2024

Sustainability report

ircantec

La retraite complémentaire publique

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Framework documents **concerning Ircantec's SRI policy**

SRI Charter [1]

- General SRI policy, incorporation of ESG criteria in the investment policy, the climate policy and the biodiversity policy.
- Application across Ircantec's portfolios.
- Reviewed in the sustainability report.

Voting policy [1]

- Improvement in the governance of companies in which Ircantec is a shareholder.
- Implementation in the voting rules subject to annual review.
- Voting report [1].

Engagement policy [1]

- Dialog with issuers and participation in collective marketplace initiatives.
- Definition of the main engagement themes.
- Engagement report.

(1) https://www.ircantec.retraites.fr/nous-connaitre/investissement-socialement-responsable.

Foreword

Christophe Iacobbi, Chairman of the Board of Trustees of Ircantec*

We are a long-term investor committed to a just transition

On behalf of the Trustees of Ircantec, whom I thank for their commitment, and as the Chairman of the Board of Trustees and representative of the employer college for the 2021–2024 period, it is my great pleasure to introduce this 2024 sustainability report.

I would like to take this opportunity to share some of the beliefs I have developed during my term of office, which ended in December 2024, but which I have continued on an interim basis alongside the Vice-chairman until a successor is appointed.

Although the primary mission of Ircantec is to ensure the payment of pensions to members, and to preserve and develop its reserve capital, it must also respect the three pillars of a socially-responsible investment (SRI), in line with the values of intergenerational solidarity. I remind you that through our different terms of office, all Trustees have had the ambition to implement a demanding, innovative, forward-looking and inspiring SRI policy.

At the end of 2024, reserves (including cash) amounted to €17.2 billion compared to €15.5 billion at the end of 2023, representing an increase of +10.9%. Almost 17% are invested in the environmental transition.

In 2024, Ircantec continued to reinforce its commitments to the environmental transition, by incorporating stricter demands in its SRI Charter. This reflects a pragmatic and realistic approach that incorporates the complexity of current geopolitical and social backdrops, both national and international. We remain attached to the principles of feasibility and acceptability, so that the climate, biodiversity and social challenges can be shared between the greatest number of people.

With this in mind, Ircantec has updated its exclusions in terms of the main fossil energy sources, namely thermal coal, oil and gas. These adjustments reflect our desire to align our investments with global climate goals while supporting companies committed to a just transition.

Throughout my term of office, Ircantec has been recognized as a pioneer amongst the community of institutional investors committed to SRI. An example for 2024 is Ircantec's adoption of a biodiversity policy, announced at COP16 on Biodiversity. In its new Biodiversity Policy, Ircantec has reinforced its commitments to protect nature. This ambitious policy is based on divesting from companies active in biodiversity-impacting fields (palm oil, GMO, pesticides and furs) after an initial dialog phase, continuing commitments to sustainable forest management on forestry assets, new goals for the real estate segment and strengthening biodiversity-related shareholder engagement efforts (to which end Ircantec joined the international Nature Action 100 initiative, which unites institutional investors to drive enterprise commitment on efforts to protect biodiversity).

As a long-term investor committed to a just transition, we will support business entities in the transformation of their value chain through the integration of the required social and societal changes, while observing our financial obligations towards our affiliates. Despite the regulatory and political changes in play, Ircantec aims to support its sustainable ambition by reinforcing its SRI Charter and maintain its sustainable practices throughout the entire investment cycle.

* Christophe Iacobbi was the Chairman of the Board of Trustees for the 2021–2024 term.

1

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1.1 Executive Summary

In light of the climate crisis, Ircantec strengthened its commitments in October 2021 to ensure that its reserves are on course to deliver emissions reductions compatible with a 1.5°C scenario. Through this policy, the Scheme aims to fully withdraw from fossil energy by 2030 and to reduce the emissions of its portfolio by 7% per year on average up to 2050. This strategy also incorporates engagement and voting policies, with particular attention on fossil energies and their financing, alongside a target of 20% of reserves being dedicated to the Energy and Environmental Transition (EET).

Furthermore, in 2024, Ircantec bolstered its commitment to protect biodiversity with a new far-reaching policy. This initiative is inherent to being a responsible investor, by aiming to preserve a viable world for current and future generations while limiting the financial risks involved in the destruction of nature. This policy implements tangible actions such as targeted divestments from activities harmful to biodiversity, such as palm oil, pesticides or GMO, as well as stronger biodiversity-related shareholder commitments. In addition, this report will strengthen our efforts to ensure transparency. The Scheme will report on its biodiversity-related efforts by meeting the recommendation of the Taskforce on Nature-related Financial Disclosures and by publishing its principal adverse impacts, through three optional indicators which measure impact on biodiversity.

In 2024, Ircantec also worked alongside asset management companies to continue the deployment of its climate policy, but also to improve the environmental, social and governance (ESG) performance of the funds. Moreover, the Scheme now uses three providers for non-financial performance analysis: Sustainalytics for non-financial and risk ratings, Trucost for measuring carbon emissions from portfolios and other types of footprints, and Carbon4 to analyze portfolio impact on biodiversity.

In 2024, Ircantec's portfolio again reported non-financial ratings above its reference index, with its ESG risk score being placed in the "low" risk category and the portfolio exhibiting emissions and carbon intensity indicators below those of the index. Ircantec's weighted average carbon intensity rating continued to fall by 5.6% between 2023 and 2024 (after reductions of 21.1% in 2022 and 11.2% in 2023). At the end of 2024, the portfolio temperature lies between 1.5°C and 2°C. Lastly, the Scheme has published a biodiversity footprint of its portfolio for the first time.

Snapshot of main indicators for 2024

	ESG risk score[1] Consolidated scope	Total carbon emissions (tCO_2e) Scope 1,2,3 Scope 2 "business"	Carbon emissions financed (tCO_2e/€M invested) Scopes 1,2,3 – Scope "business"	Carbon exposure (tCO_2e/€M GDP) Sovereign scope
Portfolio	15.4	3,957,570	366	315
Benchmark index	17.3	5,732,049	530	313

Alignment trajectory with the Paris Agreement Corporate scope
1.5°C – 2°C

16.48%
of reserves finances the energy and environmental transition

2050
-7%
Objective to reduce corporate portfolio emissions by 7% (annually, on average)

by 2030
exit
from fossil fuels

Voting policy Opposition rate to main categories

93%	79%	51%	30%
Executive compensation	Dividend distribution	Trustee appointments	Approval of accounts

(1) See specific methodology. The ESG risk level represents an unmanaged residual risk level (0 to 100); a score close to 0 corresponds to a lower level of ESG risk than a high score.

Ircantec's key stages

- **2009** – Commitment to an SRI approach
- **2010** – Definition of SRI principles and selection of a provider agency to monitor ESG
- **2012** – First SRI roadmap aiming for reserve management 100% focused on SRI criteria
- **2013** – First SRI Charter
- **2014** – Voting policy
- **2015** – Assessment of the portfolio carbon footprint
- **2016** – First results of climate actions ▪ Integration of EET requirements in the voting policy ▪ Exclusion of coal ▪ Second roadmap, more focused on the energy transition
- **2017** – First call for Green bonds in France ▪ First results of voting policy ▪ Shareholder and institutional engagement policy ▪ Exclusion of tobacco
- **2018** – SDG strategy ▪ Exclusion of oil and gas
- **2019** – Update of SRI Charter
- **2021** – New climate policy ▪ Third roadmap ▪ Exclusion of fossil fuels ▪ Call for tenders from ESG and climate service providers ▪ Call for tenders with ESG and climate over-performance fees
- **2022** – New engagement policy ▪ New voting policy ▪ Extension of SDG (objective no. 14 - Aquatic life) ▪ Exclusion of controversial weapons and tobacco ▪ Call for tenders on Social Bonds
- **2023** – First analysis of Principal Adverse Impacts (PAI)
- **2024** – Implemetation of the second phase of exclusions of fossil-derived energies in accordance with the climate policy ▪ First biodiversity policy

Awards

- **2013** – **IPE Awards** – Environment, Social, Governance
- **2015** – **IPE Awards** – best pension institution in France
- **2016** – **International award for best investor climate reporting**
- **2019** – **Couronnes Institut Invest award** – best initiative to incorporate SDGs in the responsible investment policy ▪ **Climate International award for climate-related disclosures**
- **2020** – **IPE Real Estate award** – France-Belgium ▪ **Couronnes Institut Invest** – best initiative to incorporate SDGs in the responsible investment policy
- **2021** – **Couronnes Institut Invest award** – best initiative to incorporate SDGs in the responsible investment policy ▪ **IPE Real Estate award** – Alternative Strategy
- **2023** – **IPE Real Estate Awards** – awards in two categories "Medium Real Estate Investor of the year" and "Social Impact"
- **2024** – **Impact Af2i Award** "Institutional investor" category ▪ **Couronnes Institut Invest award** – best initiative contributing to the ecological transition (climate & biodiversity)

1.2 Governance of the Scheme

1.2.1 Board of Trustees

Since the 2008 reform, the Board of Trustees has been in charge of the Pension Scheme's long-term management. As part of a four-year plan and based on preparatory work by Technical and Financial Steering Committee (TFSC), it is responsible for securing the conditions that will achieve the long-term balance of the Scheme. As such, the Trustees, with the technical and operational support of Caisse des Dépôts, are responsible for making decisions concerning Ircantec's responsible investment strategy and monitoring all financial, operational and non-financial risks, in particular risks and opportunities related to climate change.

1.2.2 Technical and Financial Steering Committee (TFSC)

Within the Board of Trustees, the TFSC is responsible for preparing its work concerning the investment policy, actuarial management and the long-term solvency of the Pension Scheme. The Committee's remit includes preparing:

- the annual technical and financial report of the Board of Trustees;
- the internal control report concerning the fiscal year ended, including an assessment of all technical, financial and operational risks.

This work therefore includes matters concerning financial and non-financial management. The topics are debated at meetings of the TFSC, which issues an opinion. All the work presented during meetings of the TFSC is submitted to the Board of Trustees for approval. Within the Committee, three Trustees are appointed to lead on issues related to voting and shareholder engagement.

