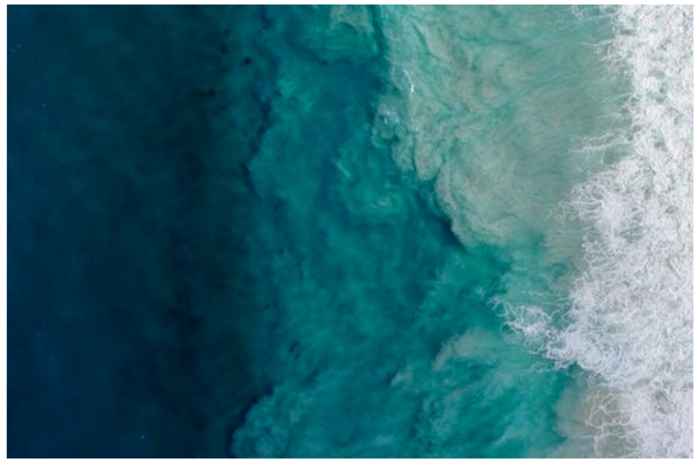
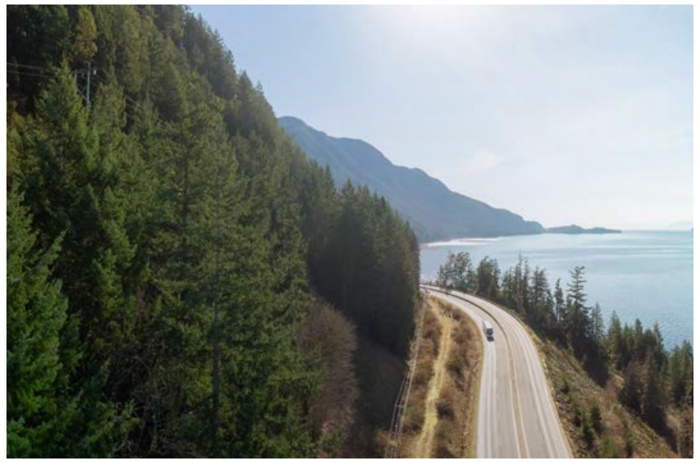
MetLife Investment Management

Global Impact Bond Strategy

2024 Impact Report

Contents





Management Commitment to Impact

We are delighted to release our seventh annual Impact Report for the Global Impact Bond Strategy and to highlight the environmental and social impact that it has supported, alongside investing for mainstream financial returns.

As a global investment manager, MetLife Investment Management's (MIM) commitment to clients is rooted in our parent MetLife's purpose: *"Always with you, building a more confident future."* At MIM, sustainable investing seeks to deliver competitive risk-adjusted market returns by incorporating financially material ESG assessments and stewardship into our investment process. Our sustainable investment approach leverages both our traditional investing and sustainability expertise.

We have made several enhancements to our sustainable investing and stewardship capabilities, most notably our respective refreshed policies, which were released in April 2024. MIM's Sustainable Investment and Stewardship Policies now reflect the incorporation of AIM's capabilities and contributions to our global investment platform, as well as an updated articulation of our sustainable investment philosophy.[1,2]

The SPECTRUM portfolios deliver mainstream risk-adjusted returns alongside environmental and social impact by investing in securities that provide solutions to major global challenges, and support the Paris Agreement to limit global warming to 1.5°C this century and the UN Sustainable Development Goals (SDGs). We continue to strengthen and innovate the SPECTRUM research process, to keep analysis at the forefront of the market, for example, by adapting the Responsible Issuer analysis for sovereign labelled bonds (see page 18).

This year's Impact Report demonstrates our continued commitment to stewardship and the importance of data and transparency. Our reporting maintains high coverage of the portfolio, at 90.6% for 2023, and continues to evidence environmental and social impact through metrics such as Carbon Yield™. Building on our successful 2023 thematic engagement series, we have conducted two thematic engagements in 2024 exploring biodiversity and scope 3 emissions respectively. Our biodiversity engagement sought to understand how issuers plan to respond to the publication of the Task Force for Nature Related Disclosure recommendations.[3] Our engagement on scope 3 emissions is part of a wider cross-asset-class MIM initiative investigating how issuers are approaching scope 3 emissions reporting.

The Public Fixed Income (PFI) Sustainability Research team continues to lead on the sustainable investment research for the SPECTRUM strategy. The team is now part of credit research and works closely with sector-specialist credit experts to develop insights on new and existing issuers. This collaboration is demonstrated in a recently published insight piece on the impact of electric-vehicle transition on the automotive industry.[4] The calibre of our PFI Sustainability Research team enables us to deliver excellence in impact analysis, measurement and reporting. We are delighted that this has been recognised, for the fifth consecutive year, in the award of 'Impact report of the year (for investors)' by *Environmental Finance* in its 2024 Bond Awards.

Thank you for your ongoing support. Our SPECTRUM portfolios continue to deliver financial returns with impact and support the shift to a sustainable future.

Jude Driscoll
EVP, Credit

MetLife Investment Management

1 mim-esg-investment-policy.pdf (metlife.com)
2 mim-engagement-Policy.pdf (metlife.com)
3 Final TNFD Recommendations on nature related issues published and corporates and financial institutions begin adopting
4 "The Electric Vehicle Transition: Long-Term Outcomes and Short-Term Uncertainties" (June 2024). (metlife.com)

ESG Certified – Best Green Bond Fund (2024)
Environmental Finance Sustainable Debt Awards 2024 Winner – Impact report of the year (for investors)
Environmental Finance Bond Awards 2023 Winner – Impact report of the year (for investors)
Environmental Finance Sustainable Investment Awards 2022 Winner – Best sustainability reporting by an asset or fund manager: medium and small (fixed income)
Environmental Finance Bond Awards 2021 Winner – Impact report of the year (for investors)
Environmental Finance Sustainable Investment Awards 2020 Winner – Best sustainability reporting by an asset or fund manager: medium and small (fixed income)
Environmental Finance Sustainable Investment Awards 2019 Winner – Best fixed income firm initiative for ESG investment process
cfi.co 2022 Best Social Impact Investment Manager Winner UK
cfi.co 2016 Best Green Bond Team Winner UK
Morningstar ESG Commitment Level of Leader. For AIM – December 2022
'Impact asset manager of the year' at the Australian Impact Investment Awards (2021)
Toward sustainability label for our flagship fund
SFDR Article 9 classification for all European funds EU Sustainable Finance Disclosure Regulation, effective 10 March 2021

These awards and accreditations pertain to Affirmative Investment Management Partners Limited, a MetLife, Inc. subsidiary, and in some cases were granted prior to acquisition by MetLife.

6 | Overview

Global Impact Bond Strategy by Numbers

126
impact-bond frameworks

2,609
projects/initiatives partially or fully supported by impact bonds held in the portfolio

168
countries receiving impact-bond commitments and disbursements

15/17
Sustainable Development Goals (SDGs) supported

8/8
environmental sectors supported[1]

6/6
social sectors supported[2]

91%
of the portfolio covered in this report

88%
subject to TCFD-aligned WACI assessment

98%
of the 2023 portfolio in impact bonds[3]

59%
of the portfolio covered in GHG analysis

0.35%
annualised net return[4]

US$623m
portfolio size[5]

1 See page 16 for details of SPECTRUM Taxonomy and eligible environmental sectors.
2 See page 17 for details of SPECTRUM Taxonomy and eligible social sectors.
3 The remaining 1.84% was in cash.
4 Inception to 31 Dec 2023.
5 As at 31 Dec 2023.

Global Impact Bond Strategy Impact Highlights

177,600MWh
estimated clean energy generated[1]
Enough electricity to power 65,768 UK households for a year[2]

82MW
clean-energy capacity installed
Equivalent to 26 wind turbines[3]

9,062,621
passenger km added
Equivalent to 100 passengers travelling around the world more than 22 times[4]

6,153ha
land managed
The area of around 8,618 football pitches[5]

34,741t
waste treated each year
Over three times the weight of the Eiffel Tower[6]

80,286,773m³
water treated each year
Enough to fill 32,114 Olympic swimming pools[7]

CARBON YIELD

81.1tCO$_2$e/US$m
invested per annum
potential avoided emissions (PAE) under the STEPS scenario, leading to 54% GHG emissions savings.[8] **Under the NZE scenario, PAE of 50.8tCO$_2$e corresponding to 42% GHG emissions savings**[9]

WACI

45.8tCO$_2$e/US$m
aggregate scope 1 and 2 Weighted Average Carbon Intensity (WACI)[10] **of our holdings** **(see page 46)**

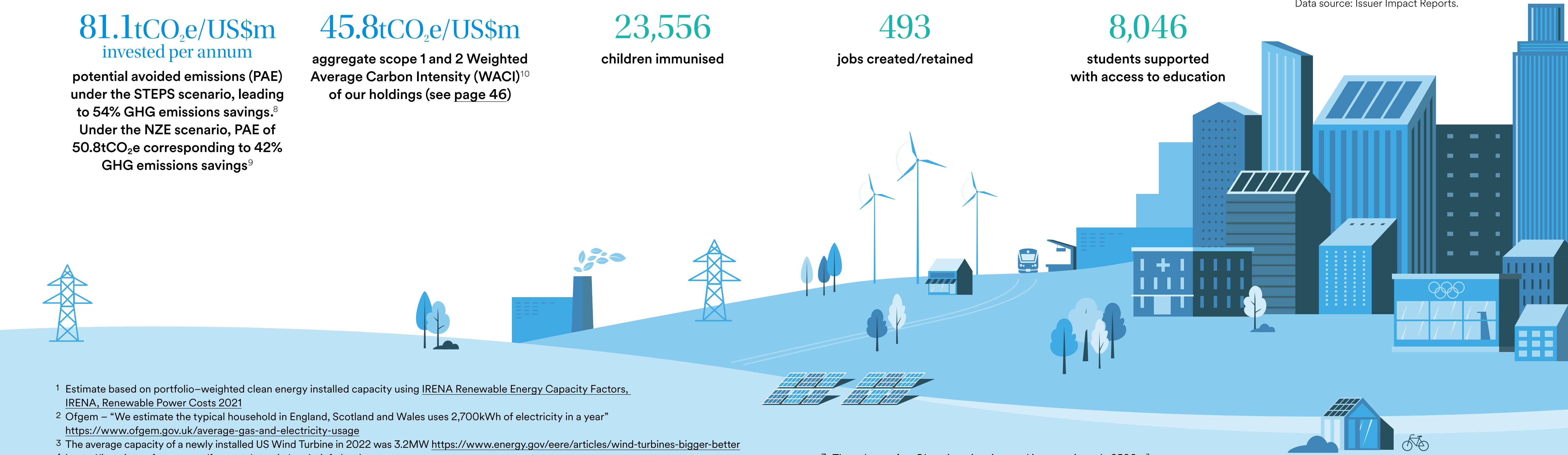
23,556
children immunised

493
jobs created/retained

8,046
students supported with access to education

- Environmental
- GHG metrics
- Social

Data source: Issuer Impact Reports.



1 Estimate based on portfolio–weighted clean energy installed capacity using IRENA Renewable Energy Capacity Factors, IRENA, Renewable Power Costs 2021
2 Ofgem – "We estimate the typical household in England, Scotland and Wales uses 2,700kWh of electricity in a year" https://www.ofgem.gov.uk/average-gas-and-electricity-usage
3 The average capacity of a newly installed US Wind Turbine in 2022 was 3.2MW https://www.energy.gov/eere/articles/wind-turbines-bigger-better
4 https://imagine.gsfc.nasa.gov/features/cosmic/earth_info.html
5 Average size of a UEFA-recognised pitch is 105m x 68m (7140m²) https://editorial.uefa.com/resources/01f9-0f842793b513-3ec14e88e0ef-1000/uefa_guide_to_quality_stadiums.pdf page 48.
6 Eiffel tower weighs 10,100 tons https://www.toureiffel.paris/en/the-monument/key-figures
7 The volume of an Olympic swimming pool is approximately 2500m³.
8 Stated Policies Scenario https://www.iea.org/reports/global-energy-and-climate-model/stated-policies-scenario-steps
9 Net Zero Emissions Scenario https://www.iea.org/reports/global-energy-and-climate-model/net-zero-emissions-by-2050-scenario-nze
10 Including LULUCF.

Sustainable Development Goals Alignment

The portfolio supported 15 of the UN Sustainable Development Goals (SDGs) that set out a blueprint for peace and prosperity for people and the planet.[1]

The largest share of holdings is in climate-related green bonds, so the heaviest concentrations fall to a number of the climate-related SDGs, such as:

SDG 7 Affordable and Clean Energy **24%**

SDG 11 Sustainable Cities and Communities **22%**

SDG 9 Industry, Innovation and Infrastructure **17%**

SDG 13 Climate Action **12%**

To assess portfolio alignment to the SDGs, each funded project is tagged to the SDGs that it supports. This allows for the implementation of a consistent assessment of which SDGs are supported by which projects or activities, ensuring that the review critically assesses the issuer's tagging to underlying SDGs. This approach identifies both the primary and additional SDGs that are supported by the underlying projects in which the bond's holdings invest. SDG alignment is weighted by order of relevance per project to limit double counting.

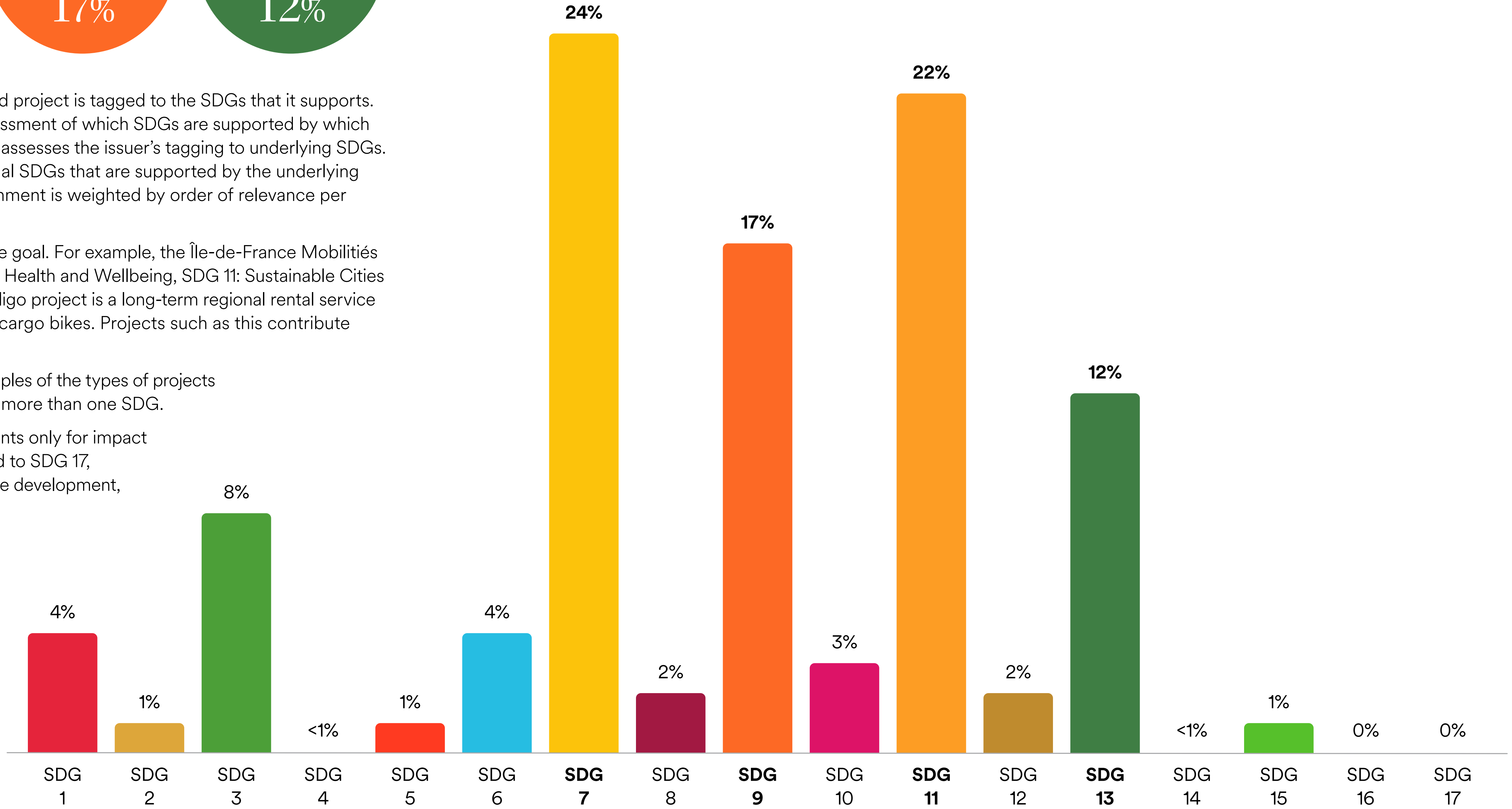
Many of the underlying projects support more than one goal. For example, the Île-de-France Mobilitiés Veligo project was tagged as supporting SDG 3: Good Health and Wellbeing, SDG 11: Sustainable Cities and Communities and SDG 13: Climate Action. The Veligo project is a long-term regional rental service and purchase-assistance programme for e-bikes and cargo bikes. Projects such as this contribute to climate-change mitigation.

The case studies (see pages 62-67) provide more examples of the types of projects the portfolio funds and of how projects often support more than one SDG.

Although not included in the chart below, which accounts only for impact bond-funded activities, SPECTRUM's mission is aligned to SDG 17, which includes private sector engagement in sustainable development, particularly in developing countries.

The UN formally adopted 17 Sustainable Development Goals in 2015:

Portfolio–weighted SDG Alignment (US$ equivalent)[2]



SUSTAINABLE DEVELOPMENT GOALS

1 UN, Department of Economic and Social Affairs: Sustainable Development – the 17 Goals https://sdgs.un.org/goals
2 Coverage ratio of 86% of 2023 portfolio holdings. See methodology annexe.

Source: Issuer Impact Reports.

Impact Bond Verification Overview

S — **SUSTAINABLE**
Aligned with the strategy's aim of supporting the UN SDGs and Paris Agreement on climate change

P — **POSITIVE EXTERNALITIES**
Positive environmental and/or social externalities associated with the issuance

E — **ETHICS AND ISSUER CONDUCT**
Issuers must have appropriate governance, policies and operational conduct

C — **CREDIT**
Issuers must have a strong financial structure

T — **TRANSPARENT**
Issuers with clear and transparent reporting and disclosure

R — **RESPONSIBLE ISSUER**
Issuers with strong integrity and environmental and social standards, as well as a clear commitment to a sustainable model

U — **USE OF PROCEEDS**
Ability to determine use of proceeds to assure funded activities meet the SPECTRUM criteria

M — **MATERIAL AND MEASURABLE**
Issuers with reporting on material and measurable environmental and social impact

Sustainability Credit

All portfolios managed using the SPECTRUM process are subject to MIM's proprietary SPECTRUM Bond® analysis. Within SPECTRUM, three types of analysis are included – Impact, ESG and Credit. This analysis is completed on both the impact-bond frameworks and the issuers. A bond must pass all three elements of analysis to be included in the SPECTRUM investable universe of impact bonds.