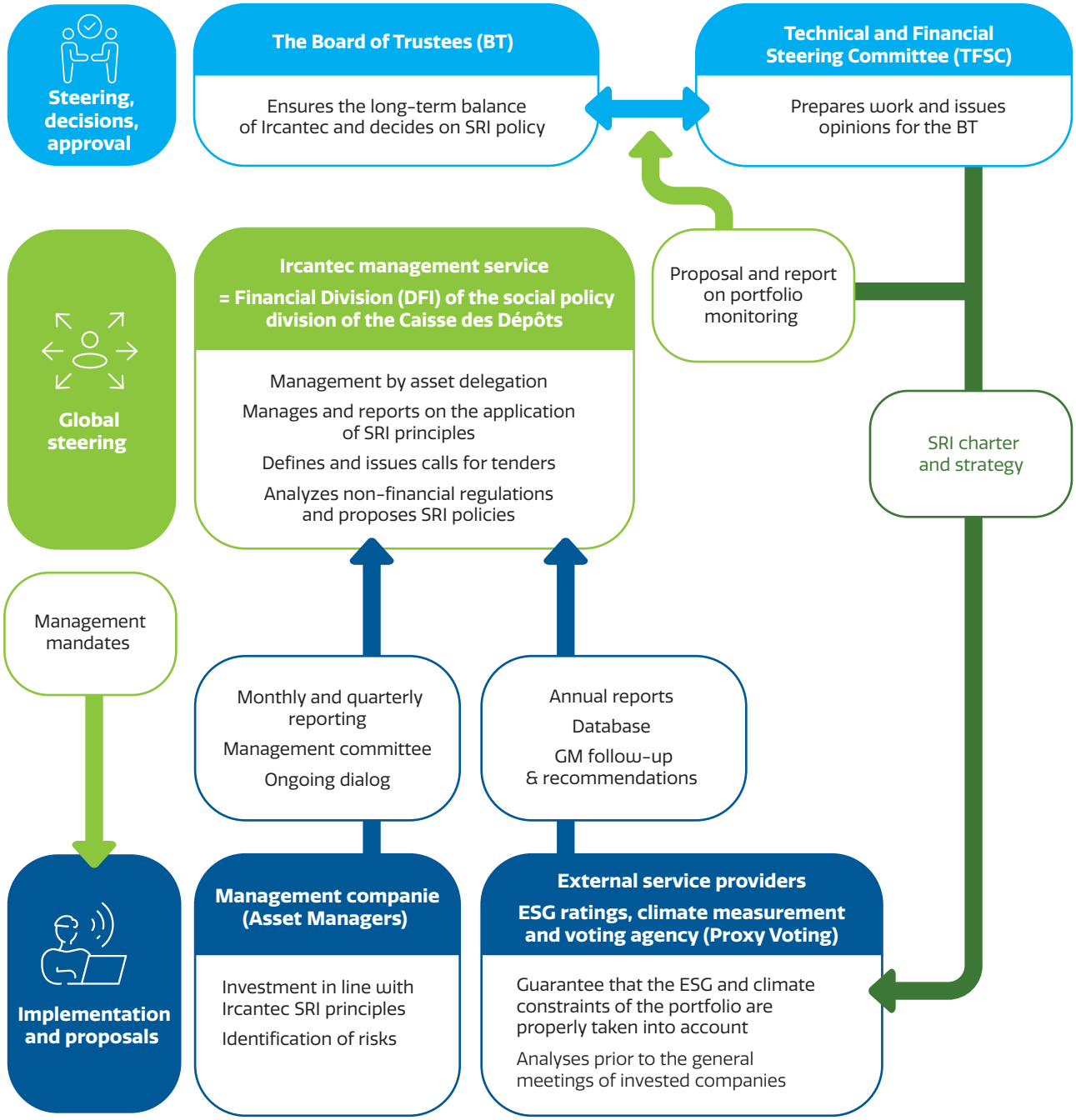
1.2.3 Caisse des Dépôts, Scheme Manager

The Caisse des Dépôts Social Policy division manages the Institution's assets by delegation. As such, it draws up proposals regarding the investment strategy, supports the Trustees in their strategic thinking and is responsible for implementing the investment policy in accordance with the general policy decisions issued by the Board of Trustees. The Caisse des Dépôts also assists the Board of Trustees in developing its SRI policy, and also in monitoring all contracts (with voting, ESG and climate service providers) and mandates (with asset management companies). It regularly reports to the Board of Trustees on the application of SRI principles in investment strategies and ensures that the Trustees have all the information they need to carry out their duties. In 2024, the management service of Caisse des Dépôts employed three out of a total ten-strong full-time delegated management team to take exclusive and entire responsibility for ESG issues on behalf of Ircantec.

1.2.4 Asset management companies

Asset management companies are selected via calls for tenders, both regarding their financial capabilities and their abilities to meet Ircantec's requirements on SRI matters and their own SRI commitments. They integrate the components of Ircantec's SRI Charter into their methodology and investment process. In line with the strategy and principles defined by the Board of Trustees, they make investments, report on the implementation of the SRI Charter, alert on difficulties in application, then identify and monitor potential risks to Ircantec's image and reputation.

Ircantec Governance Structure



Ircantec engagements

2014 Signature of the PRI and Global Investor Statement on Climate Change

2015 Signature of the Montréal Carbon Pledge

2016 Signature of the Paris call

2017 Participation in the One Planet Summit ▪ Signature of the Vigeo declaration ▪ Membership of the FIR ▪ Membership of Novethic ▪ Contribution to Climate Action 100+ ▪ Signature of the Charter of French Pro-Climate Investors ▪ Signature of the Montreal Call

2018 Participation in the Investor Agenda ▪ Signature of the Initiative Act ▪ Membership of the Investor Alliance for Human Rights ▪ Signature of the Global Investor Statement to Governments on Climate Change ▪ Know the Chain Initiative

2019 Signature of the SDG Charter ▪ Membership of ORSE ▪ Membership of Finance for Tomorrow ▪ Make Finance Work for People and Planet declaration ▪ Signature of the Investor Case for Mandatory Human Rights Due Diligence declaration

2021 Statement of support for the development of impact finance ▪ Participation in the Finance for Tomorrow working group on impact ▪ Financial Services Taskforce of the Sustainable Markets Initiative Collaborative Engagement ShareAction)

2022 Participation in a Share Action engagement with financial institutions (HSBC and Barclays) ▪ Signature of an investor PRI statement upstream of COP 15 on Biodiversity

2023 Signature of the "Fossil Banks No Thanks" letter by Banktrack ▪ Confrontation with ShareAction of five banks on the topic of financing fossil fuel projects ▪ Signature of the CDP call on the mandatory disclosure of plastics data ▪ Engagement with Engie as part of Climate Action 100+ ▪ Participation in the FIR CAC40 campaign

2024 Contribution to Climate Action 100+ ▪ Signature of the PRI Spring Initiative ▪ Commitment of financial companies through Share Action ▪ Engagement with Engie as part of Climate Action 100+

1.3 Importance of sustainability in the roadmap

The Ircantec investment roadmap for 2022-2024 adopted by the Board of Trustees in March 2022 is the continuation of the previous 2016-2020 roadmap, as our objectives are long-term. It extends SRI commitments with a portfolio temperature management target of 1.5°C (instead of 2°C previously), and an update to the SRI Charter. In line with the new objectives defined, a new asset allocation method was also adopted in December 2022, aiming to secure the yield of the medium and long-term reserves portfolio, while ensuring observance with prudential solvability restrictions.

Our three main guidelines

In the continuity of the long-term objectives of the previous roadmap and by incorporating the major topics of tomorrow, these three guidelines structure the investment of Ircantec reserves for the 2022-2025 period.

1. Optimize the yield to risk ratio as a long-term investor, in a backdrop of growing reserves and to the limit of risks accepted by the Institution, in line with its responsible investment charter:
   - **a.** diversify the investment vehicles in line with the investment horizon and the accepted level of risk;
   - **b.** strengthen the financial and non-financial management of portfolios: regularly monitor portfolios; actively manage risks and develop risk indicators; in accordance with the commitments of the climate policy, continue the dynamics of financing companies or projects that are developing solutions in favor of the EET and contribute to a just transition by strengthening non-financial requirements in the selection of funds.
2. Strengthen the responsible investor approach by consolidating the Scheme's SRI policy and ensuring its effectiveness in the management of reserves:
   - **a.** expand the SRI approach across all asset classes: regularly update the three key SRI documents (SRI Charter, voting policy, engagement policy) to incorporate emerging topics (biodiversity, themes arising from the social impact of the health crisis, etc.). Ircantec's sectoral exclusion policies apply to all asset classes and will be regularly updated to support its SRI approach over the long term and ensure that its policy remains relevant to future issues;
   - **b.** integrate and reinforce the issues of tomorrow: strengthen our climate efforts by adopting an investment strategy that is compatible with a 1.5 °C scenario given the climate emergency, while ensuring the social dimension of the transition, and integrate biodiversity issues into portfolios using a similar approach.
3. Strengthen its position as a reference investor in the private pension field by communicating transparently on the achievements of the Scheme and on its responsible investor policy:
   - **a.** report on progress: draft and communicate annual ESG analysis and Engagement Reports in a sustainable transformation report developed with its service providers which takes into account the latest regulations; promote the results in terms of financial and non-financial performance; represent the Scheme in marketplace bodies to influence its ecosystem and increase its visibility;
   - **b.** inform stakeholders: communicate externally on the Scheme's achievements to target audiences (affiliates, beneficiaries, other pension schemes, institutional investors), train decision-makers (trustees) and the management service.

As part of this roadmap, the management service strengthened the oversight of annual decarbonization objectives of each Ircantec fund, to arrive at an average target of 7% per year. With service agreements (ESG, climate and biodiversity) as well as access to ESG, climate and biodiversity databases, the management service closely monitors the SRI performance of each dedicated fund to ensure compliance with Ircantec's non-financial objectives.

1.4 Training of Trustees

New trustees complete several training modules specifically developed for Ircantec over a period of three days, addressing technical and financial management, financial management styles, as well as the integration of SRI and Climate dimensions. The training is delivered by the Caisse des Dépôts management team. All Trustees also receive support to understand the regulatory changes impacting the financial and non-financial management of the Institution as necessary. Ircantec's membership in several organizations also gives it the opportunity to participate in technical and training-related discussions as part of small committees (Novethic Investors circle, Forum pour l'investissement responsable (FIR)). In 2024, to prepare the new term of office, the management service developed e-learning modules to facilitate Trustee training, enabling them to access these modules at any time.

To support Trustees, the management service staff regularly attend training (biodiversity, European regulations) and participate in peer or expert conferences in its role of remaining informed of the latest marketplace initiatives and practices.

1.5 Alignment of compensation with sustainability risks

The Trustees of Ircantec do not receive any compensation. Discussions were initiated on how sustainability risks could be better integrated into the compensation components of other stakeholders (management service, asset management companies). Since 2024, individual SRI objectives have been defined and applied to the variable compensation of positions in the management service. It should be noted that asset management companies are also concerned by the SFDR directive [1] (*Sustainable Finance Disclosure Regulation*) and that most of them are also working to better align the compensation of their staff with sustainability objectives.

1.6 Transparency, communication, and learning for stakeholders

For almost ten years, Ircantec has bolstered its SRI communication with its peers and affiliates using a variety of communication methods: website, social media, videos and events. The aim is to prove that choosing a socially responsible financial management policy actively contributes to protecting the Institution's reserves, in line with the objective of intergenerational solidarity. The intent is to present the Scheme's actions in an educational and tangible way.

As part of its climate policy adopted in October 2021, Ircantec has sought to reinforce this transparency to demonstrate the effectiveness of its commitments. Therefore, since 2022, the Scheme annually publishes all securities held in its portfolio – via dedicated funds – on its website, along with the list of companies from which Ircantec has decided to divest.

2024 also saw the end of the leadership's term of office, after four years of dialog and cooperation between affiliate representatives, employers, and the management service. This momentum enabled the Scheme to adopt fundamental decisions for its future, especially with regard to SRI. These decisions are summarized in an editorial review and in video, for the attention of our institutional partners and the financial sector.

In general, the communication strategy adopted by Ircantec is intentionally tempered and restricted to a responsible approach (CSR criteria in the choice of service providers, environmentally responsible stand, reduction of paper publications and email campaigns, etc.). It addresses all its stakeholders through target audiences:

- its retired affiliates, through the *Ircantec News* publication, consisting of an annual hard-copy review, completed by a special edition solely intended for audiences eligible for the Scheme's social actions. Practical guides to occasionally promote social aid by target hard-copy publications are also distributed. Lastly, monthly publications are featured in the dedicated section of the website, highlighted in a bi-monthly e-newsletter. The Scheme's climate strategy and actions in terms of responsible investment are regularly reported on in these media;
- its contributors in active employment, thanks to a YouTube channel offering tutorials as well as practical videos simplifying the procedures and institutional videos (presentation of the Scheme, review of SRI events). This communication is supplemented with an annual e-letter;
- decision-makers (major employer accounts, elected officials, institutions) receive annual activity and sustainability reports, which present the various ESG and climate metrics while meeting regulatory requirements;
- elected officials, with Ircantec's participation in the Mayors and Local Authorities Convention, and for the first time in 2024, in the Convention of the Association of Rural Mayors in France;
- its investor peers and asset management companies, through invitations to an annual event. The 2024 event took place in December to ask the question: "How to protect and improve the balance of ecosystems: the sustainable approach, a new way of investing?" Over 60 people attended the event (SRI management experts, institutional investors, etc.);
- all stakeholders via the institution's website where a section is dedicated to Ircantec SRI engagements. All publications are available in French and English: SRI Charter, Sustainability Report, Voting Report, Climate Policy, etc.

(1) The European Sustainable Finance Disclosure Regulation (SFDR), which came into force in March 2021, aims to improve how financial market participants disclose information about the sustainability of their investments. It was implemented to meet the growing demand from investors for clear and comparable information on the sustainability of financial products. The primary objective of the SFDR is to redirect capital flows towards more sustainable investments, by obliging financial institutions to disclose how they integrate sustainability risks and ESG factors in their investment decisions. This enables investors to make better-informed choices and fosters a more sustainable, responsible economy.

1.7 Presentation of the portfolio

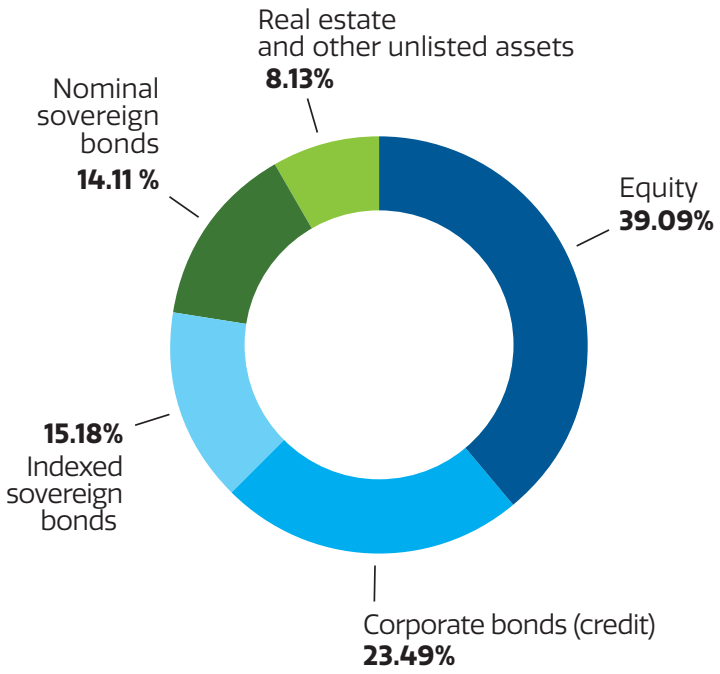
At the end of December 2024, Ircantec's reserves portfolio comprised various asset classes:

- the stocks listed include traditional management activities in Europe and World regions, systematically active management in Europe, OECD and World countries, passive management with the aim of replicating an index aligned on the Paris Agreement objectives (*Paris Aligned Benchmark*) and management actions on specific themes (mainly the Energy and Environmental Transition);
- credit incorporates Investment Grade corporate bond management in Euro currency (active management), green bond and social bond management including various issuer categories as well as sovereign bonds;
- unlisted assets include investments in various funds (real estate, private equity, private debt, Social and Solidarity Economy, infrastructure).

It should be noted that 100% of Ircantec's reserves include ESG criteria.

2024, a fourth call for tenders was issued on unlisted infrastructure assets related to the EET. This fund will become operational in 2025.

Allocation of Ircantec reserves as at December 31, 2024



2

Protection of financial reserves against climate and sustainability risks

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Since 2022, Ircantec has worked with S&P Global Sustainable (Trucost) as a data provider on climate data. The latter is a global provider of environmental data and analyses, especially on corporate emissions and the use of natural resources. This information is used to assess the carbon or environmental footprint of funds, address environmental risks and create investment strategies with low carbon or environmental impact.

Ircantec approaches the climate issue from the perspective of double materiality (as envisaged by the European regulations), making it possible to verify how the Scheme integrates climate risks to manage its reserves sustainably, and how its investments impact climate and sustainability factors in the future.

Investors face two categories of climate risks: transition risks (changes in markets, legislation, technologies or consumer perception of a low-carbon economy that negatively affect the value of a company's assets) and physical risks (resulting from damage directly caused by meteorological and climatic phenomena on goods, financial or physical assets or operational processes). Events related to this last type of risk can be acute (example of a natural disaster impacting real estate in a region and locking up the local economy) or chronic (decline in cereal yields resulting from a fall in average rainfall levels). It is the role of investors to identify and measure these risks to ensure the proper management of reserves. The management service therefore maintains ongoing, regular dialog with asset managers (dedicated mandates) to ensure that Ircantec's SRI constraints are respected at all times and to discuss the management and control of sustainability risks (including climate change).

2.1 Climate risk reduction strategy

Ircantec strives to adapt the management of its reserves to climate risks and to limit their scope. This results in divestment decisions that have been taken and refined over the years and the use of investment strategies that integrate carbon risk. Indeed, the climate crisis materialized by the rise in CO_2 by 1.3% between 2010 and 2019 (1), requires us to develop an ambitious, holistic climate policy, involving exclusions where applicable.

2.1.1 Fossil fuel exclusions

Thermal coal

According to the International Energy Agency (IEA), coal is the fossil fuel that has contributed the most to climate change. At the end of 2018, cumulative CO_2 emissions from coal combustion were responsible for the equivalent of 0.3°C of the total 1°C increase in mean annual Earth surface temperatures above pre-industrial levels. Although oil has supplanted coal as the primary source of energy since the 1960s, coal remains the main cause of greenhouse gas emissions in the world, through the activities of its value chain. Furthermore, in 2024 global coal consumption reached an unprecedented level of 8.77 billion tonnes according to the latest IEA report. This increase could seem paradoxical, because the price of coal is currently over 50% higher than the prices seen between 2017 and 2019. However, this upward trend is mainly being driven by China, which remains the main producer and consumer of coal.

The exclusions relating to coal apply to its use as a source of energy, essentially in the generation of electricity and the co-generation of electricity and heat, and not as a material.

As early as 2016, Ircantec introduced criteria and specific limits to remove the most emissive coal securities from its portfolio through its SRI charter. In the fall of 2021, the Board of Trustees enhanced these exclusions, which were applied to the portfolio starting in the first quarter of 2022.

Lastly, to expand its SRI ambitions, during 2024 Ircantec has committed to apply the exclusion thresholds for European indexes aligned with the Paris Agreement, the "Paris Aligned Benchmark – PAB". The framework governing the PAB relies on a set of rules defined by the European Union Delegated Act, which sets out the objectives required to face the climate crisis. Firstly, the aim is to favor opportunities for exposure to companies which will benefit a low-carbon emissions economy. Next, it aims to reduce the risk of exposure to companies exhibiting climate-related financial risks.

To observe the PAB framework, Ircantec excludes all companies for which thermal coal (exploration or processing activities) represents over 1% of their turnover. These thresholds are supplemented by the exclusion:

- of all companies that develop or contribute to new projects in the thermal coal sector (mines or coal-fired power plants);
- partners in this industry (particularly infrastructure such as port terminals, railways dedicated to the transport of coal) if more than 5% of their turnover is related to thermal coal or contributes to new projects;
- all companies whose annual coal production is above 10 million tons;
- all companies whose electricity production capacity from coal is greater than 5 GW.

However, these exclusions will not be applied to companies credible exit plan from coal by 2030 for all geographical areas combined. An exception will also be applied for green bonds issued by a company meeting the divestment criteria on the condition that the company has committed to phasing out thermal coal by 2030.

Through this strategy, Ircantec has made a proactive commitment to achieving zero exposure to thermal coal in its portfolio by 2030, all geographical areas combined.

(1) Estimate published in the 6th IPCC report.

Oil and gas

The sixth IPCC assessment report published in 2024 underlines the necessity to achieve carbon neutrality by 2050 in order to limit the global temperature rise to 1.5°C. To do so, the report insists on the need to urgently reduce the use of fossil energies. The scenario that will enable this objective to be reached implies a reduction in coal use by 95%, that of oil by 60% and gas by 45% by 2050, in relation to 2019. Lastly, no new fossil energy production infrastructure should be built. Furthermore, in its report "Net Zero by 2050: A Roadmap for the Global Energy Sector" published in May 2021, the IEA concludes that investment should be limited to maintaining production from existing oil and natural gas fields without bringing new deposits into production.

A sectoral divestment policy was implemented in 2018 to remove the most emissive securities from the Ircantec portfolio. Following these scientific recommendations, in the fall of 2021 the Board of Trustees determined new exclusion thresholds, which were applied from the first half of 2022. However, the growth in the non-conventional fossil energy sector, especially related to the supply of shale gas from the USA and the ever greater emergence of developing economies, in first place that of China, implies an even stronger policy on the part of Ircantec. For this reason, starting in 2024, the Scheme is committed to applying the following PAB exclusion thresholds:

- exclusion of all companies for which oil-related turnover represents over 10% of their turnover;
- exclusion of all companies for which gas-related turnover represents over 50% of their turnover;
- exclusion of companies which develop or contribute to developing new projects relating to non-conventional fossil energy resources;
- exclusion of any companies whose production is related to non-conventional activities and which are not committed to a credible exit plan.

Lastly, these thresholds do not apply to companies which have adopted a credible and detailed plan to exit non-conventional fossil energies by 2030, nor those presenting a credible plan to reduce their emissions, compatible with a 1.5°C scenario validated by the Science-Based Target initiative (SBTi). The Scheme will retain its investments in green bonds if the company in question has committed to phasing out non-conventional fossil energies by 2030.

These rigorous exclusions enable Ircantec to make a formal commitment, through both its SRI Charter and progressively through its commitments with management companies and businesses. The aim is to achieve zero exposure to any company in the oil and gas sector that has not adopted a credible emissions reduction plan compatible with a 1.5°C temperature rise scenario.

Furthermore, pending access to data on the financing of non-conventional products enabling it to define an exclusion policy for the financial sector, Ircantec wishes to engage financial players and insurers in the portfolio via shareholder dialog on the adoption of credible, detailed plans to exit non-conventional fossil energy. This commitment is made through the "Say on Climate" analysis of listed financial institutions in the portfolio, but also through the analysis of their transition plans during shareholder assembly voting phases.

2.1.2 Integration of climate risk into the fund strategy

The dedicated mandates are managed externally by more than ten different management companies and are selected following two-stage calls for tenders (pre-qualification phase then bidding phase for successful candidates). Calls for tenders issued in recent years incorporate the requirement to integrate the climate and environment dimensions into fund management at various levels: CSR policy of the management company, investment philosophy, ESG strategy, portfolio construction, composition of dedicated teams, reporting, regulatory classification. In particular, bidders are requested to explain how securities are identified, evaluated and selected with regard to their alignment with trajectories resulting from the Paris Agreement. Management companies must be signatories of the PRI or explain why they are not, where necessary. Moreover, it is essential that they explain how managers and analysts are trained in climate issues and if a non-financial filter exceeding the restrictions of Ircantec's SRI Charter is put in place.

Managers have significant leeway to meet these needs: some perform analysis of the company's climate positioning after the financial and stock market selection process has taken place; others greatly reduce the investment universe by focusing on companies that offer adequate solutions to the Energy and Environmental Transition (EET).

Management agreements with all funds incorporate compliance with the SRI Charter and also observe the commitments made by Ircantec, notably the objective to achieve a 7% average annual reduction in emissions generated by portfolio stocks and bonds up to 2050 in relation to 2021. The management agreements also include reporting requirements through assessments of negative contributing factors to the EET within the portfolio and updates of the TCFD policy within the management company.

2.2 Identification and rating of transition risk

2.2.1 Listed companies

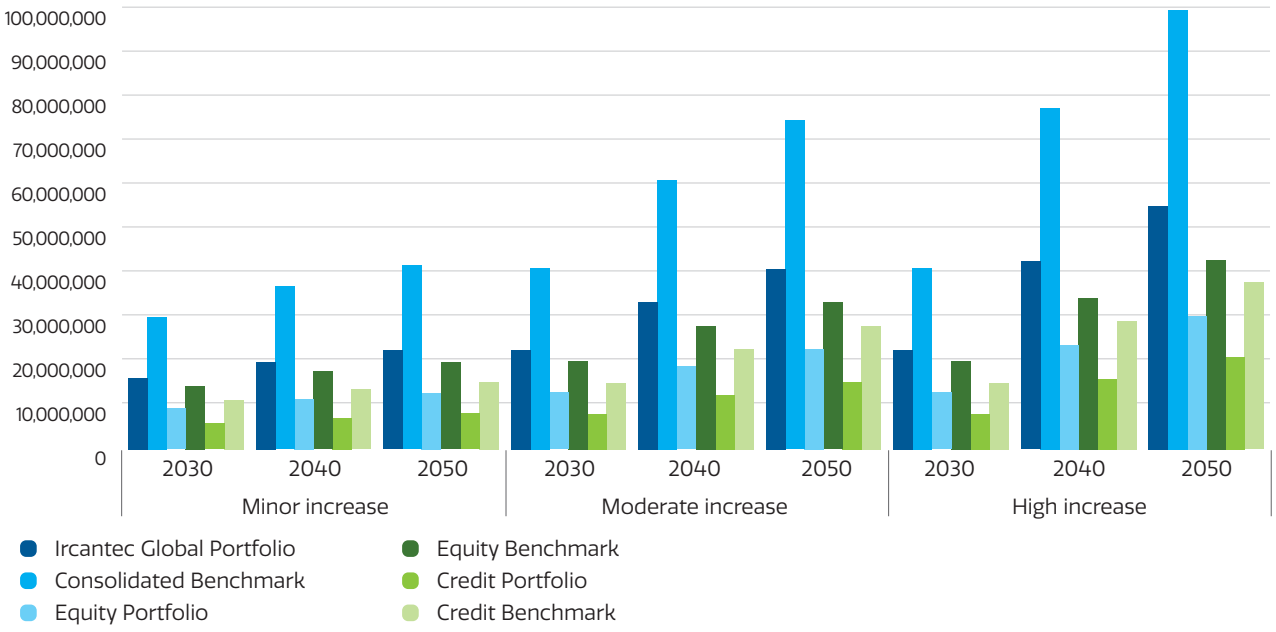
The carbon pricing mechanisms are an essential tool to efficiently manage the transition risks related to climate change. Carbon pricing enables the political authority to assign a monetary value to CO_2 emissions in order to encourage their reduction by applying carbon taxes or quota trading markets. This highly incentive mechanism favors companies which have genuine objectives to reduce their emissions, granting them a potential comparative advantage in a future with a high carbon price. It also enables a smoother transition to a low-carbon economy, thereby reducing future economic and financial shocks in case climate change worsens. Lastly, carbon pricing has become a scientific method that can redirect capital towards Best in Class players in terms of climate considerations, thereby promoting low-carbon solutions and renewable energies.