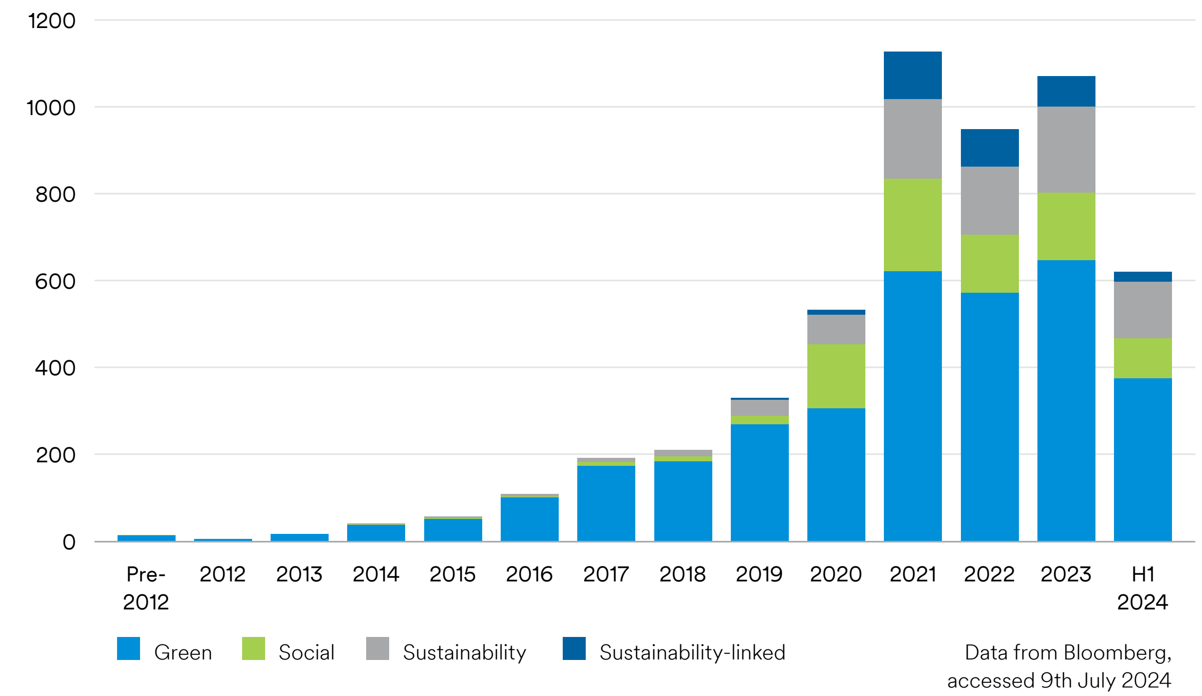
The SPECTRUM framework was designed as an independent in-house verification for impact bonds, a category that includes labelled, use-of-proceeds green, social and sustainability bonds, and unlabelled pure-play bonds. Since its inception over 15 years ago, the labelled impact-bond market has grown substantially to include many different sectors, currencies, and countries, at all points across the main yield curves.

The long-term upward trend in labelled-debt issuance continued in 2023, including record volumes of green bonds, though the total volume of impact-bond issuance in 2023 remained lower than the historic peak seen in 2021. This can be partially attributed to a more uncertain macroeconomic and geopolitical environment, with interest rates having risen across the globe.[1]

However, according to Bloomberg, 2024 has started with the busiest-ever January for labelled-bond issuance, followed by the most active February for green-bond issuance since the inception of the green-bond market.[2,3] Market growth comes from new issuers and repeat issuers that use existing frameworks to tap the market. New issuers include emerging-market sovereigns such as Ivory Coast and Colombia. See page 18 for further discussion on sovereign labelled-bond issuances.

Looking ahead, the positive momentum in the impact-bond market is expected to continue. S&P's forecast for 2024 expects modest growth in issuance volumes compared to 2023.[4] Potential catalysts for this include growing issuance from emerging markets and new sectors, and increasing investments in the low-carbon transition. Ultimately, MIM anticipates a continuation of strong levels of issuance seen in the first half of the year.

Labelled Impact Bond Market Growth US$bn



1 ICE, February 2024, Impact Bond Analysis: Full-year 2023 report.
2 https://www.bloomberg.com/news/articles/2024-02-05/global-esg-bond-sales-reach-150-billion-in-busiest-january-ever
3 https://www.bloomberg.com/news/articles/2024-03-04/global-green-bond-sales-top-54-billion-in-busiest-february-ever
4 S&P, February 2024, Sustainable Bond Issuance to Approach $1trn in 2024.

Eligible Sectors

The internal SPECTRUM sector taxonomy is complimentary but not restricted to the EU Taxonomy for Sustainable Activities.

Eligible sectors in the SPECTRUM taxonomy include:

Environmental Sectors

Energy

- Renewable-energy generation
- Energy efficiency and renewable-energy storage technologies
- Grid transmission, distribution, and infrastructure efficiencies and resilience
- District heating and cooling infrastructure

Resource Efficiency

- Pollution prevention and remediation: air, water and soil
- Waste management, reduction and recycling
- Circular economy-related activities
- Efficient and lower-carbon manufacturing products and processes

Transport

- Clean and low-carbon public and private fleets and related infrastructure
- Policies and planning supporting the uptake of sustainable transport

Buildings

- Buildings certified against recognised sustainability building standards
- Buildings undergoing energy-efficiency improvements

Resilience

- Infrastructure and systems aimed at preventing and reducing the impact of climate change, including flood-prevention infrastructure, warning systems and disaster response

Information and Communication

- Infrastructure development and enhanced efficiency of telecommunications and broadband networks
- Computer programming, consultancy and related activities aimed at delivering positive environmental impacts

Land Management and Marine Environment

- Sustainable agriculture and forestry
- Integrated landscape planning
- Biodiversity conservation and ecosystem restoration
- Sustainable enterprise fishing

Water Resource Management

- Water-use efficiency: new and retrofitted water supply and consumption infrastructure
- Water restoration and water-quality management, particularly with innovative materials and technologies, and practices

Social Sectors

Education, Training and Employment

- Access to education, safe schools, teaching materials and teachers, food programmes and financial incentives for families
- Employment training for new and re-entering job seekers in green and new-economy sectors

Financial Inclusion and Sustainable Enterprises

- Access to microfinance and financial services in underserved communities through regulation, financial institutions and technology
- Access to funding for SMEs
- Technical, energy and resource-efficiency capacity building for SMEs

Global Health

- Access to immunisation and other medical resources and services, through financing, distribution infrastructure and training
- Access to healthcare in the form of hospitals, clinics, trained healthcare workers and information
- Innovation in healthcare products, financing, distribution and services

Food Security

- Crop insurance and risk-sharing schemes to increase producer resilience to climate and other stresses
- Water-rights institutions to protect access by vulnerable groups
- New cropping techniques and resilient crop varieties
- Expanded market access through financial, regulatory and physical infrastructure

Empowerment of Women and Vulnerable Groups

- Activities promoting gender equality, e.g. education and training for women and girls
- Access to improved maternal and child-health services
- Social and regulatory services to support protection and resilience of vulnerable and war-ravaged groups

Social Housing

- Affordable housing for vulnerable groups
- Access to credit for housing for disadvantaged groups
- Shelter/temporary housing facilities
- Activities and initiatives addressing homelessness
- Integrated community planning

Spotlight Sectors

Labelled Sovereign Bonds and Asset-Backed Securities

Over the past year, there have been growing opportunities in the labelled market as it continues to deepen and expand into new sectors and regions.

Such diversification provides the SPECTRUM strategy with a broader universe of opportunities to achieve impact. In particular, the growth of the sovereign labelled bond market has enabled greater investment opportunities across emerging economies. In response to this opportunity, the PFI Sustainability Research team has further developed its toolkit to consider economic development in a more holistic way when assessing Responsible Issuer criteria.

The labelled asset-backed securities market represented US$59.2bn in 2023 and is expected to increase in 2024.[1] In the past, SPECTRUM funds were unable to tap into this part of the labelled bond market due to constraints on credit research. However, since the MIM acquisition, the PFI Sustainability Research team has worked closely with asset-backed securities specialists in the Credit Research team to establish this as a new sector within the SPECTRUM universe.

Labelled sovereign bonds support key impact projects; growing issuance from emerging-market sovereigns is critical to plug the financing gap for geographies at high risk from climate impact.

The labelled sovereign bond market represented 20% of the total issuances in 2023 and grew 26% in volume on 2022.[1] Labelled sovereign bonds provide different social and green impact exposure to corporate bonds. Typically, they use proceeds to invest in infrastructure and technology aligned with the parent country's SDG targets and to build resilience in climate-vulnerable assets, industries and natural capital. The proceeds can take the form of tax rebates, grants and research, and development investments to promote the achievement of SDGs by the private sector.

The positive sovereign bond market trend is expected to continue through 2024 and will be especially relevant to emerging-market countries, with issuances to come from Ivory Coast, Colombia and Uzbekistan among others.[2] This is because emerging-market countries are most likely to be worst affected by climate change, while simultaneously requiring economic growth to develop infrastructure and industry, reduce poverty and increase life expectancy. They also face challenges in attracting investments due to higher credit and ESG risks. The financing gap is estimated to be US$1.6trn according to a recent analysis, far outstripping current rates of funding from international sources.[3] Labelled sovereign bonds offer an important means for emerging-market countries to address this gap.

The PFI Sustainability Research team has adapted its SPECTRUM analysis, encompassing a forward-looking assessment of issuers. By understanding and taking account of the direction of environmental and social policy, the team ensures emerging market issuers are not excluded based only on relatively weak current or historical performance, which is a common profile for emerging-market sovereigns.

Asset-backed securities provide an opportunity to generate a positive impact while ensuring transparency.

Asset-backed or mortgage-backed securities (ABS and MBS) are financial instruments in which the credit exposure of the bond is to the underlying assets. From an impact perspective, in the SPECTRUM universe they are akin to a pure-play issuance, such as a green bond, since all underlying assets must be green or social to meet the eligibility criteria. For example, each asset in the underlying pool of collateralised assets in an ABS must satisfy sustainability criteria, defined in the SPECTRUM Taxonomy, such as achieving thresholds on energy-efficiency improvements, green building standards, serving targeted populations, or added renewable-energy capacity.

The regulatory landscape of these products is complex, with some restrictions on holding securities in different jurisdictions. Collaboration with the Structured Products Credit Research team has enabled the PFI Sustainability Research team to navigate the regulatory landscape and possible impact associated with securitised products and bring new securities into the opportunity set for the SPECTRUM portfolios, including Sunnova.

In the coming year, the PFI Sustainability Research team will continue to expand its research in labelled ABS and MBS. The team is dedicated to expanding its ability to have a positive impact across asset classes by fostering collaboration across teams and leveraging the extended capabilities and expertise this unlocks.

ADDITIONS TO THE SPECTRUM UNIVERSE

Sunnova – Labelled Green ABS

Sunnova is an American commercial and residential solar provider that offers loan financing for residential solar systems and other sustainable home improvements such as EV chargers.

The proceeds of the green ABS will be allocated according to Sunnova's green financing framework, with solar systems, energy storage and energy efficiency as its eligible categories. The framework supports the US Nationally Determined Contribution (NDC) targets and renewable energy development strategies and provides funding for solar energy which has significant potential avoided emissions considering the grid factor/carbon intensity of the grid.[4] The securities support the decarbonisation of electricity grids in a distributed manner, which also reduces grid volatility through the inclusion of energy-storage solutions.

Sunnova's proposed reporting commitments are in line with the sector's standards, with clear allocation reporting, as well as the provision of impact metrics such as total MW deployed and expected annual energy generation. From a responsible issuer standpoint, Sunnova's social policies are comprehensive, notably including taking an active role in increasing the accessibility of solar for indigenous communities, and its sustainability-related governance is transparent.

LABELLED GREEN ABS

IMPACT (AS OF DECEMBER 2023)[5]

- 71MW solar capacity developed
- 89GWh expected annual solar production
- 63,000tCO_2e avoided

1 Bloomberg data as of 25/06/2024.
2 https://www.bnpparibas-am.com/en-sk/professional-investor/portfolio-perspectives/sovereign-green-bonds-bigger-stronger-and-more-diverse-in-2024/
3 https://www.wri.org/insights/assessing-progress-ndcs
4 https://unfccc.int/sites/default/files/NDC/2022-06/United%20States%20NDC%20April%2021%202021%20Final.pdf
5 https://s23.q4cdn.com/546214306/files/doc_downloads/2024/02/2023-grid1-final-exam.pdf

20 | Engagement

Engaging for Impact

Engagement with issuers is an important action for achieving positive environmental and social impact.

Engagements enable the PFI Sustainability Research team to build closer relationships with issuers and develop a more granular understanding of their sustainability strategies. They also provide a platform for the team to encourage issuers to raise the bar on ambition, data and transparency around sustainability. As well as engaging with issuers within the SPECTRUM universe, the PFI Sustainability Research team also engages with issuers that are excluded with the aim of promoting sustainability beyond the portfolios.

Engagement, as defined by the Principles for Responsible Investment (PRI), seeks to influence ESG practices or disclosure and is a core part of the SPECTRUM verification, credit research, and impact-reporting processes.[1] The ESG topics discussed during engagements are mapped to the general-issue categories of SASB.[2] During the year, the key ESG themes that surfaced at engagements were Business Model Resilience, GHG emissions, and Energy Management.

The majority of engagements take place at issuer roadshows and during the impact-reporting cycle, though they can take other forms, such as the PFI Sustainability Research team's thematic engagement initiatives, which this year focused on scope 3 and biodiversity (see pages 24-31).

In addition, the team helps to advance the impact-bond market more broadly through market-development engagements, such as industry events where views and expectations are communicated to a wider audience, or in market consultations, for example, by responding to the City of London Transition Finance Market Review and Assessing Sovereign Climate-related Opportunities and Risks's (ASCOR) consultation to assess sovereign-debt issuers on climate change.

Engagements in the past 12 months

In the 12 months to the end of June 2024, there were 85 unique engagements covering 163 combined ESG topics. The engagements primarily related to:

- **Disclosure and Reporting:** engagements related to either MIM or the issuer's sustainability reporting.
- **Market:** engagements with market players such as working groups, brokers and intermediaries, or market initiatives; and, engagements with issuers that relate to a roadshow, a new or updated sustainability framework or a general issuer update.
- **Thematic:** engagements with issuers and/or other entities regarding a specific pre-defined ESG theme.

There has been a decrease in the reported number of unique engagements this year. This is partly driven by the methodology update, which means there are fewer discussions that qualify as an engagement (see methodology update), and partly because the PFI Sustainability Research team has built strong relationships with held issuers, meaning there are fewer concerns or topics that require a new engagement.

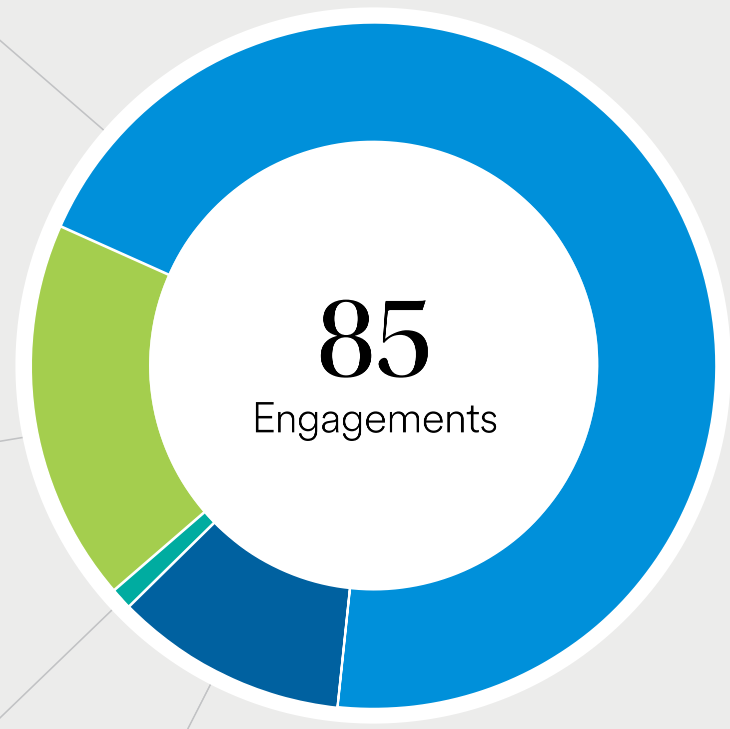
Methodology Update

The SPECTRUM engagement methodology has been updated to align with the MIM engagement methodology.[3] The former now leverages the PRI definition, which specifies that, to be accounted for, an ESG engagement must be intended to influence ESG practices and/or improve ESG disclosure.[1] This means that interactions with issuers for data collection, attendance at company presentations, and basic disclosure requests are no longer included in the engagement statistics.

Each engagement is tagged to the SASB ESG general-issue categories and most individual engagements cover several topics. This reflects how sustainability issues often overlap, and how the methodology can capture the full picture of each engagement. Although the method by which engagements are counted and reported has changed, the engagement approach of setting an intention and focusing on outcomes remains the same.

1 maindefinitionstoprireportingframework_127272_949397.pdf (unpri.org)
2 SASB (Sustainability Accounting Standards Board) is now overseen by the Sustainability Alliance of the International Financial Reporting Standards Foundation (IFRS).
3 mim-engagement-Policy.pdf (metlife.com)

Engagements by Engagement Type



71% Market

Example
The team engaged with a German commercial bank during an investor roadshow. The meeting consisted of a brief credit update and an overview of the bank's sustainability strategy.

Outcome: The team highlighted its interest in seeing the issuer join the Net Zero Banking Alliance and following the requirements involved, such as setting financed-emissions targets in higher-emitting sectors. The issuer was responsive and keen to understand what investors want from banks regarding sustainability.

18% Thematic

Example
The team conducted thematic engagements about issuers' scope 3 disclosure and biodiversity considerations.

Outcome: See Thematic Engagement section (see page 28).

1% ESG Controversy

Example
The team engaged with an issuer during a green-bond issuance to understand its remedial efforts and policy changes after the CEO of its subsidiary had admitted having violated labour laws.

Outcome: The issuer considered the matter closed because no charges were brought to court. It did not disclose any remedial action or policy changes. As a result, the issuer was excluded from the SPECTRUM universe.

11% Disclosure and Reporting

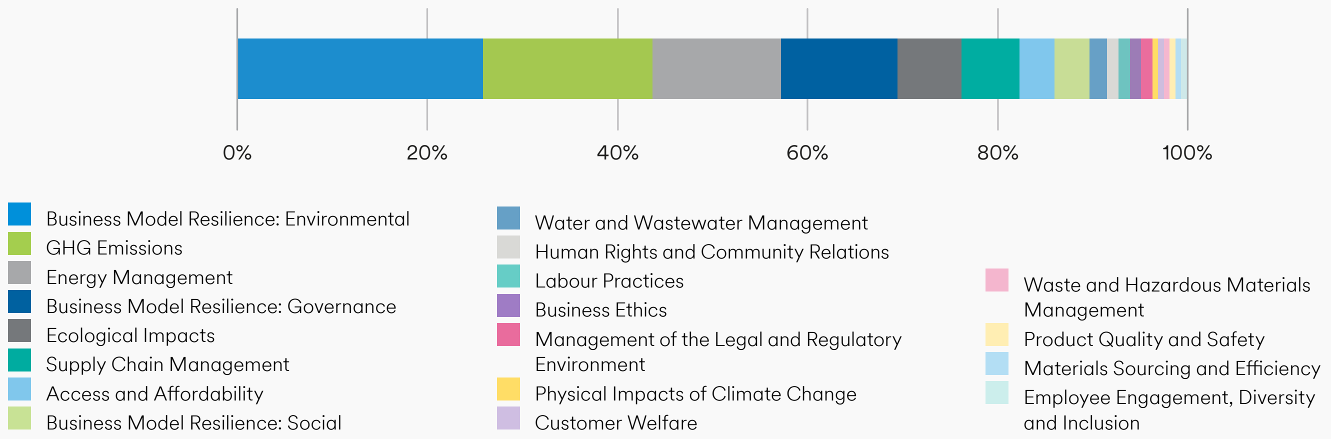
Example
The team engaged a Brazilian waste-management and energy-response multinational regarding its ESG finance framework. The clean-transport category included inconsistent emission baselines for different vehicles, and lacked clarity on the type of vehicle receiving bond proceeds.