There are currently 52 carbon pricing systems in place or being developed at regional, national or sub-national levels, covering approximately 20% of global greenhouse gas (GHG) emissions. Other systems are likely to emerge to enhance the coverage of GHG emissions, to enable States that have ratified the Paris Agreement to achieve their National Determined Contributions (NDC), taking account of the multiple regional and economic characteristics of countries.

To aid investors in managing carbon price risk, the value of which is likely to rise significantly, Trucost compiles a data set of possible future carbon prices. To date, the database has been compiled from public information on current carbon prices in over 44 jurisdictions around the world. This can be used to test each issuer's current ability to absorb future costs. Moreover, quantifying an Unpriced Carbon Cost (UCC) – the difference between what a company pays to emit carbon today and what it might pay in the future – is integral to this analysis.

Lastly, the Unpriced Carbon Cost is the product of a company's carbon footprint (tCO_2e) factored by their risk premium, which is defined by the future price of carbon less the current price. The UCC will vary depending on the industry in which a company operates and the regions in which it emits GHGs. It also depends on the scenario and the reference year chosen. Indeed, the scenarios used are taken from research done by the OECD and the IEA, namely the Representative Concentration Pathways (RCP). More specifically, two scenarios will limit temperature rise by 2050 to 2°C. Firstly, the RCP 4.5, with a moderate rise in the carbon price, and RCP scenario 2.6, with a high rise in the carbon price.

Allocated unpriced carbon costs (Euros)

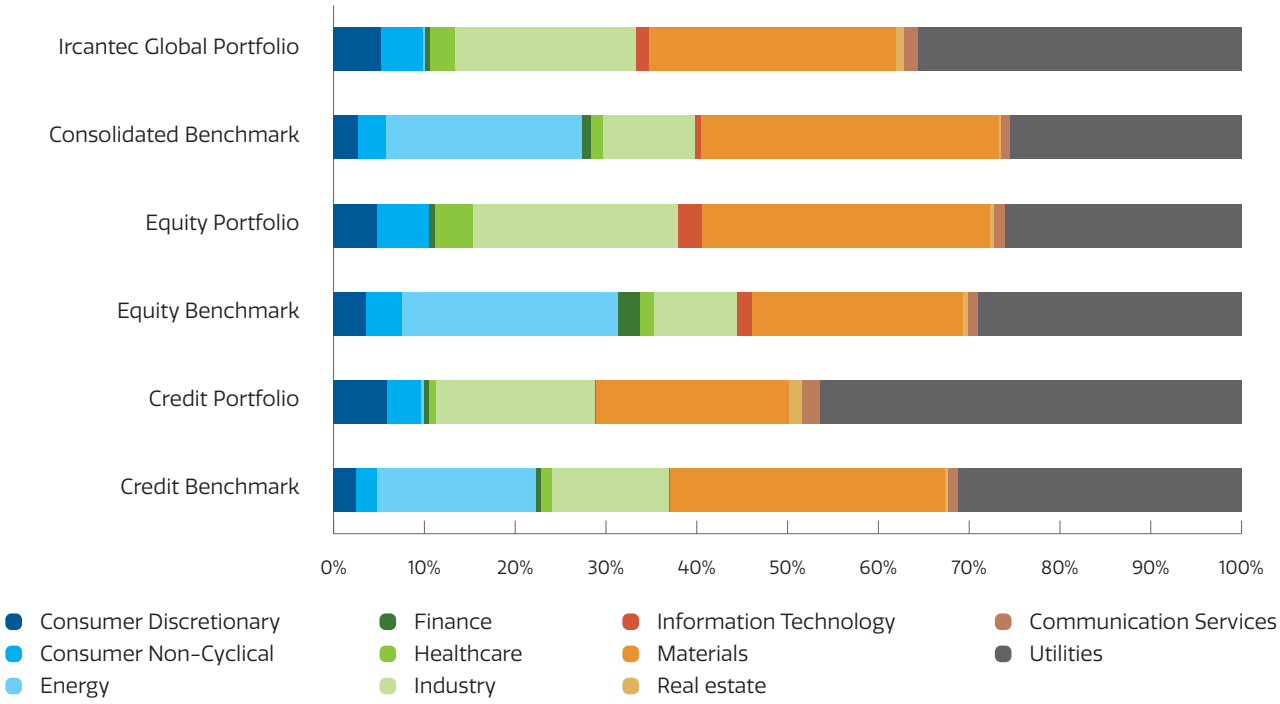


The global portfolio[1] is constantly exposed to a non-priced carbon cost below its benchmark, especially if the scenario considers the immediate application of measures to limit global temperature rise to 2°C. In effect, non-priced carbon costs are highly dependent on global temperature rise. The more it rises, the greater the climate risks will be. And then, the climate policies will be stricter, through a significant increase in carbon taxes. As the portfolio is more resilient to climate change, the carbon cost remains below that of its benchmark and this relative performance improves at the same time as temperatures rise. The benchmark comprises companies with significant carbon emissions, so the decarbonization needs are greater.

(1) Throughout the report, in the "Listed companies" sub-sections, the global portfolio refers to all corporate/enterprise issuers in dedicated Ircantec funds (equity and bonds).

Moreover, in the case of a moderate-rise scenario, the sectors most subject to unpriced carbon costs are utilities, materials and industry. These three sectors represent 83% of costs for the global portfolio. They are particularly exposed due to their high dependency on fossil energies, especially gas, which is considered to be a transitional energy and to their production processes which are GHG-intensive. These sectors are often characterized by aging infrastructures and less-efficient technologies in terms of energy, which raises their greenhouse gas emissions. Lastly, the constant and high demand for their products and services is making the transition to cleaner alternatives slower and more costly. These sectors are essential to the economy and to society, which means that demand for their products and services is growing. Due to this issue, modifying production processes is slow. What is more, significant investments are required for the transition as the modification work to infrastructures is extensive.

Unpriced Carbon Cost by sector (moderate rise 2030 scenario)



The Ircantec portfolio is more exposed to the utilities and industry sectors than its benchmark. Nonetheless, it is under-exposed to risk in the materials sector. These results are specific to the Scheme and can firstly be attributed to the extensive weighting of utilities in the global portfolio. In relative terms, this sector is strongly dependent on fossil energies, especially gas, and consequently the potential future carbon cost is high. The Utilities sub-sector, defined as the sector grouping companies involved in the production, distribution and sale of water, gas or electricity, is strongly present in the credit portfolio because Ircantec considers these companies as indispensable and contributors to the development of an efficient, low-carbon economy. Therefore, companies such as Amprion GmbH, TenneT Holding B.V. or Veolia appear in the credit portfolio and a large part of their EBITDA(1) is at risk according to the scenario of a moderate increase in unpriced carbon costs.

Secondly, the Industry sector is strongly represented in the global portfolio due to the presence in the equity portfolio of numerous companies active in civil aviation, which include EasyJet, with over ten times its EBITDA at risk according to the moderate rise scenario, or Ryanair, with over two times its EBITDA.

Lastly, the Scheme exhibits a degree of risk concentration related to the carbon costs in certain sectors or securities, which makes portfolio monitoring easier, while reducing the global cost through homogeneous weighting of securities in order to optimize diversification.

Furthermore, only 4.27% of the global portfolio EBITDA is at risk compared to 5.69% for the benchmark, 3.47% for the equity portfolio and 6.23% for the credit portfolio. Analysis of the geographical distribution of transition risks related to carbon costs across the three consolidated portfolios reveals a relatively concentrated exposure. This bias explains the under-exposure of the global portfolio EBITDA in relation to the benchmark. Considering a scenario of high increase in carbon costs, the global portfolio shows predominant exposure in the USA (20.96%), followed by France (10%) and Germany (9.36%).

(1) Earnings Before Interest, Taxes, Depreciation, Amortization.

Indeed, the portfolio has a geographical investment bias for Europe and the USA. However, these regions have a high carbon premium, as a higher future carbon price is expected there than in other regions of the world, with a faster increase in view of their proactive approach to limiting global temperature rise compared to other countries. In Europe especially, we have observed an almost constant increase in the carbon price with a strong upward trend since the start of 2022. This stems from the GHG emissions quota trading system adopted by the European Union in 2005. The price of quotas is determined by supply and demand. The prices is therefore higher if demand increases, but also if the European Union reduces the emissions ceiling, which is consistent with the European objectives for the reduction of emissions. The implementation of the European Green Deal objectives aims to reduce EU carbon emissions by 55% before 2030 and achieve carbon neutrality by 2050. In 2023, the European carbon market covered around 36% of total GHG emissions. As an example, the average price of a one-tonne CO_2e quota rose from €37.45 in February 2021 to almost €70 in August 2024.

This means that the portfolio's EBITDA [1] is at a slightly lower risk than its benchmark. Therefore, the profits of the companies in which Ircantec's reserves are invested will be less vulnerable to a rise in the carbon price than those of its benchmark index. Companies whose earnings are considered the most at risk may potentially face multiple valuation changes and a more severe fall in returns for investors. But the companies whose EBITDA is the most at risk have commenced a transition to a low-carbon economy. Amongst them are Amprion, which is speeding up its investments in renewable energies, or Holcim, whose carbon neutrality targets have been validated by SBTi for 1.5°C across all three scopes, and for which the physical and transition risks have been assessed for 320 sites and incorporated in the long-term strategy.

2030 moderate rise scenario	Allocated unpriced carbon cost (In Euros)	EBITDA at risk (in %)	EBITDA reduction of profit (as % points)	Value of assets with > 10% EBITBDA at risk	Value of assets with negative margin (in %)
Ircantec Global Portfolio	**22,522,530**	**4.27%**	**-0.72%**	**7.11%**	**0.21%**
Consolidated benchmark	41,303,431	5.69%	-1.00%	9.93%	1.03%

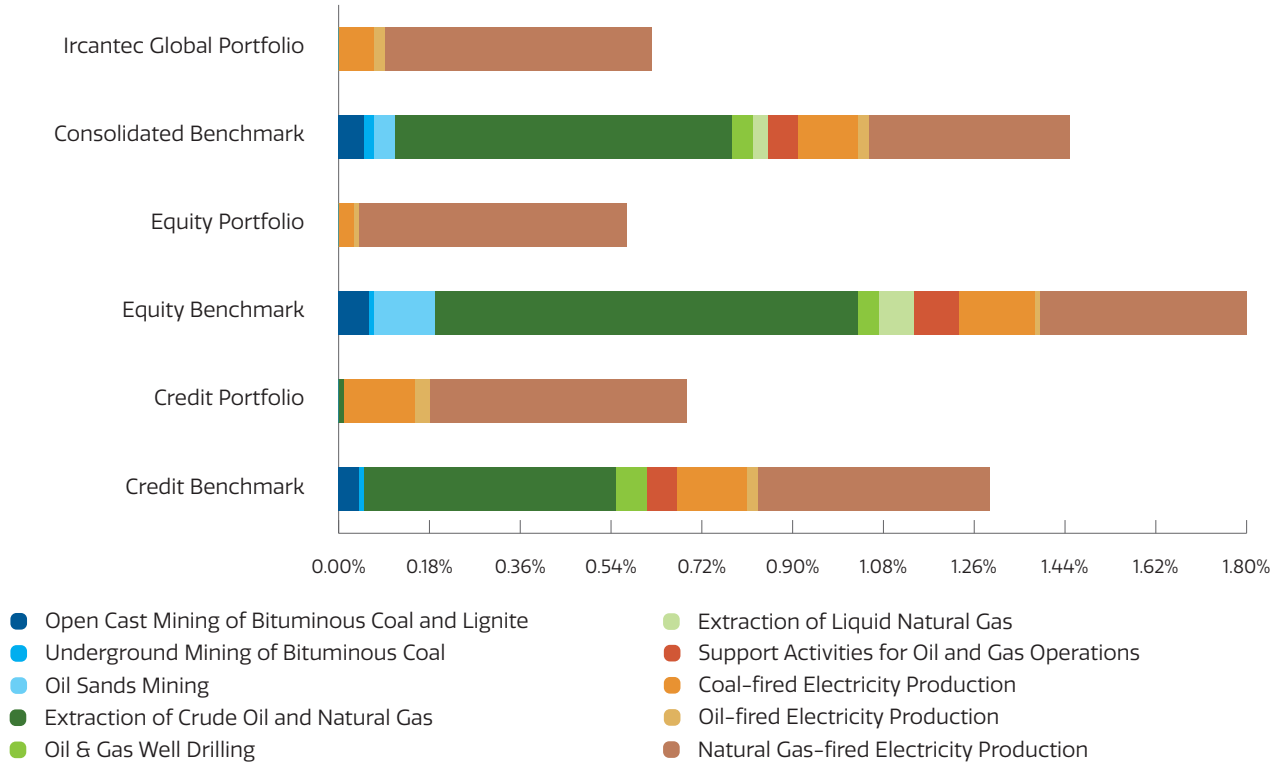
Moreover, to assess transition risks, it is also possible to identify companies that are considered to have the highest risk in terms of stranded assets on their balance sheet. From a climate standpoint, stranded assets are those that may be devalued due to a climate-related constraint (new legislation, legal risk, market downturn, etc.). The exploitation of non-renewable energy and in particular energy from non-conventional resources (shale gas, oil sands, etc.) is considered an activity par excellence that relies on stranded assets. However, the limited knowledge of the shape a low-carbon economy would take means that a significant number of other companies and sectors of activity will be affected as the transition progresses.

Within the portfolios, active monitoring is carried out on the portion of activities dedicated to the exploitation of coal, the fossil fuel energy with the highest emission factor [2] per tonne of oil-equivalent The transition policies and plans of these companies aim to exit this type of energy in the mid to long-term. The companies remaining in the portfolio and exposed to these activities in 2024 all respect the thresholds of the SRI Charter. It is important to remember that the exclusions related to thermal coal or fossil energies respect the thresholds defined earlier, without excluding companies that have a credible plan to exit these same energies by 2030.

The players involved in the use of fossil energies are mainly diversified energy producers/distributors, i.e. Utilities, and are operating a strong development policy in renewable energies alongside the divestment from excessively carbon-rich assets. Companies such as Enel, Energias de Portugal or Veolia are present in the global portfolio. Ircantec's reserves thus provide it with funding earmarked for green activities, contributing to the transition of high-impact sectors to a low-carbon economy. The role of Ircantec is to support the transition of players who develop solutions and who remain indispensable to an efficient low-carbon economy.

(1) See methodology.
(2) An emission factor is a coefficient used to convert activity data into GHG emissions.

Exposure to turnover related to fossil fuels by industry



Exposure to turnover related to fossil energies in the consolidated portfolio fell from 0.93% in 2023 to 0.62% in 2024, compared to 1.43% for the benchmark. The equity portfolio features almost four times less turnover from fossil energies than its benchmark. What is more, none of the three consolidated portfolios is exposed to turnover from bituminous or underground coal, nor oil sands, the extraction of liquid natural gas, the extraction of crude oil and natural gas.

This very low exposure to oil and gas explains why the portfolio is less exposed to stranded assets than its benchmark. The greatest exposure to turnover related to fossil fuels is found in the production of energy via natural gas, which represents around 85% of turnover. This is mainly due to the utilities in the portfolio which remain partly dependent on fossil fuels, for example NextEra Energy, Iberdrola or even ENGIE. These companies are active in the gas sector to enable their transition to renewable energies.

Main contributors to turnover derived from fossil fuels – Ircantec Global Portfolio

Description	Sector	Portfolio	% turnover from mining/ extraction	% turnover from energy	Total	% turnover with weighted risk in portfolio	Climate 100+
		Weight (%)	Fossil resources			Portfolio	
NextEra Energy, Inc.	Utilities	0.40%		45%	45%	0.182%	Yes
SSE plc	Utilities	0.36%		26%	26%	0.094%	Yes
Enel SpA	Utilities	0.43%		15%	15%	0.063%	Yes
Iberdrola S.A.	Utilities	1.53%		3%	3%	0.049%	Yes
Veolia Environnement SA	Utilities	0.34%		12%	12%	0.039%	No
Électricité de France S.A.	Utilities	0.36%		8%	8%	0.028%	Yes
EDP S.A.	Utilities	0.46%		5%	5%	0.024%	No
Engie SA	Utilities	0.33%		6%	6%	0.021%	Yes
Iren SpA	Utilities	0.07%		26%	26%	0.019%	No
Air Liquide S.A.	Materials	0.60%		3%	3%	0.019%	Yes

Lastly, in line with the SRI Charter, the Scheme does not generate turnover from coal mining, as 100% of its turnover related to coal comes from the use of coal to generate electricity. However, in the consolidated benchmark portfolio, 35% of turnover is directly generated by coal mining.

2.2.2 Sovereign funds and similar

In terms of the sovereign portfolio, analysis used to identify and measure the sovereign bonds that are most exposed to a transition risk seems less pertinent. Sovereign bonds depend on the issuing countries, in which the economies specific to each country exhibit great diversification, depth and a capacity for resilience. It is nonetheless possible to analyze the countries where electricity production is very low-carbon and where the operation of the economy depends on fossil energies. These countries will have to invest more for the energy transition. The legal judgment against several countries (France, Germany, Netherlands, Canada) for climate inaction over recent years illustrates that countries have their part to play in this transition and may be obliged to repair the environmental damage they have caused. The islands of Malta and Cyprus, Australia and Japan are primarily concerned. France is overweighted in the portfolio and only generates 10.4% of its electricity using fossil energies.

What is more, analysis of the net emissions of each country enables us to understand which country contributes the most to climate change and therefore which country will need to make considerable efforts in the future. Western countries are those with the highest levels of absolute emissions per capita. The efforts that these countries will need to make in the future are therefore significant. They will be required to transform their economies and adjust their energy mix more towards electricity with low-carbon energies. Firstly, the countries from which these greater efforts will be required are the USA, followed by Japan, Germany, Canada, Australia, the UK and Italy. These countries will need to invest massively in a carbon-neutral economy, through an energy mix that favors renewable and low-carbon energies. In this respect, France is exemplary amongst the developed and western countries.

Country	% of electricity generation associated with fossil energies
Malta	93.2%
Cyprus	79.4%
Australia	77.3%
Japan	72.9%
Netherlands	60.7%
Estonia	59.7%
USA	52.1%
Italy	50.1%
Germany	49.7%
Ireland	45.5%
Luxembourg	44.0%
Hungary	41.5%
Slovenia	37.1%
Chile	34.2%
Croatia	33.7%

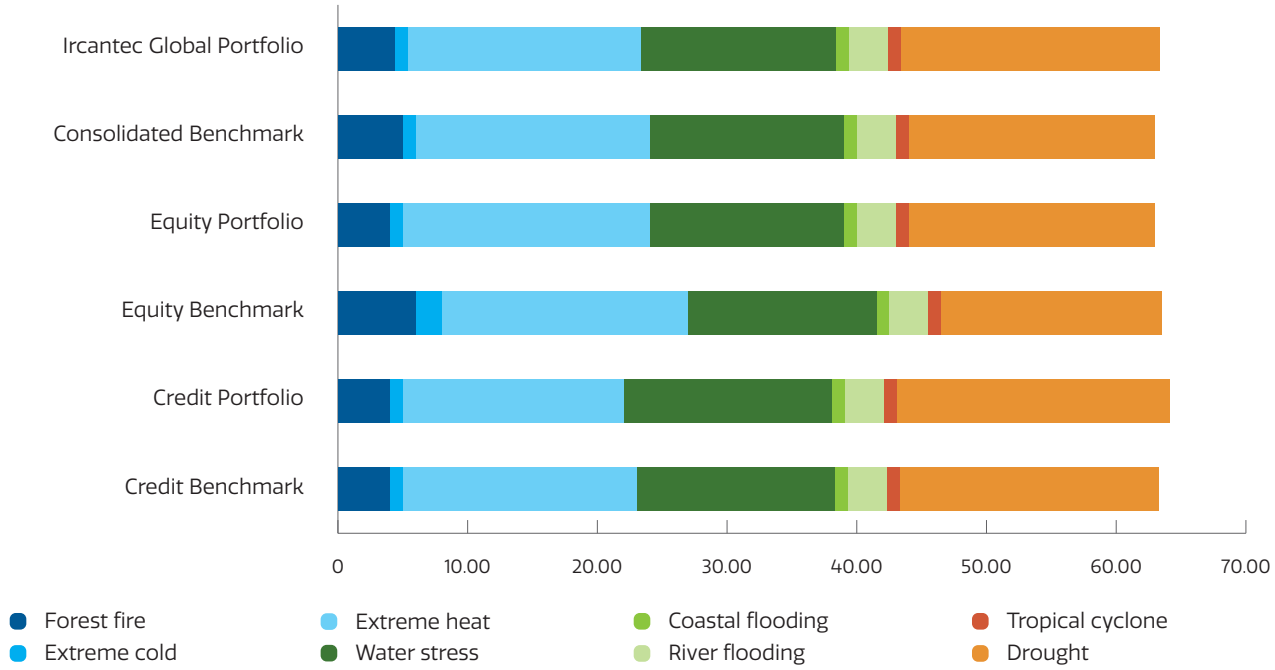
2.3 Identification and rating of physical risk

2.3.1 Listed companies

Company assets are assessed based on their exposure and sensitivity to eight types of key hazards: forest fire, extreme cold, extreme heat, water stress, coastal flooding, river flooding, tropical cyclone, and drought. The two main results of these assessments are the exposure scores and financial impacts. In terms of the portfolios, these two metrics are calculated as the average of the scores and impacts of constituent securities, weighted by the weight of the respective investments.

The exposure score is a one-off assessment of exposure to climate risks in relation to world conditions, independent of the nature of the asset at a given location. Where asset data are insufficient, companies are analyzed based on the location of their headquarters, the geographical distribution of turnover (according to the exposure to average physical risk in each country). Companies are scored from 1 to 100 for each of the eight types of risk, with 100 indicating the highest possible exposure and sensitivity to a given risk and 1 the lowest. Composite exposure scores are also provided using a log function of the exposure to the eight risks.

Exposure score by type of physical risk



Ircantec Global Portfolio – Exposure scores by sector and type of physical risk – High scenario for 2050

	Composite score	Forest fire	Extreme cold	Extreme heat	Water stress	Coastal flooding	River flooding	Tropical cyclone	Drought
Communication Services	62.6	10.1	3.2	39.3	31.8	1.1	5.5	2.2	39.8
Consumer Discretionary	62.7	8.9	3.2	39.4	30.1	1.2	5.6	2.7	40.7
Consumer Non-Cyclical	63.6	9.1	3.1	39.7	32.4	1.3	6.2	2.4	40.4
Energy	58.2	11.4	3.0	42.8	27.2	1.8	1.8	1.0	28.7
Finance	64.0	8.6	3.1	39.2	32.2	1.2	6.6	2.1	43.7
Health	62.4	8.2	3.1	39.3	29.9	1.2	5.9	3.7	38.7
Industry	63.8	10.5	3.1	38.7	32.2	1.2	5.9	2.1	43.4
Information Technology	63.7	9.6	3.2	40.2	33.9	1.1	7.1	3.2	36.9
Materials	63.1	7.7	3.0	36.2	31.8	1.1	5.9	1.5	44.5
Real estate	61.6	5.7	3.3	36.2	27.8	1.1	6.3	1.5	44.6
Utilities	65.8	14.4	3.5	37.8	42.7	1.1	4.8	1.6	47.2

Ircantec's portfolio has a risk score slightly higher than its benchmark index but reported a decline for the portfolio and the benchmark between 2023 and 2024. Within the global portfolio, the greatest risks are extreme heat, drought and water stress. The results are more concentrated and different from last year due to a change in methodology operated by Trucost. Indeed, the 2023 data indicated more homogeneous risks, with a greater share of risk of river flooding and extreme cold.

However, the previous methodology applied a score of 100/100 if a location experienced extreme cold for around two weeks, but this is now restricted to a score of 8/100, which explains the reduction of this risk in the portfolio. Moreover, the updated exposure score for river flooding includes an analysis with a higher resolution that more precisely assesses the risk of flooding at the asset locations. Therefore, this improvement reduces the overestimation of the danger of flooding for assets located at high altitudes or far from rivers. Consequently, certain assets that were previously classified as exposed to risks will now display reduced exposure scores and financial impact indicators.