Outcome: The issuer explained the difficulty of full electrification given the markets in which it operates and provided further details on how it will achieve its vehicle-emissions target using biofuels. It also stated that the targets for vehicle emissions were recommended by a third-party sustainability organisation.

Figures may not total 100% due to rounding.

The table below shows engagements with non-issuers, as well as issuers that have at some point been reviewed within the SPECTRUM universe.

SASB Topics Covered in Engagements



Thematic Engagement: Biodiversity

Intention

Biodiversity risks and impacts are increasingly the focus of financial regulation, company strategy and client requests, so it is important to understand the biodiversity positions, policies and reporting of issuers in which MIM invests. Biodiversity is difficult to measure and the lack of cohesive reporting adds further challenge to assessing issuers' biodiversity performance.

In September 2023, the Taskforce on Nature-related Financial Disclosure (TNFD) published its final recommendations, setting out 14 disclosures covering nature-related dependencies, impacts, risks and opportunities. As companies begin to implement the TNFD recommendations, the market will see an increasing emphasis on biodiversity disclosure. These disclosures are designed to encourage a shift towards considering biodiversity within enterprise and portfolio risk management.

The intention of this engagement was to:

1. Recognise the ways in which biodiversity is material to SPECTRUM issuers
2. Deepen understanding of how SPECTRUM issuers are adapting to TNFD reporting recommendations
3. Advocate for best practice disclosure in the context of TNFD recommendations

Approach

The engagement approach had a dual focus, first to establish the material biodiversity risks and impacts of the issuers, and second, to explore how the TNFD recommendations will affect issuers' biodiversity disclosures.

Issuers were selected from different sectors to explore any differences and similarities, with an emphasis on issuers that have a particularly large land or biodiversity footprint and for which TNFD requirements will be particularly material. The selection of issuers was not based on the existing level of disclosure, which allowed a wider range of perspectives to be sampled.
The definitions of biodiversity and related factors used in the research are aligned with TNFD publications.

CASE STUDY: URBAN TRANSPORT AUTHORITY IN UK

This integrated transport authority operates several modes, including over and underground rail networks, buses and trams.

In 2024, the authority will begin to implement recommendations of TNFD, building on two years of sustainability reporting against TCFD recommendations.[1] This first year of reporting is expected to be high-level and will include scenario analysis to help identify the most material nature-related risks.

In England, most new developments are now subject to a legal requirement to provide a biodiversity net gain (BNG) of at least 10%, so biodiversity has become an important part of the authority's project planning. In response, it is working to enhance the scope of its vegetation surveying to provide more-detailed data in support of this requirement. In addition, the authority is developing a tree-canopy-cover plan and installing sustainable drainage systems using nature-based solutions to help address surface-water flood risk.

The authority says it anticipates resource challenges in procuring and managing data for this new reporting requirement. It will continue to report under TNFD on an annual basis, though many of the datasets available to detect change over time will only be updated every 4-5 years: most annual reporting will, therefore, be based on project-level data. It is also working closely with all of the city's local authorities, as well as ecologists, to best address biodiversity-related reputational risks.

1 TCFD recommendations are now fully incorporated within ISSB

Thematic Engagement: Biodiversity

Outcomes

The establishment of nature-specific disclosure frameworks and growing investor interest is undoubtedly driving issuers to consider the materiality of biodiversity to business activities.

The PFI Sustainability Research team's engagement on biodiversity has already highlighted the following outcomes:

Progress against disclosure varies widely:

- The majority of issuers are in the early stages of understanding how biodiversity affects their businesses and are reviewing different reporting frameworks, such as TNFD, for applicability. The next stage in beginning disclosure is high-level reporting on risks and opportunities for their business, followed by scenario analysis.
- Progress for disclosing against TNFD requirements is varied. The greatest progress has been observed in sectors where biodiversity impacts are significant, such as utilities, and are reflected through well-developed internal biodiversity impact frameworks. One utilities sector issuer in the engagement was also involved in the pilot of TNFD and so is expected to be fully aligned by 2026.

There are differences in material considerations by sector, but also significant overlap:

- The most relevant area for considering biodiversity varies by sector and depends on the inputs of the business. For example, the main focus in the apparel sector is raw-material sourcing through the supply chain, whereas for a utilities issuer with hydropower capacity, it is flooding-related impacts. The exception is land-use, which is a universal biodiversity risk.
- As well as being a concern, biodiversity and nature-based solutions are also seen as part of the solution for issuers engaging in flood-protection activities, particularly utilities and large infrastructure.
- Multilateral Development Banks have much broader material biodiversity considerations than other sectors, though there is significant crossover, owing to the breadth of projects in which they invest.

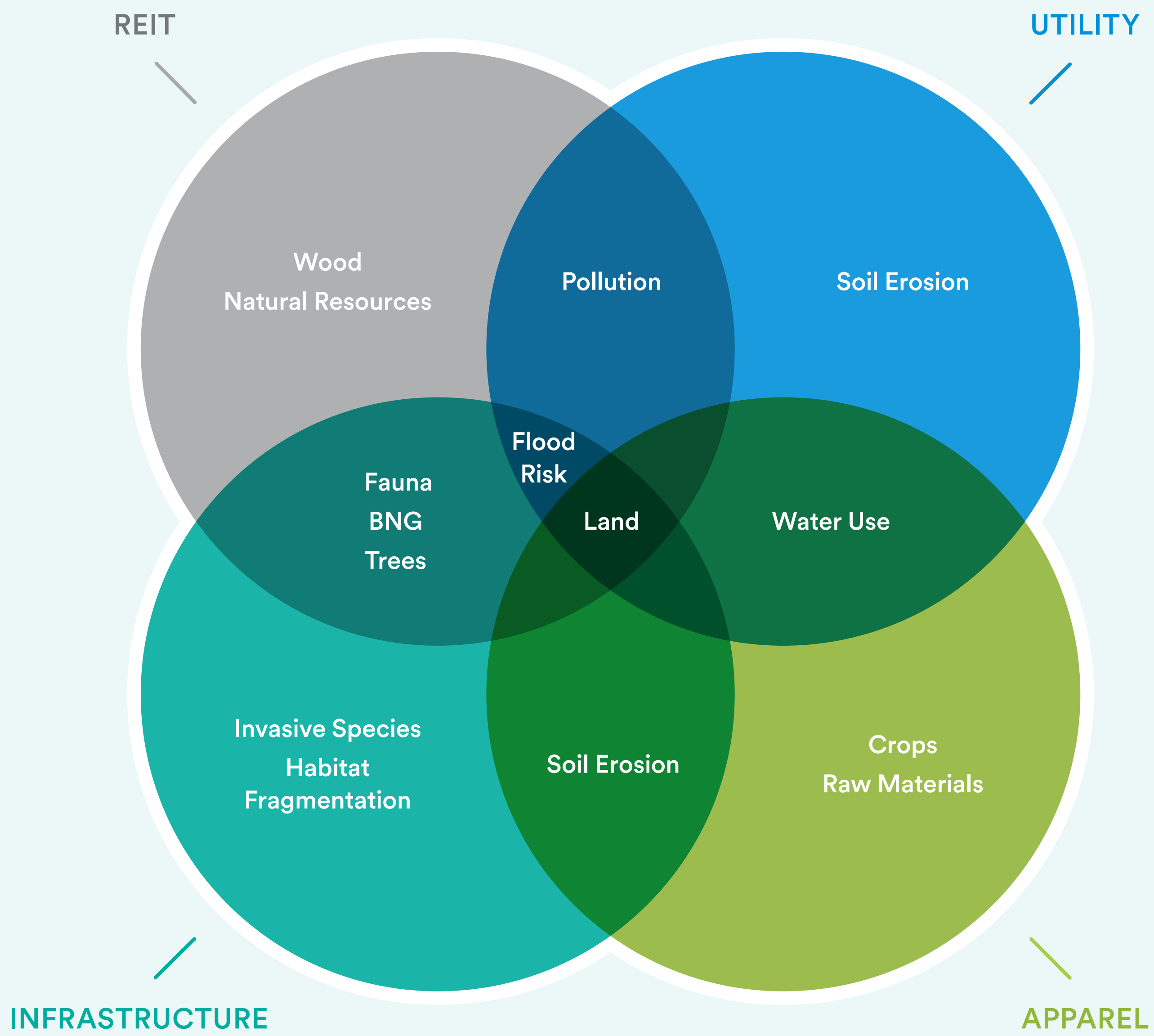
Resource constraints are the most significant challenge

- All issuers in this engagement expect the most significant challenge to be resource constraints for reporting and obtaining the data required for disclosure.
- Biodiversity risks are, or are expected to be, managed through the supply chain through sourcing policies and in response to regulation. This includes biodiversity net gain (BNG) requirements or measures to protect specific animals, such as bats.
- There is no universal consensus biodiversity metric that can be used in the same way that greenhouse gas emissions are used as a metric for decarbonisation. Potential metrics may include soil health, tree counts and canopy cover. Issuers point to the use of qualitative projects details instead, which makes objectives assessment and comparison challenging.

Issuers acknowledge that disclosure can lead to nature-positive outcomes

- Issuers find that outcomes of required assessments, for example risk and opportunity identification, within disclosure frameworks such as TNFD can help to inform internal processes and highlight resource gaps.
- Issuers that are more advanced in their biodiversity strategies report changes towards less negatively impactful projects in their CapEx investment plans when concerns have been raised through their sourcing process. Inputs for assessment include TNFD-recommended Locate, Evaluate, Assess and Prepare (LEAP) assessments for identifying and assessing nature-related impacts without formal disclosure, and geographic mapping of deforestation risk.

Material biodiversity considerations by sector and overlap:



This is not an exhaustive list of biodiversity risks and exposure to these considerations are not exclusive to the sectors under which they are listed.

Thematic Engagement: Scope 3 Emissions

Intention

Scope 3 emissions are the indirect emissions associated with procurement and investments through an entity's value chain.

Understanding and quantifying them, and identifying emission hotspots, is critical in developing strong GHG strategies because, for many sectors, scope 3 can account for more than 75% of an issuer's total emissions.

Currently, scope 3 emissions reporting, and the data used for it, is far more variable and inconsistent than scope 1 and 2 reporting. This is because the data inputs required from intricate and varied supply chains are significantly more complex. As a result, there is a general lack of confidence in setting and achieving scope 3 targets.

It is possible that with more stringent non-financial, scope 3-reporting regulations (see page 56) and increasing pressure from investors and other stakeholders, transparency in scope 3 exposure and management will improve across sectors. This will ultimately allow better tracking and support action towards decarbonisation.

With this context, the intentions for the scope 3 engagement were to:

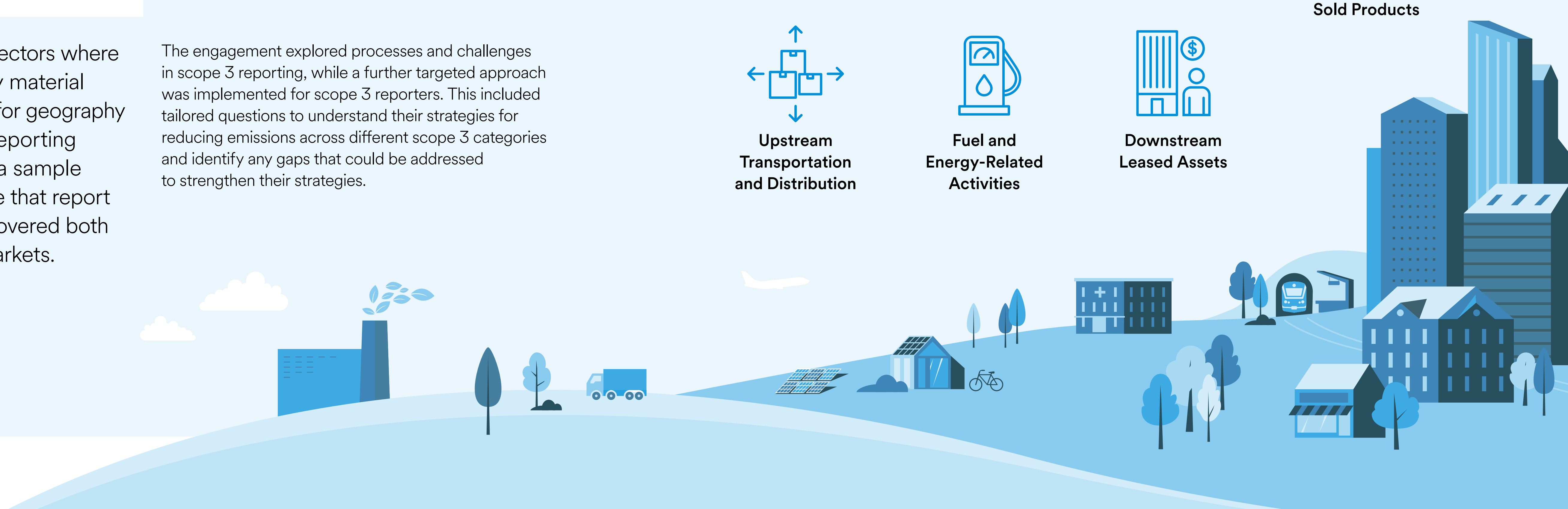
All	Reporters	Non-reporters
Promote scope 3 disclosures and data-quality improvements for all over time	Understand how reporters are tackling scope 3 reporting challenges	Gain insight on the sector and issuer-specific challenges for those not yet reporting

Approach

Issuers were selected from sectors where scope 3 emissions are highly material and then with consideration for geography and availability of scope 3-reporting information. This produced a sample of issuers that included those that report and those that do not, and covered both emerging and developed markets.

The engagement explored processes and challenges in scope 3 reporting, while a further targeted approach was implemented for scope 3 reporters. This included tailored questions to understand their strategies for reducing emissions across different scope 3 categories and identify any gaps that could be addressed to strengthen their strategies.

Categories of Scope 3 Emissions:



Thematic Engagement: Scope 3 Emissions

CASE STUDY: GLOBAL BANK

This Europe-based banking group has a global footprint through its lending portfolio. As a financial, its scope 3 (investment category) emissions are, therefore, highly material and make up almost all of its carbon emissions.[1] Since the bank finances a broad range of sectors, it is exposed to a wide range of scope 3-emission sources, which provides additional insight into the challenges and data available across sectors.

The best data availability typically comes from sectors with strong reporting regulations, such as shipping, which has the highest data quality owing to the Poseidon principles, and aviation, which has fixed inputs, such as length of flight, that allow more accurate calculations. The bank therefore expects sector-specific and national regulations requiring stronger GHG reporting to result in data improvements within the value chain, reducing the risk of double-counting.

The bank explained that the current method of calculation means that most of the movement in financed emissions is due to financial volatility and the use of financial metrics in estimations. The bank also reports large differences in data availability for geographies, with emerging-market contexts requiring greater use of proxies than developed. To address this, the bank is working on raising awareness of the attribution of carbon accounting for financial institutions.

Outcomes

Findings from the scope 3 engagement underline the complexity of scope 3 reporting and the variation in processes for reporting by sector.

No Reporting/Challenges

- Challenges in reporting scope 3 emissions include a lack of resources, knowledge and direct data. Inconsistency in data also makes comparison within sectors and across years difficult, further complicating measuring and evidencing progress in line with individual business's strategies.

Early Reporters/Complex Supply Chain

- Spend data is the most accessible proxy for emissions, with issuers looking to improve the accuracy of data over time to include direct data and product-life-cycle assessments.
- Third parties are widely used by issuers during scope 3 estimation. For some, this is solely for verification, while for others, particularly those just starting or with more complicated supply chains, all calculations are outsourced.

Reporters

- Reporting issuers tend to take a hybrid approach in calculating scope 3 emissions by using estimations, third-party data and models in conjunction with direct data from suppliers.
- In heavy-emitting industries such as construction, real estate and commodities, there are fewer estimations because many suppliers are able to provide product carbon-footprint certificates.
- The quality and availability of data is largely dependent on the sector as certain industries, for example telecoms, rely heavily on the reporting and data provided by their suppliers.

The type of data used in reporting improves in sophistication from proxy, to hybrid and direct, examples of which include:

Proxy Data	Hybrid Approach	Direct Data
Spend data Sector averages	Models Third-party sources e.g. CDP	Carbon-footprint certificates Business-travel data

Future of Reporting

Commitment
Most issuers are committed to improving their scope 3 emissions reporting

Regulatory Requirements
Tightening regulatory requirements are expected to drive improvements in data and reporting from suppliers

Technology
Technology in the form of digital tools is expected to make reporting easier and improve the accuracy of data

Engagement
Engagement informed by cross-sector guidance, such as that developed by Science-based Targets (SBT), is critical for improving data quality[2]

[1] CDP Scope 3 emissions relevance

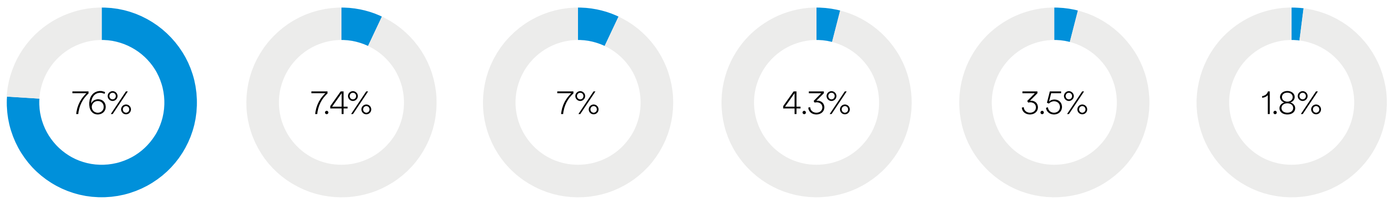
[2] https://sciencebasedtargets.org/

32 | Portfolio Deep Dive

Portfolio Composition

The mission of the SPECTRUM funds is to generate positive environmental and social impact towards achieving the Paris Agreement and the SDGs. The Global Impact Bond Strategy predominantly holds labelled use-of-proceeds bonds, with green bonds hugely outweighing other types of impact bond in the portfolio.

2023 Portfolio Holdings by Bond Type



Green	Unlabelled	Social	Aligned	Sustainability	Cash
Labelled use-of-proceeds bonds permitting investment in environmental sectors	Bonds from issuers with approximately 95% of revenues aligned to the SPECTRUM environmental and/or social taxonomy	Labelled use-of-proceeds bonds permitting investment in social sectors	Bonds from responsible issuers with over 50% of revenues aligned to the SPECTRUM environmental and social taxonomy	Labelled use-of-proceeds bonds permitting investment in environmental and social sectors	

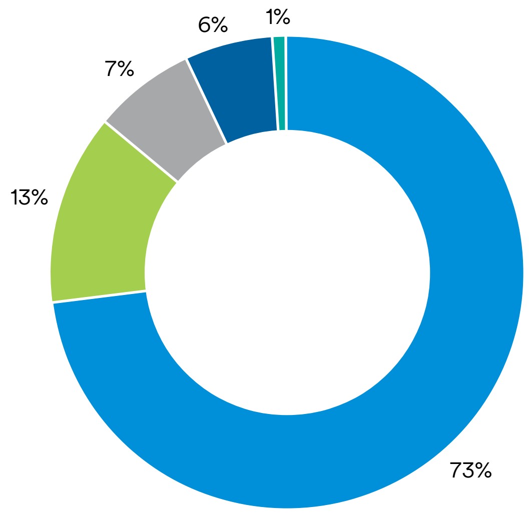
Holdings are reviewed annually and allocation and impact data on the projects and activities they support is collected.

For 2023 holdings, the data collection was able to cover 91% of holdings. This can be broken down as 4.3% aligned bonds and 86.3% impact bonds for which we were able to collect data.

The portfolio weight that was not covered by this data collection comprises a combination of cash and held bonds for which allocation and impact data was not available during our data collection period, likely because issue was less than a year ago and first impact reporting has not become due.