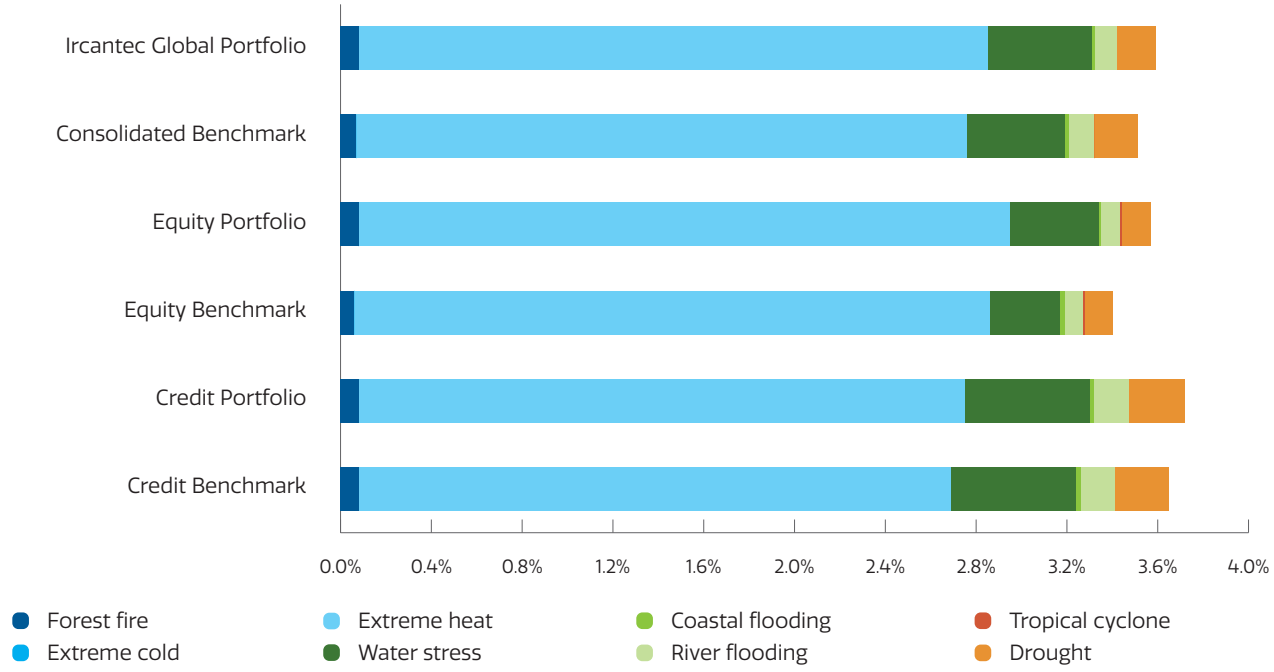
Also, the greatest physical risks are now linked directly with the temperature rise. According to the latest report by the European Environment Agency published in 2024, which identifies 36 climate risks with potential major consequences in Europe, 2023 was the hottest year ever recorded using a 12-month average, exceeding the 1.5°C threshold in relation to the pre-industrial era.

Europe is the fastest-warming continent in the world, so much so that extreme heat waves, which were relatively rare until now, are becoming more frequent. The south of Europe is increasingly prone to extreme heat-related climate events, notably extensive droughts. At December 31, 2024, the Ircantec equity portfolio of dedicated funds comprised 52.99% of European securities, so it seems consistent that this portfolio is highly exposed to the risks referred to above.

In addition to the high exposure of the global portfolio to the risks of extreme heat, water stress and drought, the risk of forest fires is also high. Indeed, wildfires are a major issue in the USA, which is weighted heavily in the portfolio, with over 8,000 outbreaks in 2024, including the Megafire in California.

In parallel to this physical risk exposure score, Trucost measures the financial impact of these physical risks, which reflect the financial consequence of the modification of exposure to climate risks in relation to a baseline specific to the asset at a given location. The financial impacts are presented as losses potentially related to the climate (for example in case of investment spending, operational spending, interruption of activities), as a percentage of the asset. According to the World Economic Forum, economic losses caused by natural catastrophes rose by 151% between 2000 and 2019, reaching almost US$2,900 billion. This is partially justified by the explosion of natural catastrophes, multiplied by fifteen between 1950 and 2000. For this reason, the integration of climate risks is so important, to develop adaptation plans in order to improve the resilience of companies and therefore of portfolios. Before the end of the century, if no extensive measures and action plans are implemented on a global scale, hundreds of thousands of people could die due to heat waves and the related economic losses could reach €1 trillion per year, according to the European Environment Agency [1].

Financial impact by type of physical risk



(1) https://www.eea.europa.eu/en/analysis/publications/european-climate-risk-assessment.

Ircantec Global Portfolio – Financial impact by sector and type of physical risk – High scenario for 2050

	Composite score	Forest fire	Extreme cold	Extreme heat	Water stress	Coastal flooding	River flooding	Tropical cyclone	Drought
Communication Services	5.06%	0.04%		3.59%	0.39%	0.03%	0.04%	0.00%	0.69%
Consumer Discretionary	3.52%	0.08%		2.84%	0.16%	0.01%	0.07%	0.00%	0.08%
Consumer Non-Cyclical	3.86%	0.08%		2.41%	0.79%	0.01%	0.12%	0.00%	0.16%
Energy	2.62%	0.02%		0.95%	1.06%	0.04%	0.01%	0.00%	0.31%
Finance	3.89%	0.07%		3.05%	0.28%	0.01%	0.13%	0.00%	0.08%
Health	4.50%	0.08%		3.26%	0.52%	0.01%	0.20%	0.01%	0.13%
Industry	3.33%	0.10%		2.52%	0.22%	0.01%	0.12%	0.00%	0.09%
Information Technology	3.94%	0.06%		3.06%	0.42%	0.01%	0.05%	0.01%	0.04%
Materials	3.12%	0.21%		2.06%	0.31%	0.01%	0.04%	0.00%	0.23%
Real estate	3.87%	0.09%		2.98%	0.18%	0.01%	0.05%	0.00%	0.29%
Utilities	3.76%	0.04%		1.12%	1.82%	0.01%	0.02%	0.00%	0.61%

The financial impact analysis reveals that the risks of extreme heat followed by water stress are the most significant for the issuer assets in the portfolio. Vulnerability to extreme heat mainly affects the Communication services sector but also Health and Information Technology. The financial impact related to water stress across the energy and utilities sector is also high.

These results are explained by the fact that climate change leads to alterations in rain patterns, increases the frequency and intensity of water stress levels. The increase in the population and associated urbanization are raising the demand for water.

Public services are subject to the risk of water shortages in their activity of distributing drinking water to populations. Furthermore, in the case of the energy sector, water stress represents a major risk, in particular for cooling nuclear reactors.

2.3.2 Sovereign funds and similar

The physical risk of sovereign funds is not yet analyzed by Trucost. These indicators are being developed and will be included as soon as possible in future publications by Ircantec.

3

Impacts of Ircantec investments on climate and biodiversity

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By adopting a responsible investor approach, Ircantec considers that it can actively and sustainably contribute to directing capital toward sustainable, low-carbon growth. Ircantec's goal is, on the one hand, to influence the economy through investment choices that favor responsible companies and, on the other hand, to directly finance innovations and infrastructures favoring the energy and environmental transition through specific investments (unlisted, green bonds, funds oriented towards so-called "solution" companies). This does not diminish the fact that, as an institutional investor, present in the equity of several hundred French, European and global companies, the economic weight of its investments is significant, leading to an extensive carbon footprint that must be reduced. Lastly, the new regulations applicable to the Scheme (SFDR and in particular the decree of article 29 of the 2019 French Energy and Climate Law), highlight the need for greater integration of long-term biodiversity-related objectives in the strategy.

3.1 Carbon footprint

Ircantec's mobilization for the climate is in line with its values of generational solidarity , with the aim of preserving the environment for current and future generations while supporting the energy and environmental transition, notably by facilitating job creation in the green economy. Initiated in 2009, Ircantec's responsible investor approach was significantly strengthened in 2016 in connection with its signing of the Paris call following COP21. Lastly, in 2021, to align its reserves with an emissions reduction trajectory compatible with a 1.5°C scenario, the Scheme has undertaken to calculate its carbon footprint annually and to significantly reduce its emissions, in line with the decree implementing article 29 of the French Energy and Climate Law.

Against this backdrop, Ircantec wished to adopt best practices and the highest standards to reduce the emissions of its portfolio of companies. The Scheme has thus committed to reduce the emissions of the WACI corporate portfolio (equities and bonds) by 7% per year on average until 2050, the reference year being 2021. The 7% reduction goal, with zero or limited overshoot, is derived from the decarbonization trajectory of the IPCC 1.5°C scenario.

To support companies in the energy transition and in accordance with the criteria of the "Paris Aligned Benchmark – PAB", the exposure of Ircantec's portfolio to high-impact sectors must be at least equivalent to that of its benchmark index. This commitment aims to support the transition by limiting a reorientation of the portfolio towards low-emission sectors only.

3.1.1 Listed companies

The main indicator for assessing the negative impact of investments on the climate is the carbon footprint, in its various metrics, carbon intensity per € million of turnover (C/turnover), carbon intensity per € million invested (C/V), weighted average of corporate C/R intensities (WACI). This monitoring is based on the carbon reporting table published by other institutional investors, which gives a complete view of the carbon profile of the portfolio. It includes an intensity indicator (weighted average carbon intensity), an absolute indicator (total carbon emissions for which Ircantec is responsible), as well as normalized emissions by assets under management (financed carbon emissions). One of the first steps in creating a carbon footprint consists in deciding on the scope of analysis of carbon emissions. All scopes are integrated in the scope of carbon emissions included in the analysis:

- direct emissions (scope 1): CO_2e emissions generated by the company's direct activities according to the definition of greenhouse gases in the Kyoto protocol;
- direct emissions (other): additional direct emissions including those from the following four sources: CCl_4, $C_2H_3Cl_3$, $CBrF_3$ and CO_2 from biomass;
- indirect emissions related to energy purchasing (scope 2): CO_2e emissions generated by the consumption of electricity, heat or steam;
- first level of supply chain excluding electricity (scope 3 upstream): CO_2e emissions generated by companies supplying goods and services at the first level of the supply chain;
- other levels of supply chain (scope 3): CO_2e emissions generated by companies supplying goods and services at the second to the last levels of the supply chain;
- downstream (scope 3): CO_2e emissions generated by the distribution, transformation and use of goods and services supplied by a company.

Note that Trucost recently made changes to the scope 3 methodology. It now integrates new information from companies in the calculation of downstream scope 3 emissions for three sectors displaying high carbon intensity: energy, utilities and the automotive sector. As an example, given the heterogeneous nature of fuel consumption and driving habits across the regions of the world, Trucost calculated the scope 3 emissions separately for the main operating regions of each car manufacturer, then aggregated the figures globally. Trucost has made changes to its methodology to more efficiently respond to customer requests to correctly assess the carbon footprint of portfolios and in the most just manner possible. Due to these changes which can significantly impact the climate data of portfolios, the Scheme asked Trucost to recalculate the N-1 data so that all other things being equal, it could calculate the portfolio data for year N and N-1 using the same methodology.

Carbon metrics – scopes 1, 2 and 3 of corporate investments

	Portfolio		Benchmark	
	2024	2023	2024	2023
Weighted average carbon intensity (tCO_2e/€million)	1,054	1,116	1,264	1,199
Evolution of carbon intensity in relation to previous year (%)	*-5.6 %*		*+5.4 %*	
Total carbon emissions (tCO_2e allocated based on corporate securities including cash)	3,957,570	4,567,633	5,732,049	5,791,421
Carbon intensity per € million of turnover generated (tCO_2e/€million turnover)	1,096	1,341	1,489	1,459
Carbon intensity per € million invested (tCO_2e/€million invested)	366	486	530	616
Equity segment				
Weighted average carbon intensity (tCO_2e/€million)	1,098	1,217	1,329	1,221
Total carbon emissions (tCO_2e allocated based on corporate securities including cash)	2,456,826	3,395,095	2,503,369	3,452,966
Carbon intensity per € million invested (tCO_2e/€million invested)	371	570	378	580
Corporate bond segment (excluding GB/SB funds)				
Weighted average carbon intensity (tCO_2e/€million)	920	963	1,193	1,159
Carbon intensity per € million invested (tCO_2e/€million invested)	397	369	555	679

Concerning the target of a 7% reduction in the emissions of the corporate portfolio, this is expressed in terms of intensity and integrates direct and indirect greenhouse gas emissions.

Also, in accordance with European indexes aligned with the Paris Agreement, the Paris Aligned Benchmark or PAB, scope 3 will be progressively integrated based on the following time scale:

- from the start of the commitment (2022): Energy (oil and gas) and Mining sectors;
- starting in 2024: integration of the Transport, Construction, Materials and Industrial activities sectors;
- starting in 2025: all sectors.