The projects and activities supported can be broadly split into four impact categories: mitigation, adaptation, social, and sustainability. Some projects are categorised as both mitigation and adaptation. Green bonds largely fund projects with an impact focus of climate-change mitigation so, naturally, this is the largest category of impact focus. It should be noted that categorising the projects in this way offers a high-level representation of the types of impact supported, while the key performance metrics, sectors supported and the case studies in this report provide more detailed information.

2023 Impact Focus[1]



- Mitigation (73%)
- Social (13%)
- Adaptation (7%)
- Mitigation and Adaptation (6%)
- Sustainability (1%)

[1] Coverage ratio of 86% of 2023 portfolio holdings. See methodology annexe.

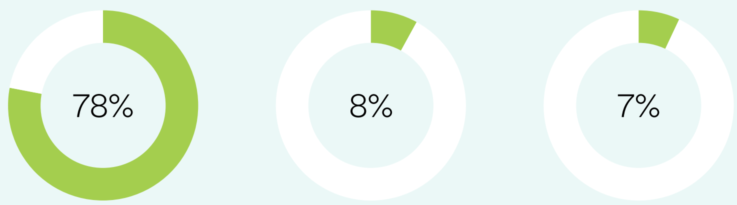
Portfolio Sector Distribution

The portfolio invests in a range of environmental and social sectors that support the Paris Agreement, climate resilience and the SDGs (see page 16 for examples of SPECTRUM eligible sectors).

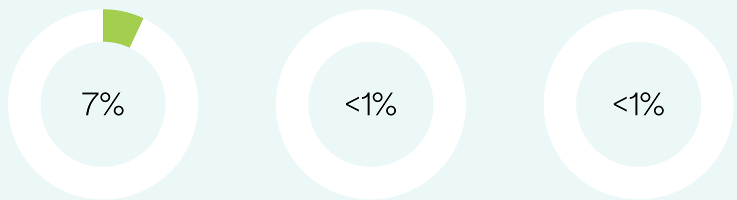
In 2023, the top three sectors to which impact-bond proceeds were allocated were all environmentally focused:[1]

Energy 29%	Buildings 24%	Transport 16%
Over 177,574MWh of renewable energy generated	95,760m² of green-building area supported	Added daily passenger capacity of 6,479 to clean-transport options

Energy Comprises:

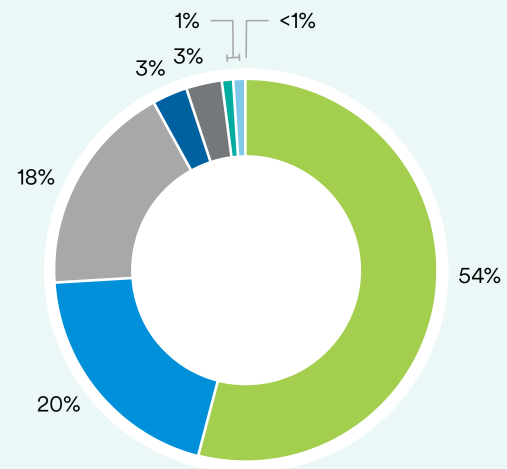


Generation | Storage | Efficiency



Transmission and Distribution | District Heating/Cooling | Production of Alternative Fuels

Generation Comprises:



- Wind (54%)
- Solar (20%)
- Unspecified Renewable Energy (18%)
- Hydropower (3%)
- Waste to Energy (3%)
- Geothermal (1%)
- Biomass (1%)
- Other (<1%)

Other sectors to which funds were allocated:

- Water and Wastewater Management (6%)
- Social Housing (4%)
- Financial Inclusion and Sustainable Enterprise (4%)
- Global Health (3%)
- Resilience (3%)
- Resource Efficiency (3%)
- Information and Communication (2%)
- Land Management and Marine Environment (2%)
- Education, Training and Employment (1%)
- Empowerment of Women and Vulnerable Groups (<1%)
- Food Security (<1%)

[1] Coverage ratio of 86% of 2023 portfolio holdings. See methodology annexe.

Global Distribution of Project Commitments[1]

The portfolio invested in impact bonds supporting sustainable activities in 168 countries. Here are just a few examples of the projects those investments support.

This impact report map uses the Winkel-Tripel projection. While not perfect, Winkel-Tripel significantly reduces the distortions present in other projections, notably Mercator, and provides a more accurate picture of the world's land masses in terms of both their relative size and location.

(See SDG case studies pages 62-67 for more detail)

Invested in **168** countries

2023 featured new investments in
Vanuatu
New Zealand
Singapore

1 FLOOD CONTROL

Region Occitanie

Reinforcing the Rhône dyke in southern France to protect a rapidly expanding population

SDG alignment 6 9 11

2 OFFSHORE WIND

Statkraft

14 wind farms adding 519MW of renewable-electricity capacity

SDG alignment 7 13

3 INCLUSION AND AUTONOMY

Intesa Sanpaolo

Supporting more than 5,000 people with neurodevelopmental conditions

SDG alignment 3 10 11

4 WATER MANAGEMENT

IBRD

An additional 14,500m³ of water available per day and 2,620m³ of additional wastewater being treated per day

SDG alignment 6 9 16

5 EXTENDING METRO CAPACITY

European Commission

Adding capacity for an extra 7.6m metro passengers per year to reduce car usage in Sofia

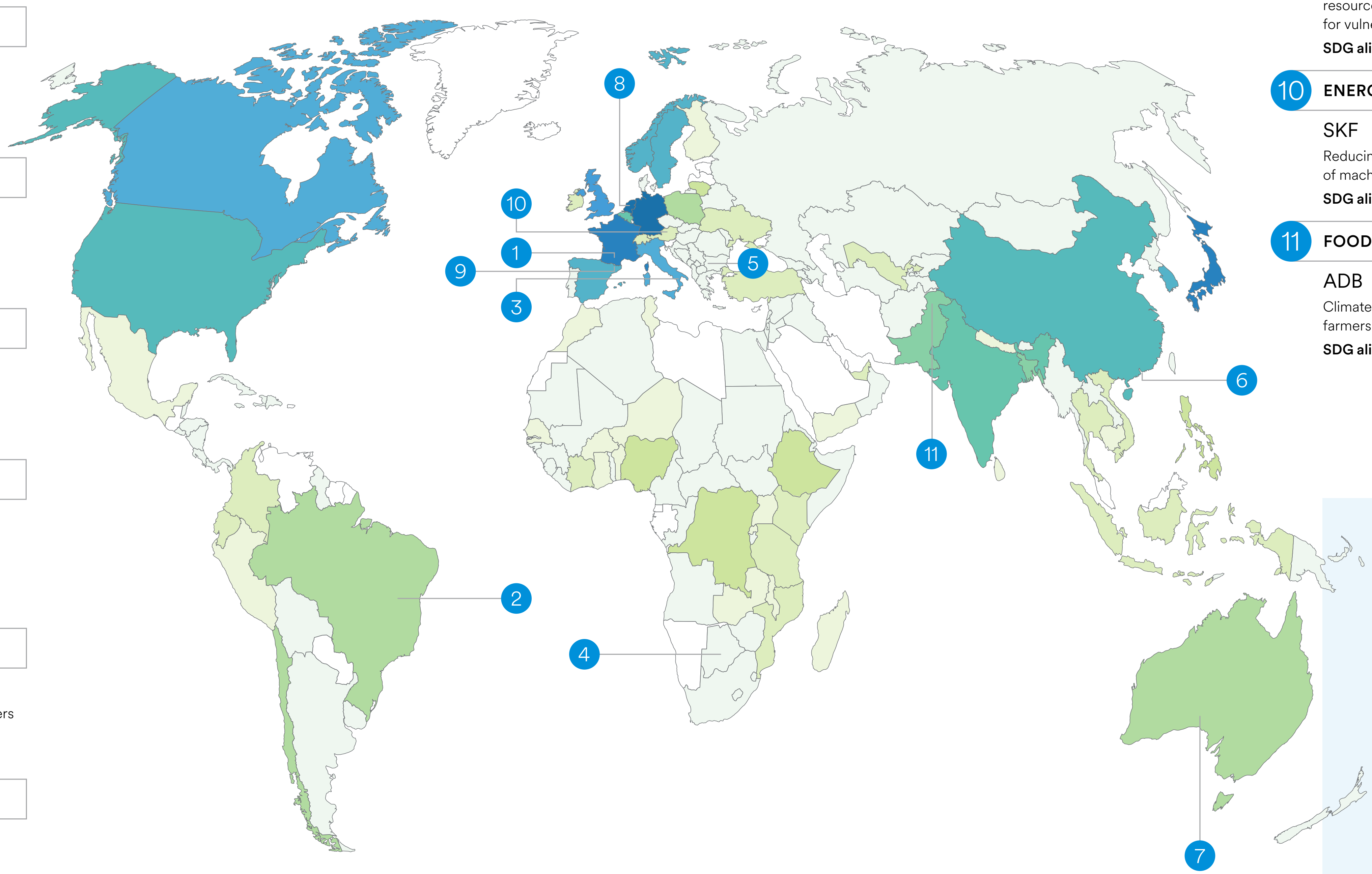
SDG alignment 9 11 13

6 GREEN BUSINESS HUB

Swire Properties

Office complex that generates 522,250kWh through solar PV and saves 46% water use by recycling rainwater

SDG alignment 7 9 11 12



7 SOLAR ENERGY AND BATTERY STORAGE

Vena Energy

159MW combined solar and battery energy storage in rural Australia

SDG alignment 7 13

8 BIODIVERSITY AND FLOOD CONTROL

Dutch State Treasury

6,687ha of new protected natural areas on floodplains of major rivers

SDG alignment 13 14 15

9 INTEGRATED HEALTHCARE

Principality of Andorra

Coordinating private and public healthcare resources and increasing access to care for vulnerable citizens

SDG alignment 3 10

10 ENERGY-EFFICIENT MANUFACTURING

SKF

Reducing the energy consumption of machine-parts manufacturer by 50%

SDG alignment 9 13

11 FOOD SECURITY

ADB

Climate-resilient agricultural inputs to protect farmers and address gender inequality

SDG alignment 2 5 10

Project commitments – percentage of portfolio

- 0%
- <0.1%
- 0.1-0.2%
- 0.2-0.4%
- 0.4-0.6%
- 0.6-0.8%
- 0.8-1%
- 1-2%
- 2-3%
- 3-4%
- 4-5%
- 5-6%
- 6-7%
- >7%

1 Coverage ratio of 86% of 2023 portfolio holdings. See methodology annexe.
Source: Issuer Impact Reports, PFI Sustainability Research team engagement.

EU Taxonomy Alignment and Eligibility

The SPECTRUM portfolios are predominantly held in labelled bonds, and taxonomy alignment is therefore reported on a use-of-proceeds basis. This means that the figures show the EU Taxonomy alignment of the projects and activities that receive allocations from the labelled bonds held in the portfolio.

This information is obtained from issuer reporting. Full taxonomy alignment requires an issuer to confirm alignment with three elements: (i) substantial contribution, (ii) do no significant harm (DNSH), and (iii) minimum social safeguards. In some cases, issuers report on the alignment with substantial contribution without a confirmation of DNSH and minimum social safeguards. For this reason, the three elements have been split out in the charts opposite and there is higher alignment with substantial contribution than with either DNSH or minimum social safeguards. The main chart shows where alignment with substantial contribution to one of the EU Taxonomy's environmental objectives has been confirmed and then indicates the eligibility and potential alignment of the remaining portfolio. The smaller charts show alignment confirmation to DNSH and minimum social safeguards.

This is the second year that EU Taxonomy alignment has been calculated for this portfolio. This year, the portfolio's supported projects show an increase in alignment with all three elements.

This was driven by a combination of enhanced reporting from issuers and changes in the portfolio's holdings. In addition, this year all the environmental objectives in the EU Taxonomy were considered, rather than climate-change mitigation alone. While mitigation was by far the most common environmental objective supported by the projects, other objectives such as climate-change adaptation also contributed to the alignment figure.

Comprehensive reporting of EU Taxonomy alignment by issuers still has quite a way to develop, so it is likely that the true alignment of the portfolio will be higher than reported here. However, it is not feasible to conduct an alignment assessment internally due to limited information and the reliance on issuer-reported data. The SPECTRUM portfolios would be unlikely to reach complete alignment with the EU Taxonomy in their current state for two primary reasons. First, the taxonomy remains underdeveloped on the social side and the portfolios support socially focused projects and activities, to contribute towards the SDGs. Second, the portfolios hold issuers outside of the EU, and complying with the criteria in the EU Taxonomy, particularly under the DNSH criteria and where there is reference to EU regulation, is challenging for non-EU-domiciled issuers.

Supported projects and activities have been categorised into five groups:

EU Taxonomy-aligned

The issuer has confirmed the alignment of this project or activity with the criteria on substantial contribution to one of the EU Taxonomy's environmental objectives in its labelled bond materials.

Eligible – Likely Aligned

There is guidance for these types of projects in the EU Taxonomy and they are likely to align with the EU Taxonomy's thresholds. For example, solar projects have been categorised in this group as it is likely they will meet the gCO_2e/kWh threshold set in the EU Taxonomy.

Eligible – Potentially Aligned

There is guidance for these types of projects in the EU Taxonomy, but a full alignment analysis has not been completed. For example, green buildings-related projects have been categorised in this way.

No EU Taxonomy Guidance

These types of projects do not have guidance under the EU Taxonomy yet. For example, healthcare projects have been categorised in this way.

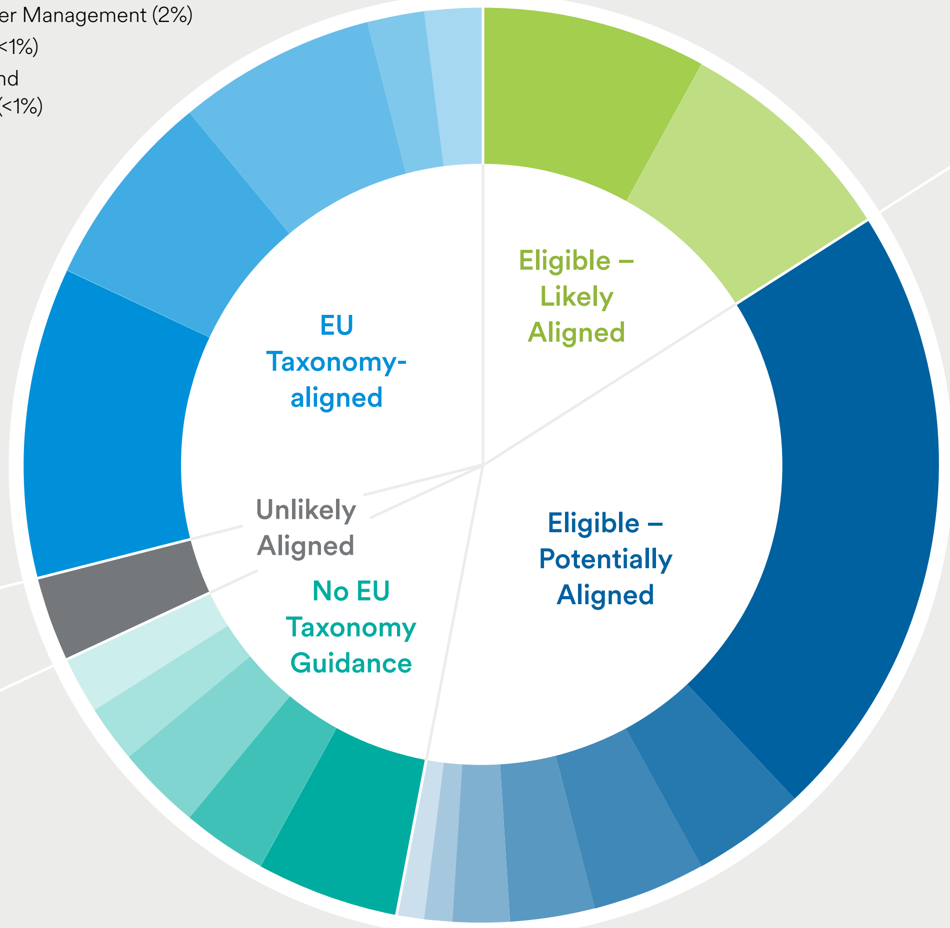
Unlikely Aligned

There is guidance for these types of projects in the EU Taxonomy, but these projects are considered unlikely to satisfy the EU Taxonomy's threshold. These are largely rail projects that do not have a clear indication as to whether electrification is planned.

Aligned with
Substantial Contribution

EU Taxonomy-aligned
- Energy (11%)
- Transport (7%)
- Buildings (7%)
- Resilience (2%)
- Water and Wastewater Management (2%)
- Resource Efficiency (<1%)
- Land Management and Marine Environment (<1%)

Eligible – Likely Aligned
- Transport (8%)
- Energy (8%)

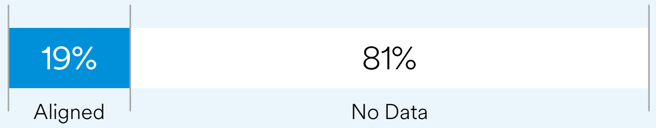


Unlikely Aligned
- Transport (3%)

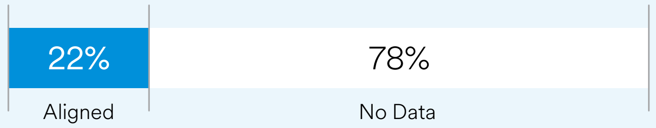
No EU Taxonomy Guidance
- Financial Inclusion and Sustainable Enterprise (5%)
- Social Housing (3%)
- Global Health (3%)
- Empowerment of Women and Vulnerable Groups (2%)
- Land Management and Marine Environment (2%)
- Transport (<1%)
- Education, Training and Employment (<1%)
- Food Security (<1%)

Eligible – Potentially Aligned
- Buildings (22%)
- Energy (4%)
- Water and Wastewater Management (4%)
- Information and Communication (3%)
- Resource Efficiency (2%)
- Resilience (1%)
- Transport (1%)
- Education, Training and Employment (<1%)
- Land Management and Marine Environment (<1%)
- Empowerment of Women and Vulnerable Groups (<1%)
- Arts, Entertainment and Recreation (<1%)

Aligned with
Do No Significant Harm



Aligned with
Minimum Social Safeguards



Coverage ratio of 86% of 2023 portfolio holdings. See methodology annexe.

40 | Climate Performance

Measuring Greenhouse Gases

Greenhouse-gas (GHG) metrics are important indicators of the SPECTRUM portfolio's progress in generating positive climate-mitigation impact and managing and understanding the carbon risks that are associated with these portfolios.

This section includes carbon metrics that analyse the portfolio at both the project and issuer level. The project-level carbon metrics included in this report include net zero-alignment analysis and potential avoided emissions. Net zero analysis is also conducted for the SPECTRUM portfolios at the issuer level, and this is presented alongside other issuer-level metrics including the weighted average carbon intensity (WACI) and implied temperature rise. Further detail on the metrics provided in this section can be found in the Methodologies report.

Carbon dioxide (CO_2) is the primary greenhouse gas emitted through human activities, hence its importance in measuring anthropogenic global warming and progress on climate-change mitigation.[1] However, it is important to account for other GHG emissions as well, some of which have greater global-warming potential than CO_2. For this reason, it is best practice to measure and report on GHG emissions in terms of "carbon dioxide equivalent emissions" or CO_2e.