Carbon metrics – scopes 1, 2 and 3 only for the energy, mining & extraction, transport, construction, materials and industrial activities - phase II sectors

	Portfolio	Benchmark
	2024	2024
Weighted average carbon intensity (tCO_2e/€million)	521	723
Carbon intensity per € million of turnover generated (tCO_2e/€million turnover)	659	1,103
Carbon intensity per € million invested (tCO_2e/€million invested)	220	393
Equity segment		
Weighted average carbon intensity (tCO_2e/€million)	676	736
Carbon intensity per € million invested (tCO_2e/€million invested)	269	300
Corporate bond segment (excluding GB/SB funds)		
Weighted average carbon intensity (tCO_2e/€million)	313	515
Carbon intensity per € million invested (tCO_2e/€million invested)	169	341

Ircantec's weighted average carbon intensity was reduced by 5.6% between 2023 and 2024, thus respecting the commitments made in the latest climate policy. Carbon intensity was reduced by 21.1% in 2022 and by 11.2% in 2023, making an average reduction of 12.3% over the three years, in line with the objective of the SRI Charter. In contrast to the reduction in WACI of the portfolio, its benchmark observed an increase in its WACI over the same period, between 2023 and 2024. The relative performance of the portfolio against the benchmark index moved from -6.9% in 2023 to -16.6% in 2024. This reflects a clear year-on-year improvement in the relative performance of the portfolio, all the more so that the relative performance of the WACI for the equity segment moved from -0.3% to -17.3%.

The global portfolio reported better performance than its benchmark across all metrics. This can be partly explained by the sectoral weightings of the portfolio, especially the under-weighting of the energy sector, which improves the carbon footprint by 11.9% compared to its benchmark index. Furthermore, the rigorous selection of securities within the materials and utilities sectors has also improved the portfolio carbon footprint by 7.4% simply through Security Allocation, creating a global positive effect of 7.1%.

What is more, the Scheme has achieved a very marked decarbonization of absolute emissions, while the benchmark has only generated a very weak result.

The significant improvement in the portfolio WACI in 2024, i.e. -5.6% year on year, is partly explained by sectoral allocation and the rigorous selection of securities, in contrast to the movement of the benchmark index WACI between 2023 and 2024, which amounted to +5.4%. In 2023, the total effect of sectoral and security allocation amounted to 7.9%, reflecting the fact that the choice of investments imposed by the SRI Charter improved the carbon footprint by 7.9% in relation to the benchmark index. In 2024, this total effect reached 26.4%, in particular through improved sectoral allocation and more rigorous selection of securities in the Industry sector. For this year, Ircantec dramatically reduced the proportion of companies whose carbon intensity across all scopes is very high. For example, the companies Signify or Siemens Energy no longer figure amongst the main contributors.

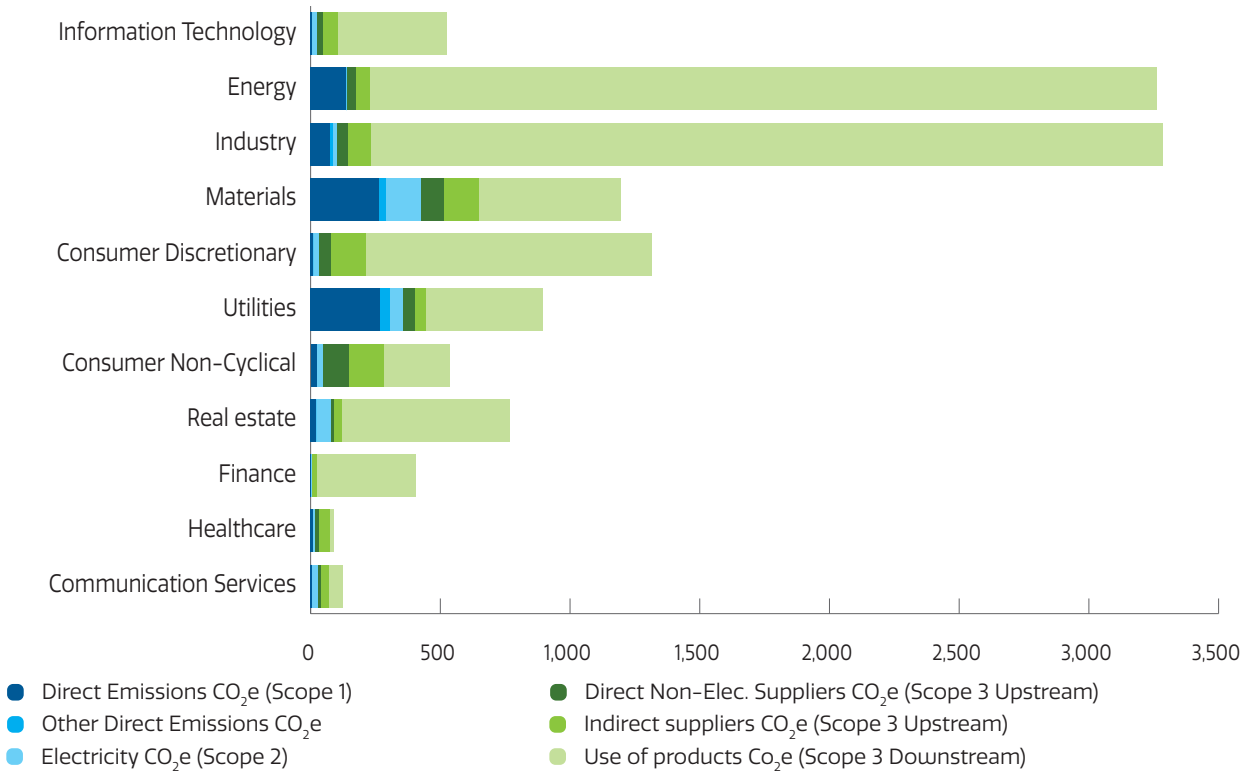
The equity segment presents total carbon emissions that are much lower than those of its benchmark, in particular due to its downstream scope 3 performance. This can also be explained by excellent sectoral allocation and security selection within the energy, materials, utilities and consumer discretionary sectors, whose carbon footprints are higher, especially the energy sector.

The bond segment posted better performance than its benchmark across all indicators, in particular thanks to the sectoral allocation of the energy sector, which has a high carbon footprint, but also to the appropriate selection of securities, in particular in the utilities sector.

The Industry sector exhibits the highest carbon intensity in the portfolio. This sector notably includes the oil majors, who are investing in their transition and in renewable energy sources. Nonetheless, due to its almost zero under-weighting compared to the 11% of the benchmark, this sector is not the most negative contributor to the portfolio carbon intensity. The Industry and consumer discretionary sectors, which feature extensive supply chains, generate high levels of downstream scope 3 emissions. Significant positions held by the portfolio in these sectors include Prysmian or Stellantis. These two companies have put solutions in place, for example Prysmian has a short-term goal aligned with a 1.5°C trajectory validated by Science Based Targets Initiative (SBTi) and an objective to achieve carbon neutrality aligned with 1.5°C by 2050 that is also validated by the initiative.

Lastly, exposure to high-impact sectors amounts to 52.61% compared to 52.09% for its benchmark index, with over-exposure to the Utilities and Industry sectors in particular. In this way, Ircantec fulfills its obligation of financing sectors which support the energy transition.

Breakdown of Carbon Intensity tCO_2e/€ million turnover of the global portfolio by different scopes and GICS sectors



Ircantec Global Portfolio – Emissions from all scopes combined (1+2+3)

Sector	Sector Weighting		Carbon Intensity		Allocation of Carbon Footprint		Total
	Portfolio	Benchmark	Portfolio	Benchmark	Sectoral Allocation	Security Allocation	
Communication Services	5%	5%	123	121	-0.3%	0.0%	-0.3%
Consumer Discretionary	16%	14%	1,313	1,324	0.3%	0.1%	0.4%
Consumer Non-Cyclical	10%	11%	536	490	-0.6%	-0.3%	-0.9%
Energy	0%	11%	3,263	3,093	11.9%	0.0%	11.9%
Finance	18%	14%	406	502	2.5%	1.2%	3.6%
Health	11%	9%	88	115	2.3%	0.2%	2.5%
Industry	17%	17%	3,275	3,109	0.7%	-1.8%	-1.2%
Information Technology	6%	5%	526	651	0.8%	0.5%	1.3%
Materials	6%	7%	1,169	2,394	1.0%	4.7%	5.7%
Real estate	1%	1%	769	689	0.2%	-0.1%	0.1%
Utilities	11%	7%	858	1,235	0.7%	2.7%	3.4%
TOTAL	**100%**	**100%**	**1,096**	**1,489**	**19.3%**	**7.1%**	**26.4%**

According to the current carbon accounting methodology, which includes all scopes, the exclusion of the following ten stocks would reduce the carbon intensity of the overall portfolio by 30.3% (per million of turnover generated). It is a measure of contribution. In other words, the weight of a security in the portfolio has a strong influence on the final result, as does its carbon intensity expressed as a GHG/turnover ratio. Thus, Prysmian makes a higher contribution to the portfolio intensity than Lennox International due to its greater weighting, while generating lower carbon intensity.

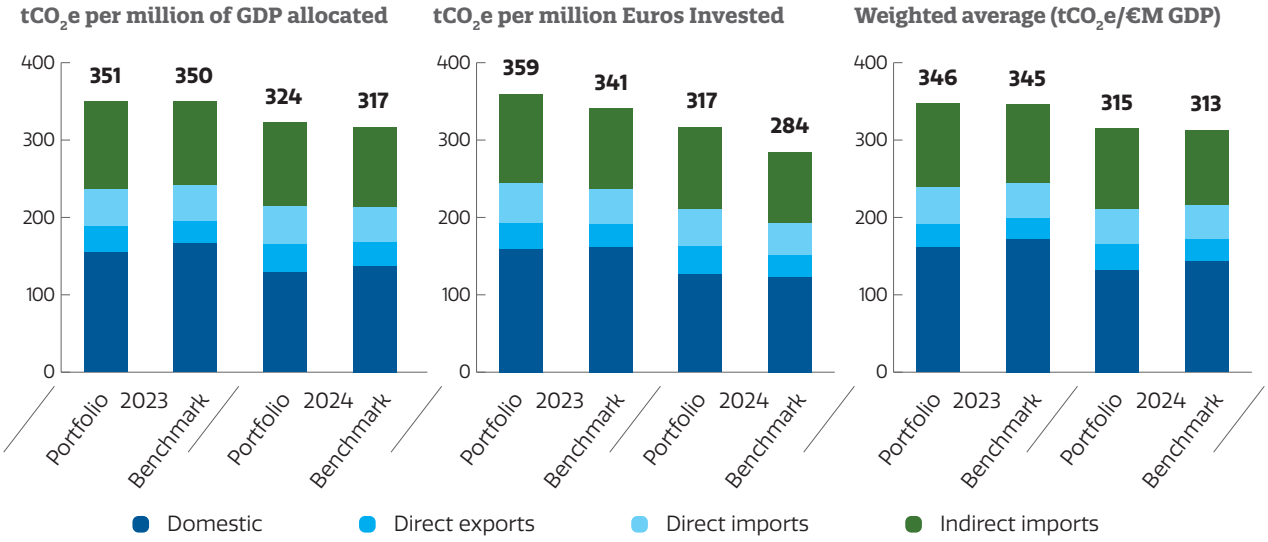
Ten leading contributors to weighted carbon Intensity of global portfolio, all scopes combined

Description	Sector	Value of assets	Carbon footprint	CI/Turnover 1 + 2 + 3	Contribution to CI/Turnover 1 + 2 + 3
		Weight (%)	Weight (%)	(tCO_2e/€ million)	(%)
Prysmian S.p.A.	Industry	0.45%	1.22%	17,288	-13.23%
Siemens Aktiengesellschaft	Industry	0.58%	2.07%	5,818	-2.90%
Xylem Inc.	Industry	0.40%	0.38%	12,156	-2.79%
Stellantis N.V.	Consumer Discretionary	0.23%	2.06%	2,378	-2.13%
Nexans S.A.	Industry	0.06%	0.42%	11,823	-2.05%
Compagnie Générale des Établissements Michelin SCA, Limited Equity Partnership	Consumer Discretionary	0.13%	0.69%	5,353	-1.87%
Lennox International Inc.	Industry	0.13%	0.45%	21,380	-1.45%
AB Volvo (publ)	Industry	0.15%	1.36%	6,191	-1.43%
Arkema S.A.	Materials	0.08%	0.33%	7,706	-1.29%
Trane Technologies plc	Industry	0.13%	1.41%	18,851	-1.19%

3.1.2 Sovereign funds and similar

Trucost collects data on national emissions inventories with PRIMAP [1] and economic production data with the IMF, covering 171 countries. The calculation of the portfolio carbon footprint is based on the average carbon exposure of domestic emissions (generated by goods and services produced and consumed in a given territory), as well as imported and exported emissions, set against GDP in € million of each country, weighted according to their weight in the portfolio. Furthermore, in the carbon footprint analysis of Sovereign states, the scope used varies according to whether governments are considered to be "economic agents" or "regulators". The approach used is that of a Regulator State, to focus more widely on national emissions, using the whole economy as a unit of analysis. This approach is consistent with the role and impact of governments which are not limited to just government activities and public services. Therefore, to generate as full a panorama as possible of the contributions to climate change, the emissions related to production and consumption were taken into account for each country.