GHG emissions are categorised in three groups or 'scopes' by the most commonly used international carbon accounting tool for corporates, the GHG Protocol.[2]

Example:

Scope 1 – Direct	Scope 2 – Indirect	Scope 3 – Indirect
Covers emissions from owned or controlled sources	**Covers emissions from purchased energy**	**Includes all other emissions associated with a company's value chain**
• Fuel combustion • Company vehicles • Fugitive emissions – intentional and unintentional releases of GHGs, such as methane leaks from transmission and storage facilities, SF_6 emissions from transmission and distribution infrastructure, and HFC emissions during use of refrigeration and air conditioning[3,4]	• Purchased electricity, heat and steam	• Purchased goods and services • Business travel • Employee commuting • Waste disposal • Use of sold products • Transportation and distribution (up and downstream) • Investments • Leased assets and franchises

1 https://www.epa.gov/ghgemissions/overview-greenhouse-gases
2 Scope 1, 2 and 3 emissions data is sourced from S&P. Figures may be as reported or estimated.
3 Sulphur hexafluride.
4 https://ghgprotocol.org/sites/default/files/standards/ghg-protocol-revised.pdf

Net Zero Alignment

For the third year, the PFI Sustainability Research team assessed the net zero alignment of funded projects.

This analysis provides insights into how financed projects align with a net zero-by-2050 future, which is required to achieve the Paris Agreement objective of limiting global warming to 1.5°C this century. Investing in line with these targets is a critical part of SPECTRUM's mission.

However, not all projects are suitable for this analysis. For example, social projects do not have a climate goal and are, therefore, ineligible for this analysis. Net zero-alignment analysis focuses on the three sectors that make up most of the funded projects: energy, transport and buildings.

Data was available for 41% of the pool of eligible projects, slightly down on last year's 42%. However, the total number of eligible projects has increased. Of the projects where data was available, 90% were either aligned, aligning, or expected to align with a net zero-by-2050 future. This provides solid evidence of the effectiveness of the SPECTRUM verification process in selecting projects that actively support the transition towards a net zero world.

There are still data gaps, which limits the coverage of net zero-alignment analysis across portfolios. Continuing engagement with issuers is, therefore, critical in order to encourage enhanced disclosure and address these gaps.

NZAM Reporting

SPECTRUM portfolios have a Net Zero Asset Managers initiative (NZAM) target.

Target:

By 2030, 85% of financed emissions from corporate bond issuers held in SPECTRUM portfolios will be invested in issuers that are considered to be Paris-aligned.[1]

Progress:

In 2023, 89% of SPECTRUM portfolio-financed emissions were from issuers considered to be Paris-aligned. This provides a strong basis to increase the coverage of the targets in the future.

Eligible Pool Data Availability

Alignment of Eligible Pool with Data

Aligned 86%
Project performance currently fulfils 2050 criteria for net zero alignment

Aligning 1%
Project performance meets the current year's threshold on a net zero-by-2050 trajectory

Expected to Align 3%
Issuer has a sufficiently robust net zero-aligned strategy, therefore underlying projects can be expected to align with a net zero-by-2050 trajectory

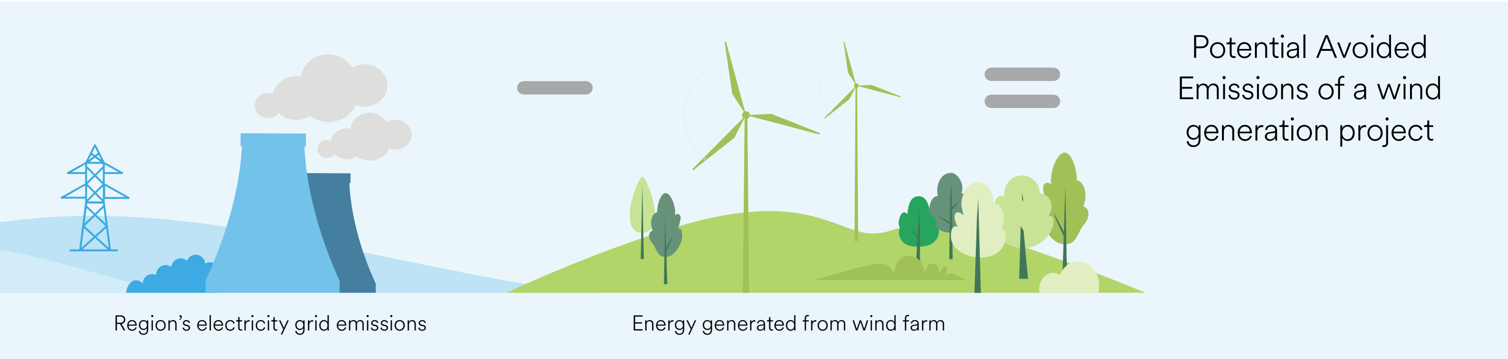
Not Aligned 10%
Project emissions may exceed the current year's alignment criteria but project contributes to decarbonisation and climate resilience through supporting themes such as electrification, efficiency of energy usage and generation and pollution prevention

1 Committed to support and invest with the goal of net zero GHG by 2050, in line with efforts to limit global warming to 1.5°C.

Carbon Yield™

A project-level potential avoided GHG emissions assessment provides an important measure of the positive climate impact being delivered by applying the SPECTRUM methodology.

Since 2016, the PFI Sustainability Research team has been running a bottom-up avoided-emissions analysis following the Carbon Yield methodology, which it co-developed with funding from the Rockefeller Foundation. Carbon Yield calculates impact in terms of the "potential avoided emissions" (PAE) enabled by funded projects in terms of tonnes of CO_2e/US$m per annum. Using the example of a wind farm, the PAE is calculated based on the energy generated from the operation of the wind farm compared to the region/country's electricity grid emissions under a dynamic scenario for its expected working life.



This year, MIM continued to partner with ISS ESG to estimate project-level emission footprints covering scope 1 and 2 emissions (i.e. from project operations) and partial scope 3 emissions (i.e. from project construction and material use). Funded-project scope 1 and 2 emissions are then used to derive avoided emissions, which are then allocated on a portfolio-weighted basis to SPECTRUM funds. The Carbon Yield calculation does not currently cover scope 3 emissions due to the complexities of comprehensively accounting for value-chain emissions for both funded projects and baseline scenarios.

Project GHG Emissions Footprint

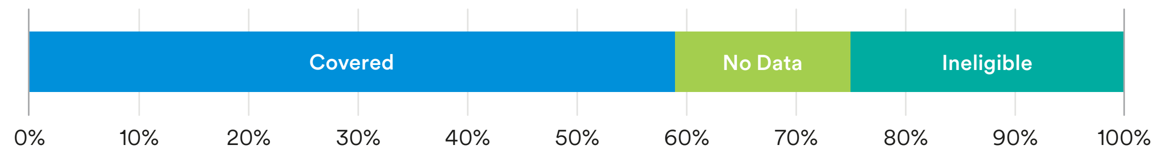
Scope 1 and 2
45,326
tCO_2e per annum

Scope 1, 2 and 3
52,314
tCO_2e per annum

This PAE assessment only covers projects with an objective to reduce GHG emissions, such as renewable energy, energy efficiency and clean-transport projects. Projects that deliver different positive impacts, such as social projects, wastewater treatment and climate-adaptation projects, are not covered though they are an important component of SPECTRUM portfolios, and in many cases, also deliver GHG emissions reductions.

The PFI Sustainability Research team's portfolio Carbon Yield calculations cover 59% of the portfolio holdings. The remaining holdings were excluded from the calculations as they finance activities not expected to have significant mitigation potential or because there was insufficient data to include them.[1]

Potential Avoided Emissions Portfolio Coverage



The PFI Sustainability Research team continues to use dynamic baselines instead of business-as-usual baselines in its Carbon Yield calculations to account for expected changes in the composition of electricity grids globally and related changes to grid emission factors. The dynamic baselines this year are based on the International Energy Agency's (IEA) Stated Policies Scenario (STEPS) and Net Zero Emissions Scenario (NZE).[2] The STEPS scenario represents a conservative policy context that accounts for policies that have already been set, as well as those that have been announced by governments. Meanwhile, the NZE scenario is a more ambitious decarbonisation scenario that sets out a trajectory where the energy sector achieves net zero emissions by 2050.

As with last year, results for both the STEPS and NZE scenarios have been provided to offer a comparison between avoided emissions estimates under a conservative climate scenario (higher avoided emissions) and an ambitious scenario (lower avoided emissions). In line with this, the Carbon Yield estimates for the NZE scenario are 37% lower than the estimate for Carbon Yield using STEPS.

Our Portfolio Carbon Yields:

- STEPS
- NZE

STEPS: Funded-projects avoided emissions **81.1** tCO_2e/US$m per annum → this equates to **54%** GHG-emissions savings

NZE: Funded-projects avoided emissions **50.8** tCO_2e/US$m per annum → this equates to **42%** GHG-emissions savings

1 Issuers provide their impact reports by bond frameworks, which are a collection of funded projects
The average project proportion covered by our Carbon Yield assessment for each framework is 77%.

2 https://www.iea.org/reports/global-energy-and-climate-model/understanding-gec-model-scenarios

Weighted Average Carbon Intensity (WACI)

The SPECTRUM portfolios' GHG-emissions metrics are calculated in line with the recommendations of the International Sustainability Standards Board (ISSB) for asset managers.[1] These metrics include the Weighted Average Carbon Intensity (WACI).

What is WACI?

Each year, issuers report on their GHG emissions, which are measured in estimated tonnes of carbon dioxide that are released into the atmosphere as a result of the issuers' business activities. This figure, while useful, is challenging when used as a comparator of issuers' relative performance on emissions. As an absolute figure for emissions, it would often a reflect the scale of the issuers' operations rather than provide a measure of their relative impact. With a unit-intensity figure, such as WACI, it becomes possible to more accurately and fairly compare issuers and compile more informative portfolio statistics.

WACI

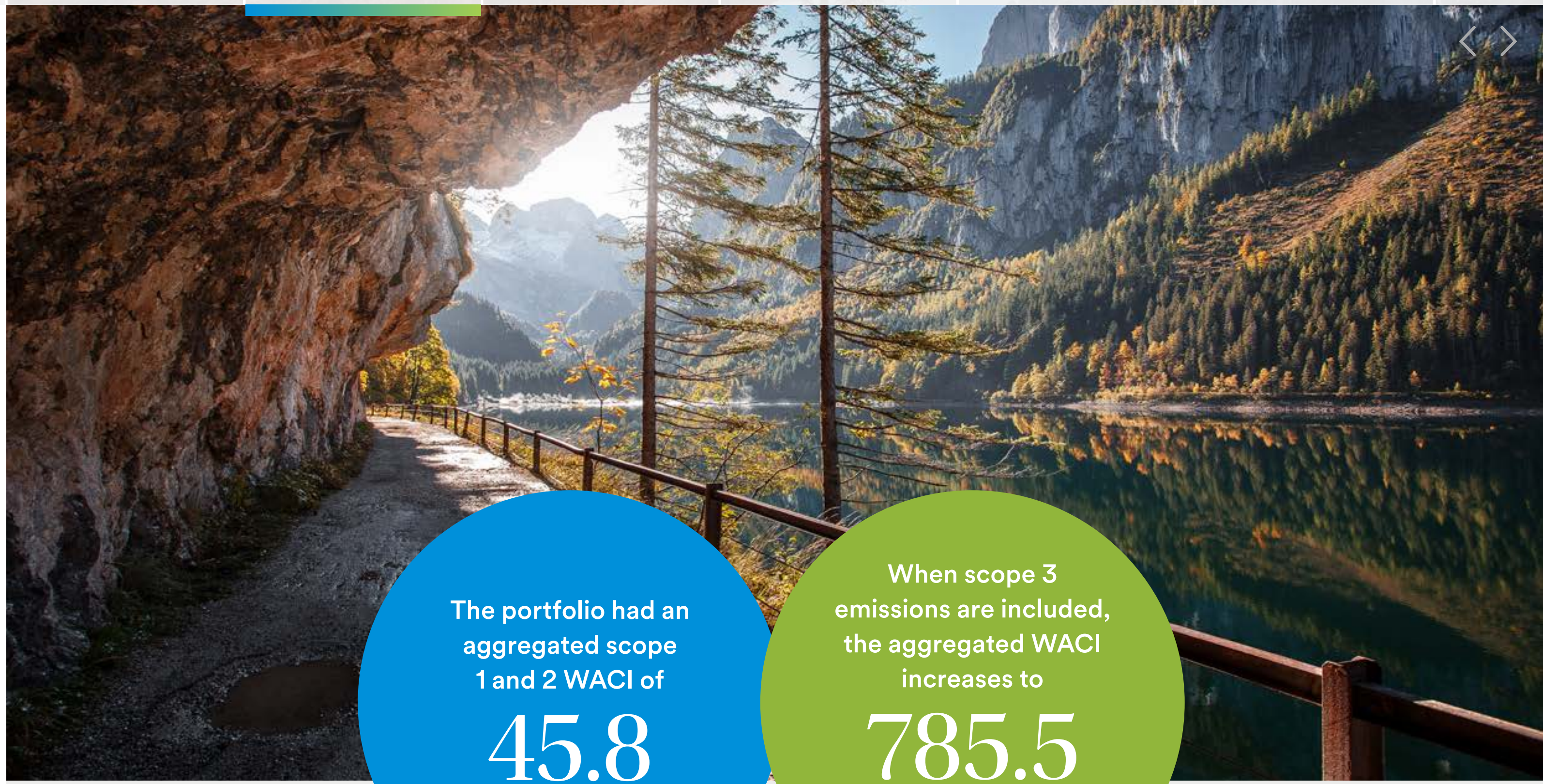
WACI provides a weighted average of the carbon intensity for each issuer held within a portfolio. It is expressed as tCO_2e/US\$m of revenue (for corporates) and tCO_2e/PPP-adjusted GDP US\$m (for sovereign-related issuers).[2]

$$\sum_{n}^{i} \left(\frac{\text{current value of investment}_i}{\text{current portfolio value}} \times \frac{\text{issuer's scope 1 and 2 GHG emissions}_i}{\text{issuer's US\$m revenue}_i} \right)$$

Issuer WACI calculated is an outcome of our SPECTRUM process and is not used to determine inclusion in the SPECTRUM universe.

The portfolio's aggregate scope 1 and 2 WACI was 45.8tCO_2e/US\$m. When scope 3 emissions are included, the WACI rises to 785.5tCO_2e/US\$m including LULUCF (45.4 and 785.4 respectively excluding LULUCF).[3] These figures reflect an aggregate coverage of 87.8% of the portfolio for WACI calculation.

1 Formerly known as the TCFD.
2 The WACI should be regarded as an assessment of the carbon profile for the share of the portfolio covered by the analysis. The WACI was calculated by maintaining original portfolio weights.
3 Land use, land use change and forestry – Partnership for Carbon Accounting Financials (PCAF) recommends reporting emissions both with and without LULUCF, since countries treat LULUCF emissions differently in their mitigation targets. See Methodology annexe for more detail.



The portfolio had an aggregated scope 1 and 2 WACI of

45.8

tCO_2e/US\$m

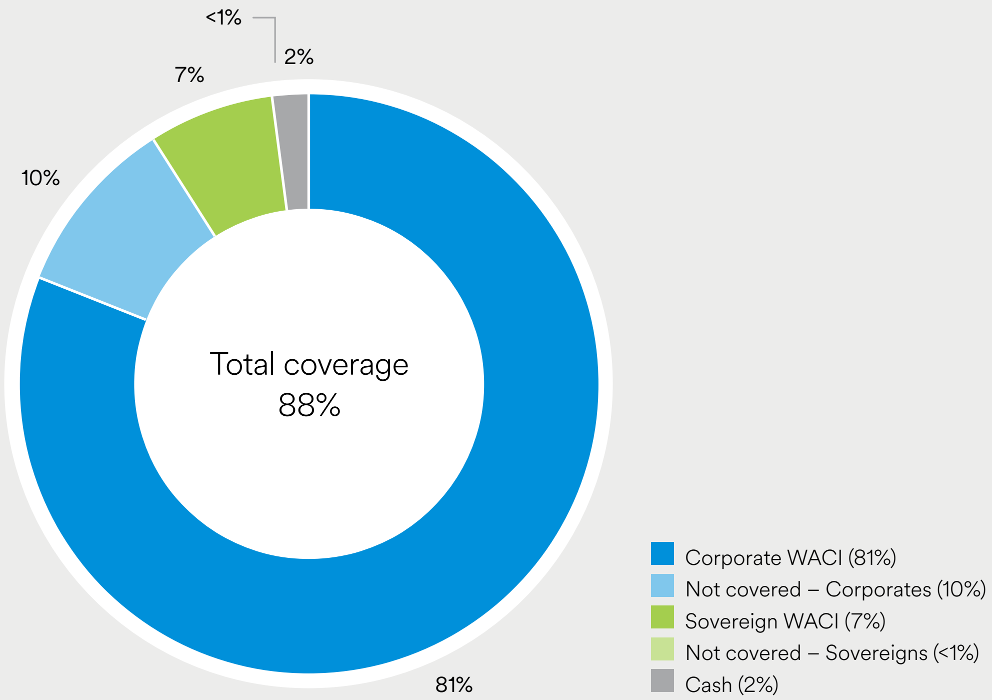
When scope 3 emissions are included, the aggregated WACI increases to

785.5

tCO_2e/US\$m

Alongside portfolio WACI, MIM has once again calculated separate WACI figures for corporate and agency issuers, and for sovereigns and regulators. These two categories of issuers pose different methodological and data availability challenges: the methodologies and data behind corporate WACI are more advanced than they are for sovereign issuers; and the denominators for each (revenue and GDP) are not comparable. By providing both figures separately, MIM aims to deliver the highest level of transparency in its reporting.

2023 WACI Coverage by Portfolio Weights



Weighted Average Carbon Intensity (WACI)

Carbon Intensity Metrics: the Importance of the Denominator

WACI is the Sustainable Finance Disclosure Regulations (SFDR)-recommended metric for carbon intensity, though like most metrics it has limitations. It is a snapshot metric that shows a portfolio's carbon intensity at one point in time rather than capturing issuers' emission-reduction commitments or their decarbonisation trajectories.

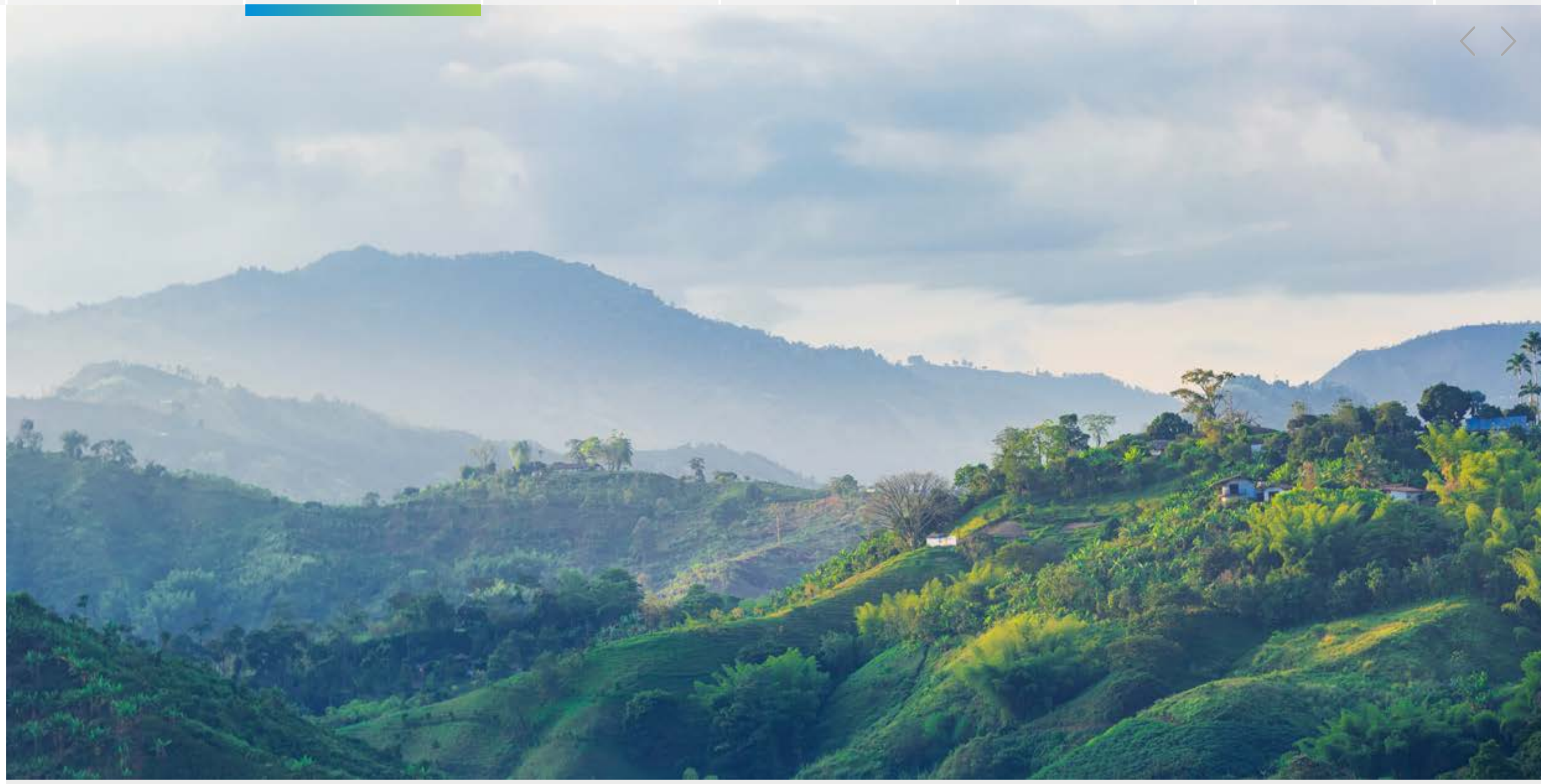
$$\frac{\text{issuer's scope 1 and 2 GHG emissions}_i}{\text{issuer's US\$m revenue}_i}$$

The sectoral composition of a portfolio drives portfolio WACI as certain sectors are inherently more carbon intensive than others. For example, the utilities sector comprises companies involved in large-scale energy production that, when from sources other than renewables, releases significant volumes of CO_2 into the atmosphere, both from energy production and through the infrastructure needed to distribute it. By comparison, the healthcare sector, consumes energy to power hospitals and care facilities but on a much smaller scale. This difference can also apply in reporting boundaries, as some issuers such as those in energy transmission and distribution, will report on the emissions of energy purchased that is then transmitted to the consumer, but not used by the issuer itself. So, while WACI provides an insightful view of an issuer's emissions performance relative to its peers, it still needs to be viewed in the context of its sector's performance and methodological quirks.

WACI, as an intensity figure, can be measured using different variables, such as revenue, enterprise value including cash (EVIC) or sector-specific KPIs. The table below highlights some characteristics of these variables. Revenue is most widely used by investment managers as it is available with good coverage from service providers. The PFI Sustainability Research team WACI methodology uses revenue to align to market practice and because using revenues as the unit of intensity allows for the calculation of WACI across asset classes.

The table below presents some examples of carbon intensity metrics, and some positives and negatives of each of these.

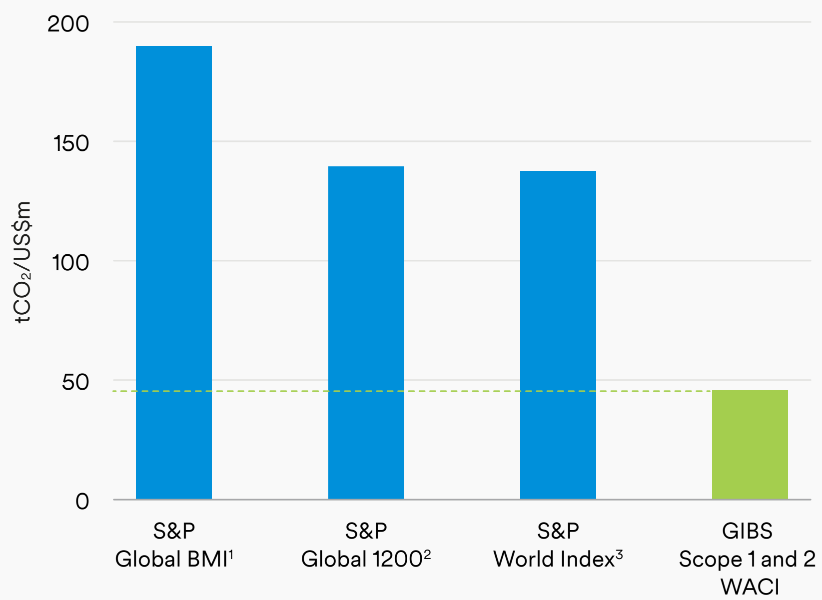
Intensity Metric	Denominator	Pros/Cons
WACI	Revenue	• Good data availability and coverage • SFDR-recommended metric • The figure may reflect financial rather than emissions profile changes
Economic Emissions Intensity	EVIC	• EVIC varies due to fluctuations in valuation, which tend to change much more frequently than revenue
Sector-specific intensity measures, e.g. GHG emissions per kWh	Sector-specific	• Useful for comparing issuers in the same sector • Would not be an appropriate measure for a cross-industry portfolio



Comparing WACI

Last year, the report provided an in-depth comparison between the WACI of the portfolio and the Bloomberg Barclays Global Agg, which is used as a benchmark. This year a different approach has been taken and the chart below compares the portfolio WACI to several non-green global indexes to contextualise its performance. All four indexes use the same data source (S&P Trucost) for the WACI calculation.

The scope 1 and 2 WACI value of this portfolio is significantly lower than numerous non-green indexes



1 https://www.spglobal.com/spdji/en/indices/equity/sp-global-bmi/#data
2 https://www.spglobal.com/spdji/en/indices/equity/sp-global-1200/#data
3 https://www.spglobal.com/spdji/en/indices/equity/sp-world-index/#data

Corporates and Agencies – WACI

The portfolio had a corporates and agencies' (corporate hereafter) scope 1 and 2 WACI of 29.1tCO_2e/US$m revenue and a scope 1, 2 and 3 WACI of 758.4tCO_2e/US$m revenue in 2023.

Corporates and Agencies:

All issuers, including utilities, industrials, financial institutions, supranationals and government-related agencies, but excluding those designated Sovereigns and Regulators (see page 52).

Corporate Scope 1 and 2 WACI of
29.1
tCO_2e/US$m

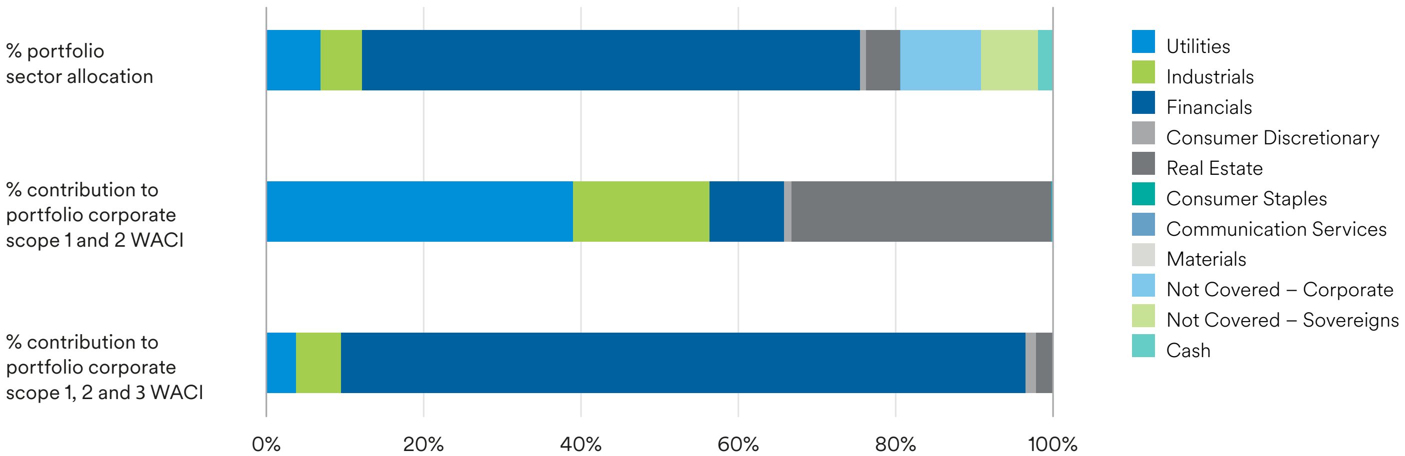
Just two sectors contribute
72.1%
of the portfolio's corporate scope 1 and 2 WACI

Financials represent
63.3%
of portfolio allocations, but their contribution to scope 1 and 2 WACI is just
9.5%

For the aggregated scope 1, 2 and 3 WACI, this year's figure is a significant increase on last year, primarily driven by the improvements in emissions reporting within the financial sector and its investments.

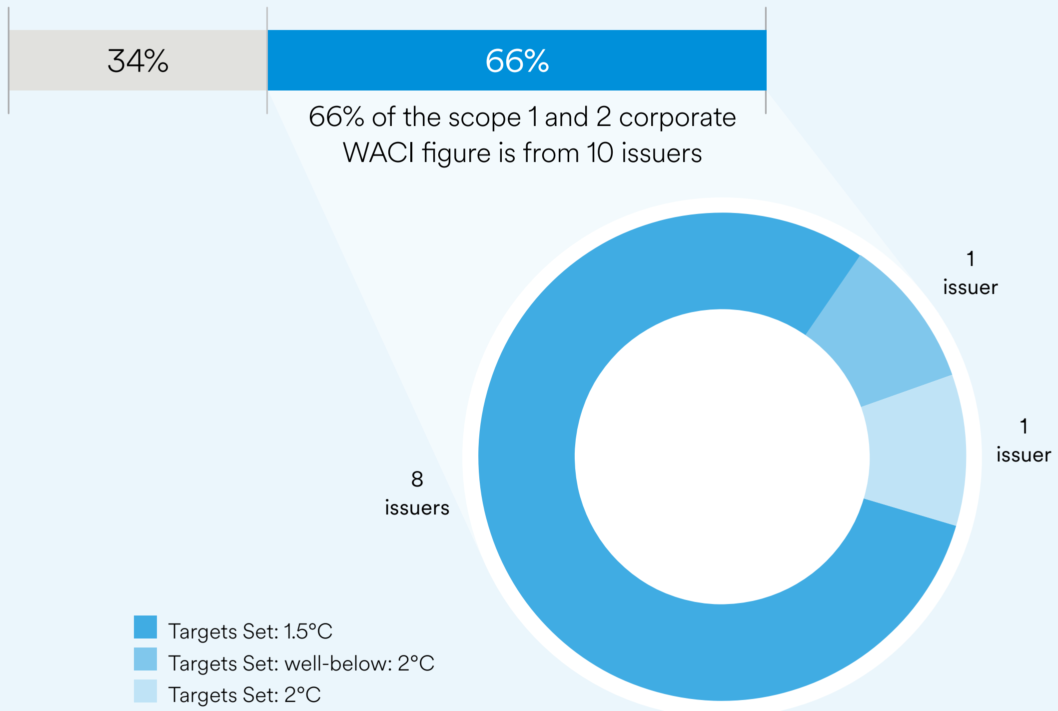
Additionally, data vendors have improved their ability to estimate scope 3 emissions across sectors where direct reporting is not available. MIM's engagements with financial issuers this year suggest that the increase in data availability is driving higher scope 3 emissions values across portfolios. As regulatory pressure increases, this trend is expected to continue, with more robust data becoming available across sectors. However, scope 3 data remains of a lower quality than data for scope 1 and 2, because there is a wide variance in estimation methodologies and ambiguity about reporting boundaries. This also makes direct comparisons of scope 3 emissions between issuers challenging. It is also important to note that data vendor estimation methodologies usually apply sector-level metrics to individual issuers. While this is helpful to provide indicative values, it can result in scope 3 values that are driven more by scale than true performance.

Corporate WACI Contribution vs. Portfolio Sector Distribution



In line with previous years, the main contributions to the scope 1 and 2 WACI figure come from limited portfolio allocations to a small number of sectors with high scope 1 and 2 emissions intensities. For example, while utilities and real estate made up 6.8% and 4.3% of the portfolio respectively, these sectors contribute 72.1% of the portfolio's scope 1 and 2 WACI.

Presence and Ambition of Science-based Targets (SBT) for Top 10 WACI Contributors



The corporate WACI figure is driven by a minority of issuers. However, the large majority of these issuers have credible transition plans that have been approved by the Science-based Targets initiative (SBT).

Sovereigns and Regulators –WACI

Sovereign and regulators (sovereign hereafter) WACI calculations took the same approach as last year, in line with the recommendations of the Partnership for Carbon Accounting Financials (PCAF), which uses the definitions outlined below, as well as reporting sovereign WACI both with and without LULUCF.

Sovereigns and Regulators:

Sovereign-related entities, including central governments and treasuries, sub-sovereigns, and municipalities.

The portfolio had a sovereign scope 1 and 2 WACI (including LULUCF) of 16.6tCO_2e/PPP-adjusted GDP US$m and a scope 1, 2 and 3 WACI of 27.4tCO_2e/PPP-adjusted GDP US$m in 2023. Excluding LULUCF, the figures were 16.2 and 27tCO_2e/PPP-adjusted GDP US$m respectively.

Sovereign Scope 1 and 2 WACI (including LULUCF)
16.6
tCO_2e/PPP-adjusted GDP US$m

Sovereign Scope 1, 2 and 3 WACI (including LULUCF)
27.4
tCO_2e/PPP-adjusted GDP US$m

Excluding LULUCF Scope 1 and 2
16.2
and for Scope 1, 2 and 3
27
tCO_2e/PPP-adjusted GDP US$m

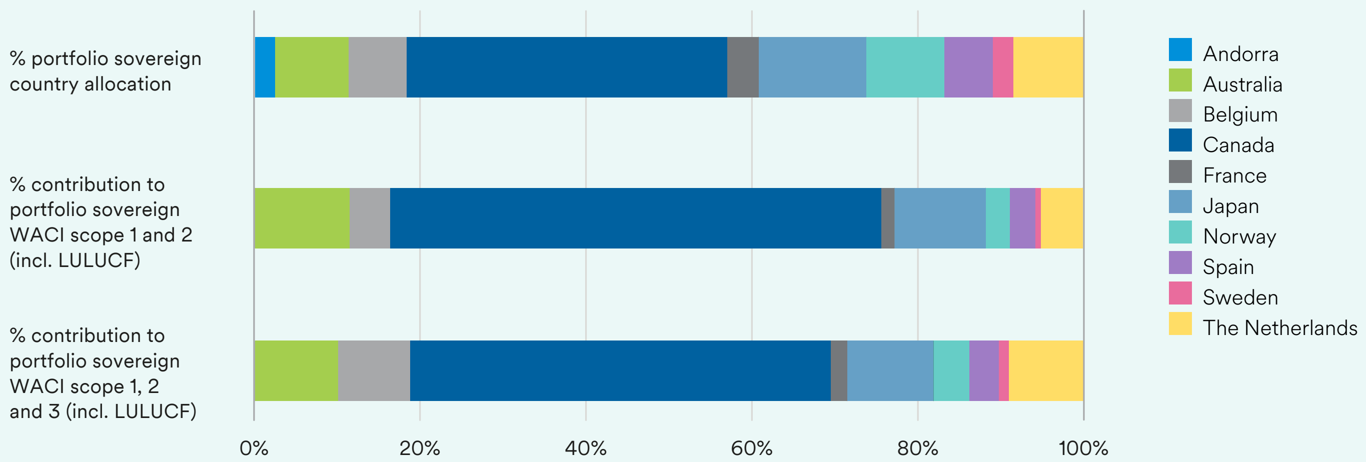
The scopes of emissions for sovereigns are not identical to those of corporates, owing to the differing drivers of their emissions. The scopes for sovereigns WACI are:

Scope 1	Scope 2	Scope 3
Domestic GHG emissions from sources located within the country territory	GHG emissions occurring as a consequence of the domestic use of grid-supplied electricity, heat, steam and/or cooling that is imported from another territory	GHG emissions attributable to non-energy imports as a result of activities taking place within the country territory

The largest contributor to the portfolio's sovereign WACI figures is Canada. While Canada makes up the largest sovereign country allocation, its contribution to the scope 1 and 2 WACI figure is disproportionately large: 38.7% of the sovereign allocation and 59.3% of the WACI contribution respectively.

Like last year, our exposure to Canada is driven by bonds issued by the provinces of Quebec and Ontario, which due to the data difficulties in the measurement of sub-sovereign emissions are mapped up to the relevant sovereign, in this case Canada. These provinces, however, do not have significant oil production.[1]

Sectoral Breakdown % Sovereign WACI Allocation vs. Contribution



1 Statistics Canada, NRCan – Energy Fact Book 2023-2024, page 107 (statistics for 2022).

54 | Sustainability Regulation

Evolving Regulatory Landscape

In many countries, government regulation continues to promote investment in sustainable activities and more-detailed sustainability disclosures from both companies and investors.

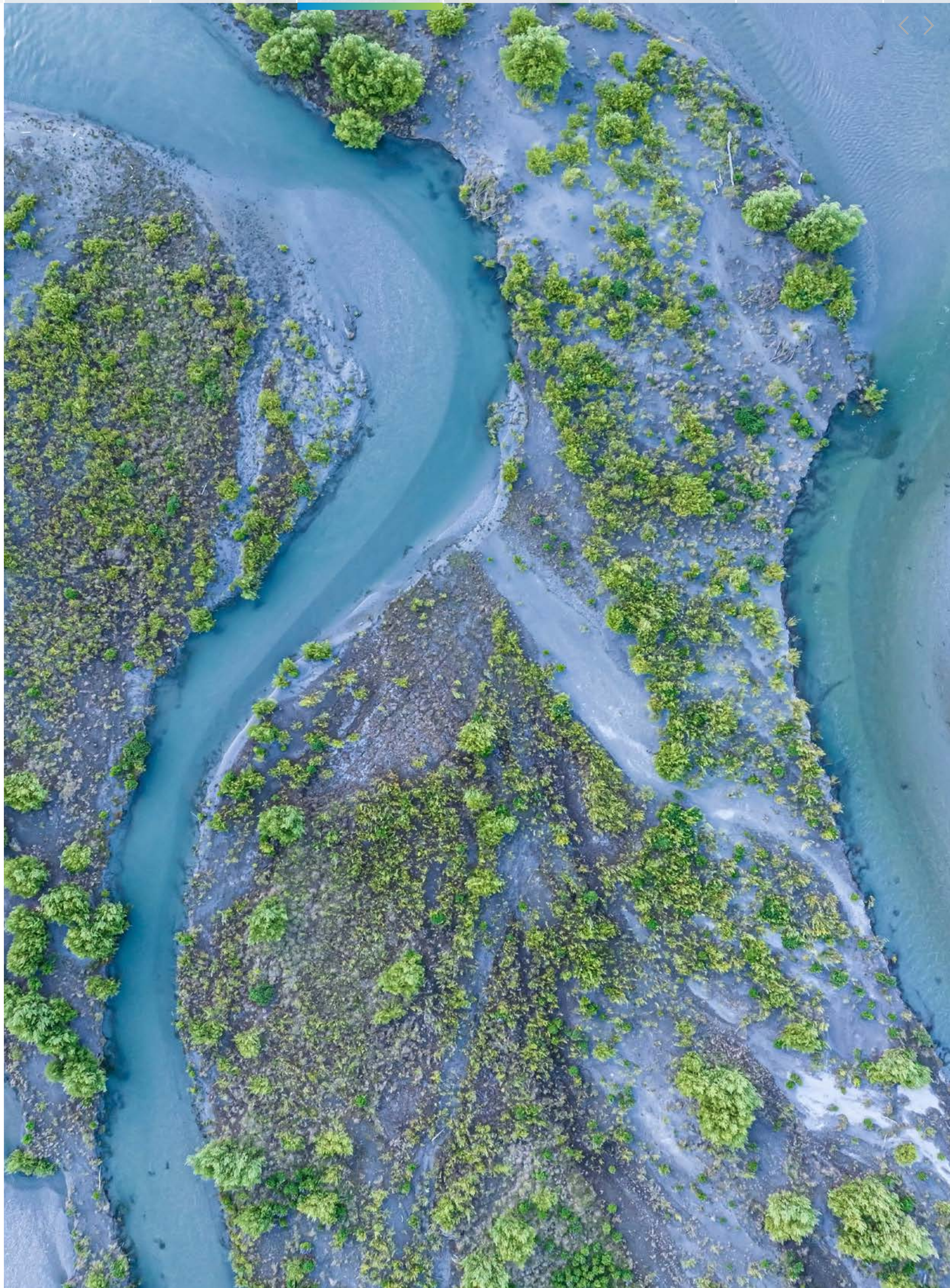
The policy momentum for decarbonisation is evident in a number of places. For example, the Inflation Reduction Act, a landmark climate bill in the US, has encouraged large-scale investment in low-carbon technologies.[1] Similarly, the EU provides support for decarbonisation through its Green Deal strategy, with the REPowerEU programme allocating EUR 300bn towards renewable energy, energy efficiency and other measures.[2] Further, companies in several high-emitting sectors will need to take steps to decarbonise in the coming years in response to the phasing in of the Carbon Border Adjustment Mechanism, which begins in 2026.[3]

Another regulatory trend is the growing push for detailed reporting and disclosures. For example, in the EU, the Corporate Sustainability Reporting Directive (CSRD) now requires companies, starting with the largest, to report sustainability data in line with the European Sustainability Reporting Standards, while the Corporate Sustainability Due Diligence Directive requires large companies to address environmental and social risks in their supply chains. In the US, the Securities and Exchange Commission (SEC) has introduced a requirement for companies to report on their scope 1 and 2 emissions within annual 10-K reports, and California now requires large companies operating in state to report on scope 1, 2 and 3 emissions.[4,5]

Through its programme of thematic engagements, the PFI Sustainability Research team has had productive conversations with issuers affected by these new requirements to develop a clearer understanding of their impact and the ways in which issuers are adapting to them (see page 28 for more detail).

At the same time, regulations on disclosures and greenwashing are being introduced for asset managers. The SFDR in the EU and the Sustainability Disclosure Requirements (SDR) in the UK now require asset managers to explain the nature of sustainability integration within their funds. The SDR also includes rules governing how sustainability-related wording can be used in fund materials. Fund-labelling and anti-greenwashing regulations are also being implemented in several other regions.[6,7]

1 https://www.whitehouse.gov/briefing-room/statements-releases/2023/08/16/fact-sheet-one-year-in-president-bidens-inflation-reduction-act-is-driving-historic-climate-action-and-investing-in-america-to-create-good-paying-jobs-and-reduce-costs/
2 https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal/repowereu-affordable-secure-and-sustainable-energy-europe_en
3 https://www.woodmac.com/horizons/how-the-cbam-will-change-the-world/
4 https://www2.deloitte.com/us/en/pages/audit/articles/sec-climate-disclosure-guidance.html
5 https://www.thomsonreuters.com/en-us/posts/esg/california-climate-reporting-law/
6 https://www.reuters.com/sustainability/us-sec-poised-ban-deceptive-esg-growth-fund-labels-2023-09-20/
7 https://www.esgtoday.com/australia-to-develop-sustainable-finance-taxonomy-labels-for-esg-investment-products/



Sustainable Finance Disclosure Regulation Reporting

The EU's Sustainable Finance Disclosure Regulation (SFDR) sets out disclosure requirements that apply to investors and financial advisers. It affects EU financial market participants and non-EU financial market participants that are managing EU-domiciled funds or marketing into the EU.

The Global Impact Bond Strategy is categorised as an Article 9 fund under the SFDR, meaning that it has a sustainability objective, a minimum commitment to make sustainable investments, and that it fully complies with the disclosures required under SFDR. The table opposite reports against the mandatory Principal Adverse Impacts (PAIs) as stipulated by the SFDR.

This is the second year of reporting against the PAIs and the methodology has been updated to align with the highest-quality data available from the service provider and using the 'all investments value' as a denominator rather than the 'only relevant investments'. This is believed to be better-aligned with the SFDR definition of all investments, though it does mean the PAI figures provided in this report are not directly comparable with those of last year.[1]

Principal Adverse Impacts (PAIs)[2]	Value	Coverage[3]	Data Source[4,5]
Mandatory PAIs			
GHG emissions (scope 1)	4,980tCO_2e	81%	S&P
GHG emissions (scope 2)	1,644tCO_2e	81%	S&P
GHG emissions (scope 3)	40,362tCO_2e	81%	S&P
Carbon footprint	77.5tCO_2e/EURm	81%	S&P
GHG intensity of investee companies	800tCO_2e/EURm	81%	S&P
Exposure to companies active in the fossil-fuel sector	3.2%	30%	Clarity AI
Share of non-renewable energy consumption	19.6%	26%	Clarity AI
Share of non-renewable energy production	2.2%	6%	Clarity AI
Energy consumption intensity per high-impact climate sector	0.06GWh/EURm	10%	Clarity AI
Activities negatively affecting biodiversity-sensitive area	0.0%	30%	Clarity AI
Emissions to water	<0.01t/EURm invested	12%	Clarity AI
Hazardous waste ratio	0.5t/EURm invested	24%	Clarity AI
Violations to UNGC and OECD guidelines	0 cases	100%	Clarity AI, ISS Datadesk and in-house research
Lack of processes and compliance mechanisms to monitor compliance with UNGC and OECD guidelines	0%	32%	Clarity AI
Unadjusted gender pay gap	7.1%	23%	Clarity AI
Board gender diversity	15.5%	32%	Clarity AI
Exposure to controversial weapons (anti-personnel mines, cluster munitions, chemical and biological weapons)	0	33%	Clarity AI
Sovereigns and regulators: GHG intensity incl. LULUCF	28.9tCO_2e/EURm	7%	S&P
Sovereigns and regulators: GHG intensity excl. LULUCF	28.5tCO_2e/EURm	7%	S&P
Sovereigns and regulators: investee countries subject to social violations	0	5%	Clarity AI
Optional PAIs			
Share of bonds not issued under EU legislation on environmentally sustainable bonds[6]	81%	86%	Issuer reported
Number of identified cases of severe human rights issues and incidents	0 cases	30%	Clarity AI

Exposure to companies active in the fossil fuel sector:

Given that the SPECTRUM portfolios are impact portfolios with strong verification processes, it may seem surprising that there is any exposure to companies active in the fossil-fuel sector. Exposure in this portfolio comes from the issuers listed below and it is important to be clear about their levels of exposure since it could otherwise be inferred from the PAI that these are purely fossil-fuel companies. The holdings in each of the issuers below are in labelled bonds only.

Issuer	Fossil Fuel Exposure per SFDR Definition[7]
SSE Plc	15.7% natural gas distribution
Hera	65% natural gas distribution
Ørsted	0.02% thermal coal distribution, 17% natural gas distribution
A2A Spa	1.9% thermal coal distribution, 4.7% natural gas distribution

1 https://www.esma.europa.eu/sites/default/files/2023-05/JC_2023_18_-_Consolidated_JC_SFDR_QAs.pdf
2 For definitions of the PAIs please refer to 'Annex 1 principal adverse sustainability impacts statement' that can be found here: https://ec.europa.eu/finance/docs/level-2-measures/C_2022_1931_1_EN_annexe_acte_autonome_part1_v6.pdf
3 The Global Impact Strategy is held 91% in corporates and 7% in sovereigns, which means that 7% coverage of sovereigns represents complete coverage of the sovereign portfolio allocation.
4 Clarity AI data pulled 11/07/2024.
5 Some data sources have been amended compared to last year's reporting so data is not directly comparable.
6 This metric is based on the EU Taxonomy alignment study that can be found on page 38.
7 Revenue exposures from S&P.

60 | SDG Aligned Case Studies

1 FLOOD CONTROL IN FRANCE

Region Occitanie – Sustainability Bond[1]

Proceeds from Occitanie's sustainability bond have been used to fund the construction of improved flood defences along a section of the lower Rhône.

Occitanie in the south of France and bordering Spain and Andorra is the country's fifth-most-populous region with 5.8m inhabitants. It encompasses the cities of Toulouse and Montpellier and is expected to see rapid population growth in the next few years. The Municipality has a broad range of investments to support its development covering tourism, transport, education, healthcare, housing, sports, and energy.

Since 2000, the region has experienced a number of severe and costly floods when the Rhône, one of Europe's largest rivers, broke it banks. The Municipality is part-funding a €58m project to strengthen 13km of the Rhône dyke between Beaucaire and Fourques to prevent such events in the future. The project, which began in 2019, required the dyke to be completely demolished to allow the construction of deep foundations that are able to resist a 100-year flood. When completed, it will provide protection for around 18,000 inhabitants, as well as businesses and agriculture.

Impact

- Protection of inhabitants from flooding.
- Protection of land from flooding.
- Renewal of aging infrastructure.

KPIs

- 13km of dyke reinforced.
- 5km of dyke resistant to overflow.
- 18,000 inhabitants protected.
- 125km² of land protected.

SDG Supported

2 EXPANDING ONSHORE WIND-ENERGY CAPACITY IN BRAZIL

Statkraft – Green Bond[2]

Norwegian company Statkraft is Europe's largest renewable electricity generator. Since 2022, has been issuing green bonds to finance renewable-energy projects around the world.

Proceeds from the green-bond have been used to finance the Ventos de Santa Eugenia Project in Brazil. This is Statkraft's largest wind project in South America and will include 14 wind farms in the state of Bahia, contributing an additional 519MW of renewable-electricity capacity. The state has ideal conditions for renewable-energy generation and the project is expected to deliver 2.3TWh of wind power per year – enough to supply 1.2m Brazilian homes. In addition to energy generation, Statkraft is delivering education and other supporting infrastructure activities in nearby communities as part of its commitment to a just transition.[3]

In order to reach its renewable energy targets under the National Energy Plan 2050, Brazil has a target of meeting 45% of its primary energy demand with renewable energy by 2030. The second-largest source of renewables is projected to be wind, so this project is contextually important in supporting Brazil's energy transition.[4]

Impact

- Support Brazil's progress towards scaling up renewable-electricity generation and achieving its renewable-energy targets.
- Supporting diversification of renewable-energy sources and reliability in Brazil.

KPIs

- 2.3TWh of renewable energy generated per year.
- 1.2m Brazilian homes powered by renewable wind energy.

SDG Supported

3 SUPPORT FOR NEURODEVELOPMENTAL DISORDERS IN SOUTHERN ITALY

Intesa Sanpaolo – Sustainability Bond[5]

Intesa Sanpaolo's sustainability bond has helped to fund a centre that provides support and therapy for people with autistic spectrum disorders and behavioural issues.

Intesa Sanpaolo SpA is Italy's largest banking group by assets and has a strong social impact and climate change mitigation. It is a member of the Net Zero Asset Owners Alliance, has emissions reduction targets and strong ESG Policies. Through its sustainability bond Intesa Sanpaolo has allocated over €9.5bn to social financing, split between access to essential services, socioeconomic advancement and empowerment, and employment generation.

One project that Intesa Sanpaolo is funding through its sustainable bond is Associazione "SABIR", which offers support for economic, social, educational and cultural development and integration for disadvantaged communities in southern Italy. One of SABIR's initiatives is the construction of a centre for minors with neurodevelopmental disorders and behavioural issues. It provides access to cognitive-behavioural therapy sessions and helps people with autism-spectrum disorders to acquire individual autonomy. SABIR also runs projects providing protection for victims of violence and support for people with Alzheimer's disease.

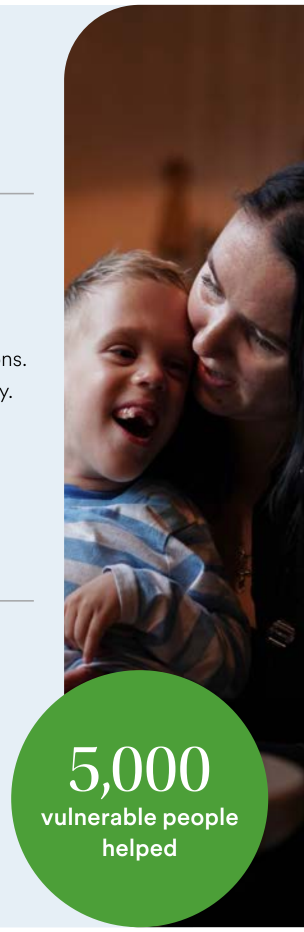
Impact

- Support for vulnerable individuals.
- Support for people with disabilities.
- Safe places for victims of abuse.

KPIs

- 5,000 vulnerable people helped.
- 2,200 migrants have been given assistance.
- 13,000 socio-assistance interventions.
- 50 children engaged in therapy daily.
- 5 adults with autism supported in having autonomy.
- 200 protected listening sessions for victims of abuse.
- 20 elderly people with Alzheimer's supported.

SDG Supported



4 WATER MANAGEMENT IN BOTSWANA[6]

International Bank of Reconstruction and Development – Green Bond

Proceeds from the International Bank of Reconstruction and Development (IBRD) green-bond programme contribute to a range of environmental projects.

Including the Emergency Water Security and Efficiency project in Botswana, which has three main components that address water provision, quality, and management across the country.

The first component improves water-supply service in drought-vulnerable areas. Through a combination of immediate and medium-term investments, an additional 14,500m³ of water has been made available per day, strengthening resilience to the impacts of climate change. The second component enhances wastewater management through refurbishments to treatment facilities and protection of groundwater sources. This has resulted in an additional 2,620m³ of wastewater being treated per day, directly benefitting 75,000 households.[7]

The project also focuses on institutional reform and the bolstering of the Water Utilities Corporation, the national water utility of Botswana. It aims to improve water management in Botswana, which is expected to enhance long-term water security and increase efficiency of water provision, with as many as 580,000 direct beneficiaries.

Impact

- Improved, immediate water security for those within drought-vulnerable areas of Botswana.
- Enhanced resilience to the intensifying impacts of climate change.
- Long-term water security and increased efficiency of Botswana's water-management system.

KPIs

- 14,500m³ of additional water made available per day.
- 2,620m³ of additional wastewater treated per day.

SDG Supported

Images are for illustrative purposes only and do not represent the actual projects.

1 Region Occitanie – Sustainability Report
2 Statkraft 2022 Green Bond Report
3 Statkraft Sustainability Strategy
4 Brazil Renewable Energy 2030 Roadmap
5 Intesa Sanpaolo – Sustainability Bond Report
6 Botswana: Emergency Water Security and Efficiency Project
7 2022 IBRD Green Bond Projects

7.6m
additional passenger capacity

5 EXTENDED METRO LINE IN SOFIA, BULGARIA

European Commission – Green Bond[1]

Proceeds from the European Commission's green bond have been used to finance green and efficient public transport services in Bulgaria's capital, Sofia.

Bulgaria's Resilience and Recovery Plan includes projects to improve and decarbonise public transport with funding from the European Commission's green bond. One of these projects is the construction of the Hadzhi Dimitar – Levski section on line 3 of the Sofia Metro. This will provide 3km of additional clean capacity to Sofia's public transport system and is expected to be completed in December 2025.

The investment is expected to increase the capacity of Sofia Metro by around 7.6m passengers per year as of 2026. Additional benefits are expected through the reduction of urban traffic, air pollution and local GHG emissions.

Impact

- Support the growth of green and efficient public transport under Bulgaria's Resilience and Recovery Plan.
- Provide additional transport options and connections for residents and visitors to Sofia.
- Encourage modal shift towards a cleaner form of transport, reducing GHG emissions.

KPIs

- 3km of track across three stations.
- Additional capacity of 7.6m passengers per year.

SDG Supported

35,250 →

522,250 kWh
of renewable energy

6 DEVELOPING GREEN BUILDINGS IN HONG KONG

Swire Properties – Green Bond[2]

Swire Properties' green-building portfolio has received proceeds from the company's green-bond programme.

One of the projects to benefit is Two Taikoo Place, completed in September 2022 as part of the Taikoo Place redevelopment project, itself part of a broader project to create a green global business district within Hong Kong. Two Taikoo Place has been designed and built to LEED platinum, BEAM plus, and WELL standards – the highest sustainability standards within the industry. Overall, the development creates 70,000ft[2] of landscaped gardens.[3,4]

Two Taikoo Place self-generates 522,250kWh of renewable energy annually through solar PV and a wind turbine on the roof. It also has a bio-diesel tri-generation system, created from the waste cooking oil of tenants, to supply heating, cooling and electricity to the building. In addition to this and other energy efficiency measures, the building has a rainwater harvest and water recycling system that has delivered freshwater savings of more than 46%.[5]

Impact

- Improved efficiency across several factors, reducing pressure on Hong Kong's environmental resources.
- Part of the broader Taikoo Place redevelopment project to create a new economic zone in Hong Kong.

KPIs

- Generates 522,250kWh of energy per year.
- Freshwater savings of more than 46%.

SDG Supported

Images are for illustrative purposes only and do not represent the actual projects.

1 European Commission NGEU Impact and Allocation Report 2023
2 2023 Swire Properties Green Bond Report
3 Two Taikoo Place – Swire Properties
4 6,503m².
5 Based on the BEAM Plus baseline.

7 COMBINED SOLAR AND BESS IN SOUTH AUSTRALIA

Vena Energy – Green Bond[6]

Proceeds from Vena Energy's green-bond programme have been used to build out renewable-energy capacity across Asia and Australia.

This includes Tailem Bend 2 – a combined solar and battery energy storage system (BESS) in South Australia launched in 2022. The project will have a total capacity of 159MW made up of 118MW of solar and 41MW of BESS.

Once complete, the project will provide sufficient power for the average annual needs of 35,000 homes, reducing GHG emissions by more than 207,000tCO_2e. Local employment was a priority during construction: 50% of the workforce are from Tailem Bend; 10% identify as being of Aboriginal decent and 14% as women.[7]

Within Southern Australia, energy demand was entirely met by renewable energy generation for at least part of the day for 289 days of 2023. Tailem Bend 2, and the earlier Tailem Bend 1, directly contributed to this renewable energy supply and support targets for meeting electricity demand using low-carbon technology. With this performance and sustained progress in building renewable-energy capacity, South Australia was able to bring forward its 100% renewable-energy target from 2030 to 2027.[8]

Impact

- Supporting South Australia's state target to achieve 100% renewable energy by 2027.
- Provide a cleaner and more reliable supply of energy with the BESS.

KPIs

- 118MW of solar-energy capacity.
- 41MW of battery energy-storage-system capacity.
- 207,000tCO_2e avoided emissions.

SDG Supported

159MW
energy capacity

8 FORMING NEW BIODIVERSE AREAS IN THE NETHERLANDS

Dutch State Treasury – Green Bond[9]

Proceeds from the Dutch State Treasury's green bond have gone towards financing the creation of 6,687ha of natural areas across the Netherlands.

The funds have been allocated to a 30-year-old national programme, Nadere uitwerking rivierengebied (NURG) with the objective of creating new natural areas in the floodplains of multiple large rivers, particularly the Meuse and Waal. Delivered by the Ministry of Infrastructure and Water Management, the project is divided into 55 sub-projects and covers 6,687ha of new protected natural areas including wetlands, bird habitats, sandy riverbanks and grasslands, across the Netherlands. Within each NURG sub-project, special emphasis is placed on biodiversity – including migratory birds, beavers, otters, grasshoppers and other insects. These areas are largely accessible to the public, allowing residents and visitors to benefit from the spaces protected.

The creation of these natural spaces also aims to increase the water-safety levels and decrease flood risk, providing additional climate adaptation for the Netherlands, more than 26% of lies below sea level.[10]

Impact

- The creation of dedicated and protected natural areas including wetlands, bird habitats, sandy riverbanks and grasslands across the Netherlands.
- Reduced flood risk to surrounding areas through nature-based flood management projects.

KPIs

- 6,687ha of new natural areas across the Netherlands.
- 158ha artificial island designed as a haven for birds and bats.

SDG Supported

6,687ha
of new natural areas

6 Vena Energy – 2023 Sustainability Report
7 Tailem Bend 2 Project
8 South Australia Renewable Energy Target
9 Dutch State Treasury 2022 Green Bond Report
10 Netherlands Sea Level Rise Risk

>73,000
people covered

9 HEALTHCARE MANAGEMENT IN ANDORRA

Principality of Andorra – Sustainability Bond[1]

Funds from Andorra's sustainability bond support a national healthcare management and administration service.

Andorra's sustainability bond helps to fund a wide range of environmental and social initiatives, including the Servei Andorra S'Atencio Sanitaria (SAAS). Established in 1986, SAAS coordinates the resources of the private, public and voluntary sectors to provide healthcare services to the 80,000 residents of the principality and its visitors. By integrating all health services into a single functional body, SAAS aims to provide the most efficient use of all resources to improve the health of the population at a guaranteed quality with controlled expenditure. SAAS also implements new policy priorities to reflect the changing needs of the population. It is currently extending mental-health services through the lease of an 869m² community space following the Ministry of Health's new policy directives.

SAAS commits to fair compensation for its professionals and has consistently achieved this throughout the pandemic and subsequent rise in living costs.[2] In addition, SAAS has developed four working groups, one of which focuses on talent recruitment and retention in order to ensure the long-term sustainability of the Andorran healthcare system.

Impact

- Provides access to healthcare for Andorrans, receiving a score of 95/100 on the Healthcare Access and Quality Index developed by The Lancet.[3]
- Full coordination of the national healthcare system, including private, public and voluntary resources.

KPIs

- >73,000 people insured, including 23,760 vulnerable people (including minors, over 65s and those with disabilities).
- 177 hospital beds financed.

SDG Supported

>Energy improvement of
50%

10 MAXIMISING INDUSTRIAL ENERGY EFFICIENCY IN AUSTRIA

SKF – Green Bond[4]

Proceeds from SKF's green bond have been used to fund energy-efficiency measures in a manufacturing plant in Austria.

SKF is a Swedish machine-parts manufacturer with a net zero-by-2050 target and a detailed strategy to achieve it. Part of this strategy to reduce emissions is creating net zero manufacturing units, one of which was financed using green bonds.

SKF's net zero manufacturing unit in Steyr, Austria, is 100% powered by renewable energy and employs a range of industry tools, funded through the project, to further reduce the unit's environmental impact by improving energy performance. These include the use of heat pumps with 1.6MW cooling power, LED lighting in production areas and upgraded heating and ventilation systems with variable speed drive motors. The project is expected to deliver energy efficiencies of around 50%.

Impact

- Improved energy efficiency at manufacturing sites.
- Replacement of outdated heating and lighting equipment.

KPIs

- Expected energy efficiency improvement of 50%.
- Expected annual savings of 1.5GWh.

SDG Supported

11 FOOD SECURITY IN PAKISTAN[5]

Asian Development Bank – Green Bond

The Asian Development Bank (ADB) has been a consistent issuer of green bonds since 2015, with proceeds being used to finance a range of eligible green projects across Asia.

One such project is the Khyber Pakhtunkhwa food-security support project in Pakistan. The project has both environmental and social benefits as it looks to address climate vulnerabilities, food security and improve the livelihoods of rural farm households within the province.

Khyber Pakhtunkhwa is a northwestern province that has experienced severe flooding, including flash floods in April 2024, which resulted in fatalities and damage to over 3,200 households.[6] This project will provide 200,000 smallholders in the most flood-affected districts with climate-resilient agricultural inputs to rebuild their livelihoods while reducing their vulnerability to such events in the future. In addition, further enabling actions will be taken to reduce inequalities and build long-term resilience through the training of 28,000 female farmers, improved digitalisation and increased institutional preparedness.[7]

Female farmers in the province are mostly unpaid and focus on small scale, low revenue work such as livestock care or cleaning seeds.[7] Switching to higher revenue work is hampered by obsolete technology and geographic isolation. This means female farmers, in particular subsistence farmers, are at high risk of climate impacts, such as flooding, when it causes loss of livestock and crops as it results in malnutrition.[7] The project is, therefore, also important in addressing gender inequalities and improving the long-term health of communities through food and livelihood security.

Impact

- Long-term resilience to climate-induced disasters.
- Improved livelihoods for flood-affected farmers, with a focus on addressing gender inequalities.

KPIs

- 200,000 households to receive resilient seeds and agriculture inputs for increased climate-adaptive crop production.
- At least 28,000 women to receive training and agricultural-input toolkits to improve food production.

SDG Supported

200,000
households supported

Images are for illustrative purposes only and do not represent the actual projects.

1 Andorra Sustainability Bond Report 2022
2 SAAS 2023 Impact on Health
3 Healthcare Access and Quality Index – The Lancet
4 SKF – Green Bond Investor Letter and Impact Report

5 Pakistan: Food Security Support Project
6 Pakistan flash floods April 2024
7 Khyber Pakhtunkhwa Gender Assessment and Action Plan

SUSTAINABLE DEVELOPMENT GOALS

68 | SPECTRUM Aligned Investments

SPECTRUM Aligned Investments

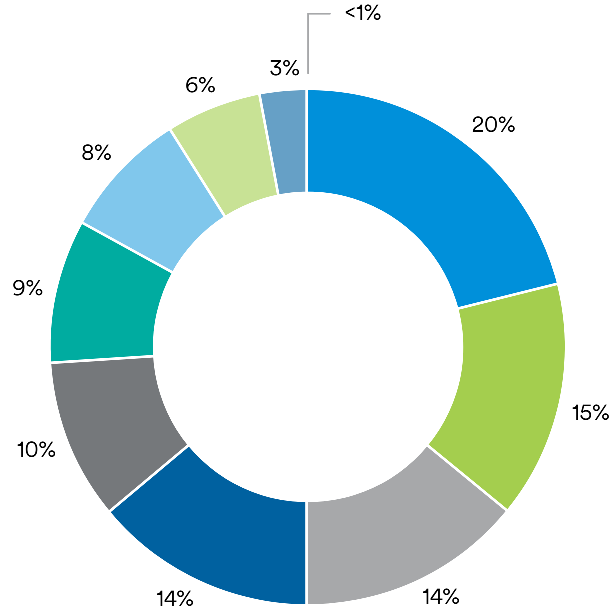
In 2023, 4% of the portfolio was invested in five SPECTRUM aligned issuers. These are defined as issuers that receive at least 50% of revenues generated from sectors aligned with the SPECTRUM taxonomy (see pages 16-17).

SPECTRUM aligned issuers have a clear commitment to climate mitigation and adaptation, and to sustainable economic development. SPECTRUM aligned bonds are an important portfolio-management tool.

Asian Development Bank (ADB)

ADB is a leading multilateral development bank focused on sustainable development in the Asia-Pacific region. The issuer's 2030 strategy focuses on seven operational priorities: poverty reduction, gender equality, climate-change adaptation and mitigation, urban resilience, rural development and food security, governance, and regional cooperation. ADB has high levels of transparency on its current funding as well as strategic priorities to increase its contributions to climate-change mitigation and adaptation, such as an ambition to provide US$100bn in cumulative climate financing from its own resources to its developing member countries between 2019 and 2030. ADB committed US$6.7bn in climate financing in 2022, reaching US$21bn in cumulative financing for 2019-2022.

Commitments by Sector

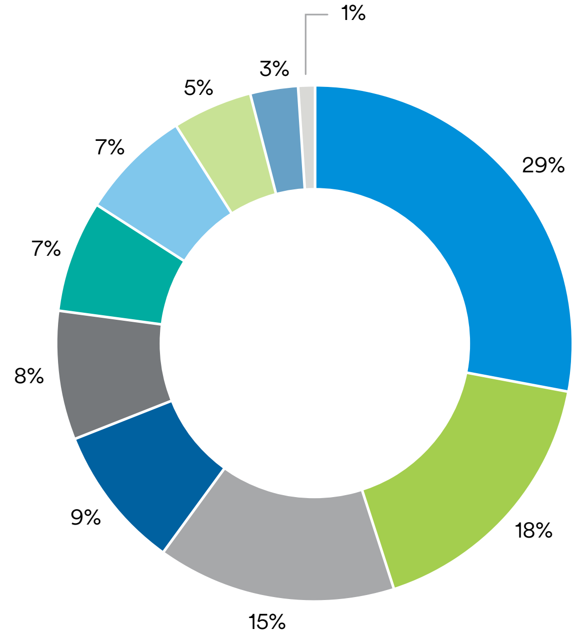


- Transport (20%)
- Finance (15%)
- Agriculture, Natural Resources, and Rural Development (14%)
- Public Sector Management (14%)
- Health (10%)
- Energy (9%)
- Water and Other Urban Infrastructure and Services (8%)
- Education (6%)
- Industry and Trade (3%)
- Information and Communication Technology (<1%)
- Multisector (<1%)

European Investment Bank (EIB)

EIB is a multilateral financial institution owned by and representing the interests of the 27 Member States of the EU. The bank supports implementation of EU policy, with priority areas that include climate and environment, development, innovation and skills, small and medium-sized business, infrastructure and cohesion. Its mission is to finance projects in less-developed regions, in modernisation, and/or of common interest, that cannot be financed by individual members, as well as other development projects outside the EU. Climate action is taken into consideration throughout the assessment and monitoring of all projects. More than half of EIB's investments are in climate action and environmental sustainability.

Loans by Sector



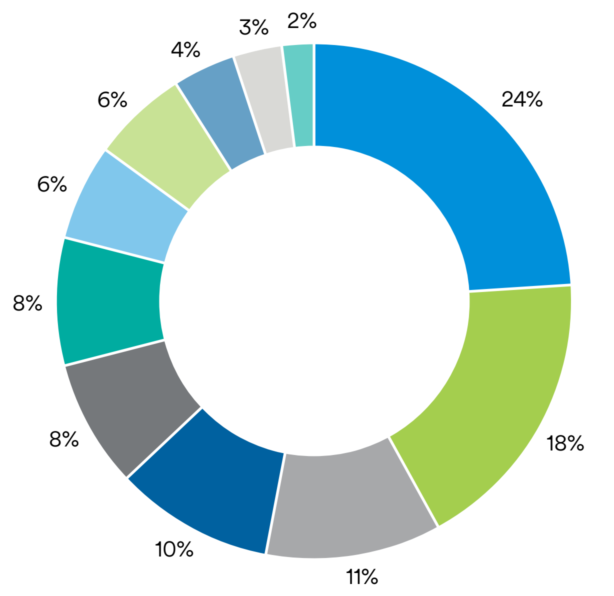
- Transport (29%)
- Global Loans (18%)
- Energy (15%)
- Health and Education (9%)
- Miscellaneous Infrastructure (8%)
- Water and Sewage (7%)
- Industry (7%)
- Services (5%)
- Telecommunications (3%)
- Agriculture, Fisheries and Forestry (1%)

Figures may not total 100% due to rounding.
Source: Issuer reports and websites.

International Bank for Reconstruction and Development (IBRD)

IBRD, part of the World Bank Group, is a mission-driven organisation that supports the dual goals of ending extreme poverty by 2030 and boosting shared prosperity for the poorest 40% of the population with sustainable solutions. IBRD provides loans, guarantees, risk-management products and advisory services to middle-income and credit-worthy low-income countries around the world, as well as technical assistance and regional coordination. About 60% of the world's poorest countries are at high risk of debt distress or are already in distress. IBRD has been a trailblazer in the green-bond market: in 2009 it issued the first green bond of the form that we see in today's market.

Commitments by Sector

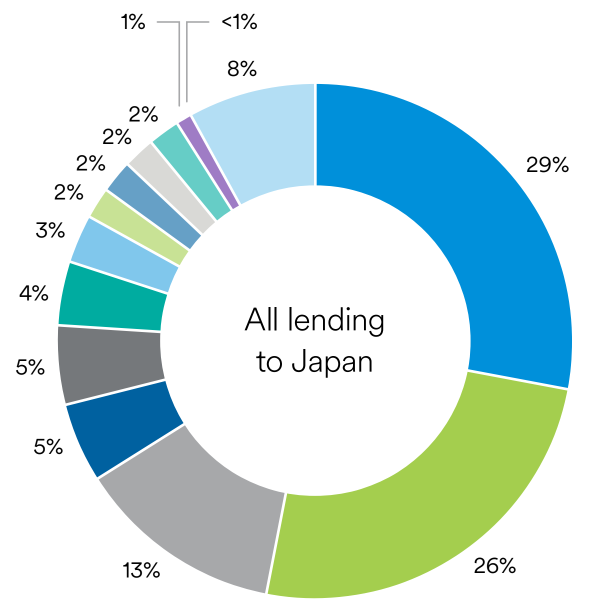


- Public Administration (24%)
- Energy and Extractives (18%)
- Financial Sector (11%)
- Agriculture, Fishing, and Forestry (10%)
- Health (8%)
- Social Protection (8%)
- Industry, Trade, and Services (6%)
- Water, Sanitation, and Waste Management (6%)
- Education (4%)
- Transportation (3%)
- Information and Communications Technologies (2%)

Japan Finance Organisation for Municipalities (JFM)

JFM is a funding organisation set up to optimise funding for local authorities in Japan. It focuses on long-term lending, reflecting the longer life cycles of social infrastructure projects for which local governments borrow. JFM expects continued high financing demand for the newly established decarbonisation promotion projects. Key financing areas include sewage management, water, hospitals, and elderly care, as well as disaster management for an earthquake-prone country with large areas vulnerable to rising sea levels.

Outstanding Loans by Sector



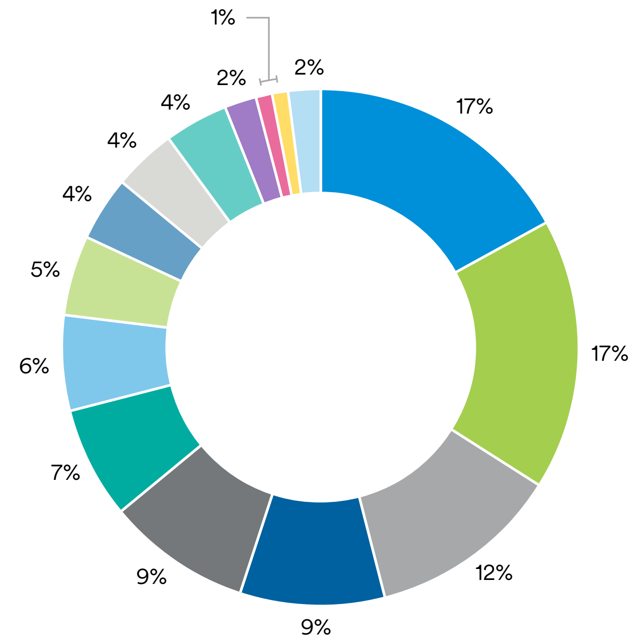
- Sewerage (29%)
- Temporary Financial Countermeasures (26%)
- Water Supply (13%)
- Hospitals (5%)
- Special Municipal Mergers (5%)
- Disaster Management and Mitigation (4%)
- Transportation (3%)
- Loans Covering Decrease in Local Tax Revenues (2%)
- Local Road Development (2%)
- Proper Management of Public Facilities (2%)
- Public Projects (2%)
- Industrial Water Supply (1%)
- Toll Road Public Loans (<1%)
- Others (8%)

Figures may not total 100% due to rounding.
Source: Issuer Reports and websites.

Inter-American Development Bank (IDB)

IDB is a leading multilateral development bank that works to improve lives in Latin America and the Caribbean. The bank provides financial and technical support for countries to improve health and education, advance infrastructure, and achieve development in a sustainable, climate-friendly way. IDB has committed to increase climate finance, setting a target in 2022 for 40% of its financing to be going to climate and green finance by 2025. In 2023, 45% of its lending went towards climate-related projects, contributing to its Paris Agreement alignment. It has extended its target to triple its direct and mobilised climate financing to US$150bn over the next decade.

Outstanding Loans by Sector



- Reform/Modernisation of the State (17%)
- Transport (17%)
- Energy (12%)
- Financial Markets (9%)
- Social Investment (9%)
- Private Firms and SME Development (7%)
- Water and Sanitation (6%)
- Urban Development and Housing (5%)
- Education (4%)
- Environment and Natural Disasters (4%)
- Health (4%)
- Agriculture and Rural Development (2%)
- Science and Technology (1%)
- Trade (1%)
- Others (2%)

74 | Glossary and Disclaimers

Glossary

ABS – Asset backed securities
ADB – Asian Development Bank
AIM – Affirmative Investment Management
ASCOR – Assessing Sovereign Climate-related Opportunities and Risks
BNG – Biodiversity Net Gain
CDP – Carbon Disclosure Project
CO_2 – carbon dioxide
CO_2e – carbon dioxide equivalent
CSRD – Corporate Sustainability Reporting Directive
DNSH – Do No Significant Harm
EIB – European Investment Bank
EPC – Engineering, Procurement and Construction
ESG – Environmental, Social and Governance
EV – electric vehicle
EVIC – Enterprise value including cash
gCO_2e/kWh – grams of CO_2 equivalent per kilowatt hour
GHG – Greenhouse Gases
GJ – gigajoule
GWh – gigawatt hour
ha – hectare
HFC – Hydofluorocarbons
IBRD – International Bank for Reconstruction and Development also known as World Bank
IDB – Inter-American Development Bank
IEA – International Energy Agency
IFRS – International Financial Reporting Standards
IRENA – International Renewable Energy Agency
ISSB – International Sustainability Standards Board
ISS ESG – Institutional Shareholder Service inc. ESG
KPI – key performance indicator
kWh – kilowatt hour
kV – kilovolt
LULUCF – land use, land-use change and forestry
MBS – Mortgage backed securities
MIM – MetLife Investment Management
MW – megawatt
MWh – megawatt hour
NDC – Nationally Determined Contribution
NZAM – Net Zero Asset Manager Initiative
NZE – Net Zero Emissions Scenario
OECD – The Organization for Economic Cooperation and Development
Ofgem – The Office of Gas and Electricity Markets
PAE – Potential Avoided Emissions
PAI – Principal Adverse Impacts
PCAF – Partnership for Carbon Accounting Financials
PFI – Public Fixed Income
PRI – Principles for Responsible Investment
PM10 – particulate matter that is small enough to cause adverse health effects
REIT – Real Estate Investment Trust
SASB – Sustainability Accounting Standards Board (now part of IFRS)
SEC – Securities and Exchange Commission
SBT – Science-based Targets
SDG – Sustainable Development Goals
SFDR – Sustainable Finance Disclosure Regulation
SME – small and medium-sized enterprises
Solar PV – solar photovoltaic
SPECTRUM – verification methodology (see page 14)
STEPS – Stated Policies Scenario
TCFD – Task Force on Climate-Related Financial Disclosures
tCO_2e – tonnes of CO_2 equivalent
t/EURm – tonnes per million of EUR revenue
tCO_2e/EURm – tonnes of CO_2 equivalent per million of EUR revenue
tCO_2e/PPP-adjusted GDP US$m – tonnes of CO_2e per Purchasing Power Parity-adjusted GDP (gross domestic product) in millions of US dollars
tCO_2e/US$m – tonnes of CO_2 equivalent per million of US dollars
that can lead to respiratory problems
TNFD – Task Force on Nature-Related Financial Disclosures
tNOx – tonnes of nitrogen oxides
TWh – terawatt hour
UNGC – United Nations Global Compact
WACI – Weighted Average Carbon Intensity

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Morningstar disclaimer

AIM disclaimer

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