It should be noted that supranational organizations and development banks (EIB, IBRD for example) are included in the analysis of listed companies for methodological issues, not in the sovereign analysis (as they cannot be attached to a particular country).



The weighted average carbon intensity of the sovereign portfolio fell by 8.95% between 2023 and 2024, as illustrated in the table on the right. It is essentially linked to domestic and imported emissions. Analysis of sovereign issuers is highly sensitive to changes in the growth of GDP. Following the Covid pandemic, economic growth was high, with average rates across the world reaching 6.5% in 2021. However, after 2023, global growth fell by 3%, with a more significant decline for developed economies, with France in first place, which saw growth fall from almost 7% in 2021 to 2.6% in 2022 and 0.9% in 2023. This decline in growth marked a slowdown in economies and potential drop in national absolute emissions. Such emissions fell from 18,128 million tonnes of CO_2 to 17,563 tonnes of CO_2. Also, exposure to the eight largest contributors to portfolio carbon intensity fell slightly, from 80% to almost 78%. The decline was particularly significant on its exposure to the USA, falling from 19.94% in 2023 to 16.11% in 2024.

(1) PRIMAP is a set of models and tools with the mission to synthesize earth system science and its uncertainties for international climate policy. PRIMAP combines the greenhouse gas emissions data for each country and Kyoto protocol gases covering the period from 1750 to now.

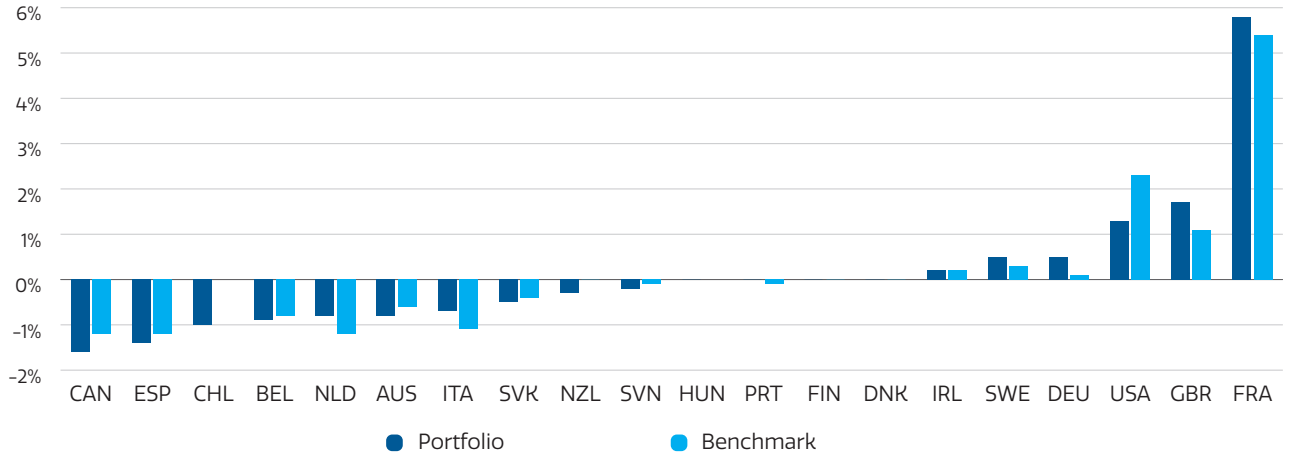
Country	Sovereign portfolio							Sovereign benchmark						
	Weight (2023)	Weight (2024)	Intensity (2023)	Intensity (2024)	WACI contr. (%) (2023)	WACI contr. (%) (2024)	Difference	Weight (2023)	Weight (2024)	Intensity (2023)	Intensity (2024)	WACI contr. (%) (2023)	WACI contr. (%) (2024)	Difference
France	25%	24%	274	253	70	60	-10.4	23%	22%	274	253	63	55	-7.8
Italy	16%	17%	386	340	63	59	-4.1	15%	16%	386	340	59	54	-5.1
USA	20%	16%	337	291	67	47	-20.3	30%	28%	337	291	99	82	-17.6
Spain	12%	15%	380	352	47	52	5.0	9%	9%	380	352	36	33	-3.1
Germany	12%	11%	376	315	43	34	-9.6	11%	10%	376	315	40	31	-8.9
Great Britain	5%	7%	268	251	14	18	3.7	5%	5%	268	251	12	12	-0.4
Chile	1%	2%	195	397	1	7	5.2	0%	0%	195	397	-	-	-
Belgium	2%	1%	608	547	11	7	-3.7	1%	1%	608	547	8	6	-1.4
Japan	0%	1%	457	432	-	5	5.4	1%	5%	457	432	6	20	14.2
Austria	1%	1%	385	369	4	4	0.6	1%	1%	385	369	2	2	-0.1
Canada	1%	1%	546	577	7	5	-1.5	1%	1%	546	577	4	3	-0.6
Australia	1%	1%	422	505	3	4	0.9	1%	0%	422	505	3	2	-0.7
Netherlands	1%	1%	508	481	4	4	-0.6	1%	1%	508	481	5	5	-0.8
Sweden	0%	0%	219	220	1	1	0.1	0%	0%	219	220	1	1	-0.2
Finland	0%	0%	368	328	1	1	0.9	0%	0%	368	328	1	1	-0.1
New Zealand	0%	0%	401	460	2	2	0.3	0%	0%	401	460	0	0	-0.2
Ireland	0%	0%	213	229	1	1	-0.4	0%	0%	213	229	1	1	-0.0
Slovakia	0%	0%	909	831	2	2	-0.7	0%	0%	909	831	1	1	-0.0
Slovenia	0%	0%	628	691	1	1	-0.3	0%	0%	628	691	0	0	0.0
Portugal	0%	0%	469	437	2	0	-1.4	0%	0%	469	437	2	1	-0.2
Denmark	0%	0%	266	276	0	0	-0.0	0%	0%	266	276	0	0	0.1
Hungary	0%	0%	822	696	0	0	-0.1	0%	0%	822	696	-	-	-
Latvia	0%	0%	417	709	0	0	0.1	0%	0%	417	709	0	0	0.1
Lithuania	0%	0%	823	775	-	-	-	0%	0%	823	775	0	0	0.0
Estonia	0%	0%	766	604	-	-	-	0%	0%	766	604	0	0	0.0
Croatia	0%	0%	648	588	-	-	-	0%	0%	648	588	0	0	-0.1
Cyprus	0%	0%	553	528	-	-	-	0%	0%	553	528	0	0	-0.0
Malta	0%	0%	223	207	-	-	-	0%	0%	223	207	0	0	0.0
Luxembourg	0%	0%	191	179	-	-	-	0%	0%	191	179	0	0	-0.0

The performance analysis above (with a focus on the weights and intensity of equity holdings between 2023 and 2024) highlights Spain, Japan and Chile as the main contributors to the portfolio WACI. For these countries, the weight increased by 3% for Spain and by 1% for both Japan and Chile.

Furthermore, the strong decline in the weighting of the USA due to a 4-percentage point drop in American bonds in the AXA portfolio, resulted in discussions with the management company in an attempt to lower the portfolio temperature, which is highly exposed to the USA, a country that is not aligned on a trajectory compliant with the Paris Agreement. This reduction has significantly increased the portfolio WACI as well as the carbon intensity of France and Germany.

Lastly, the Scheme's sovereign portfolio is only lightly or not at all exposed to countries whose carbon intensity is very high, in particular Eastern and Central European countries.

Performance Analysis – Carbon Footprint per million GDP allocated

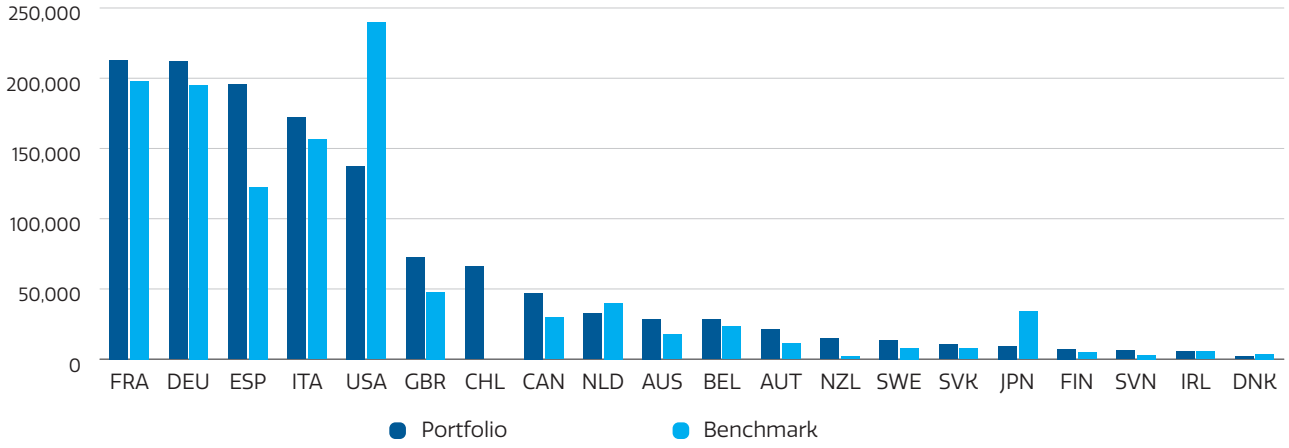


Certain countries present in the sovereign portfolio make a highly positive contribution to its carbon footprint. For example, if France was no longer in the portfolio, the footprint would rise by 5.8%. Inversely, the footprint would be 1.6% less if Canada was removed from the portfolio. This is explained by the relatively high carbon intensity of Canada in relation to the other countries. It is therefore possible to observe that the Scheme portfolio is globally exposed to countries whose carbon intensity is relatively good, so as to improve overall performance. The choice of weightings is strategic as the sovereign portfolio focuses on a small number of countries, with a high volatility of carbon intensity in relation to their GDP.

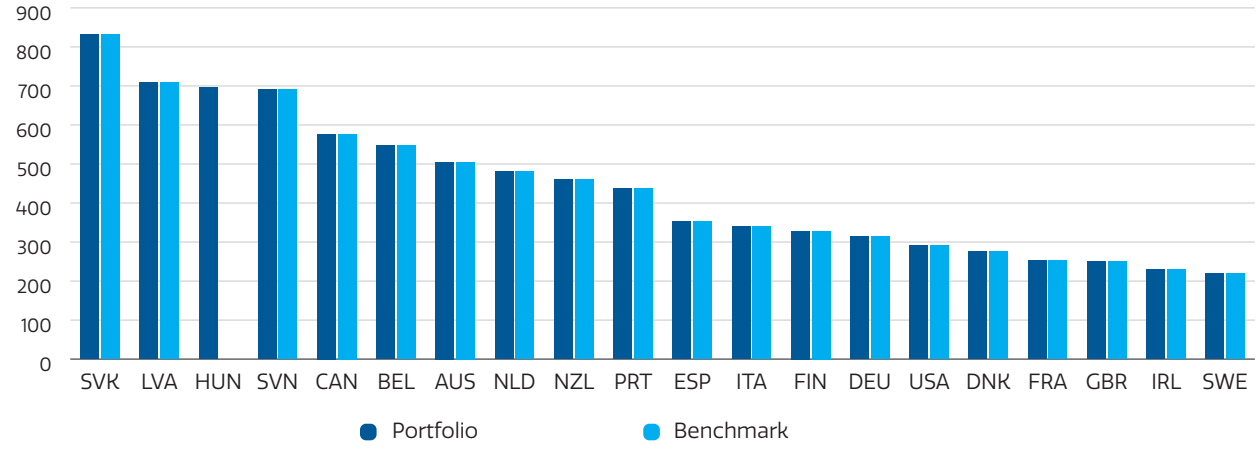
The graphs below compare the carbon intensities of issuers according to their weight in the portfolio but also per million of GDP generated. In tCO_2e absolute, the carbon footprint of the US in the portfolio is much higher than that of Slovakia.

On the other hand, once emissions are compared against GDP, it is clear that Slovakia's emissions are very high compared to the size of its economy. Nonetheless, this approach comparing intensity to € million of GDP penalizes less-developed countries as the monetary indicator is impacted by the non-parity of currencies and by the much lower levels of wealth in these countries. However, these two graphs highlight that the absolute emissions of the USA in the portfolio are well below those of the benchmark, in contrast to Spain, which reports absolute emission levels much higher than those of the benchmark. What is more, the second graph shows the distribution of countries with the highest carbon intensity in the portfolio, with the presence of some Eastern European countries. These countries have a relatively low GDP but high carbon emissions, in particular due to the high weighting of fossil energies, including coal, in their energy mix.

Primary contributors – Absolute footprint (tCO_2e)



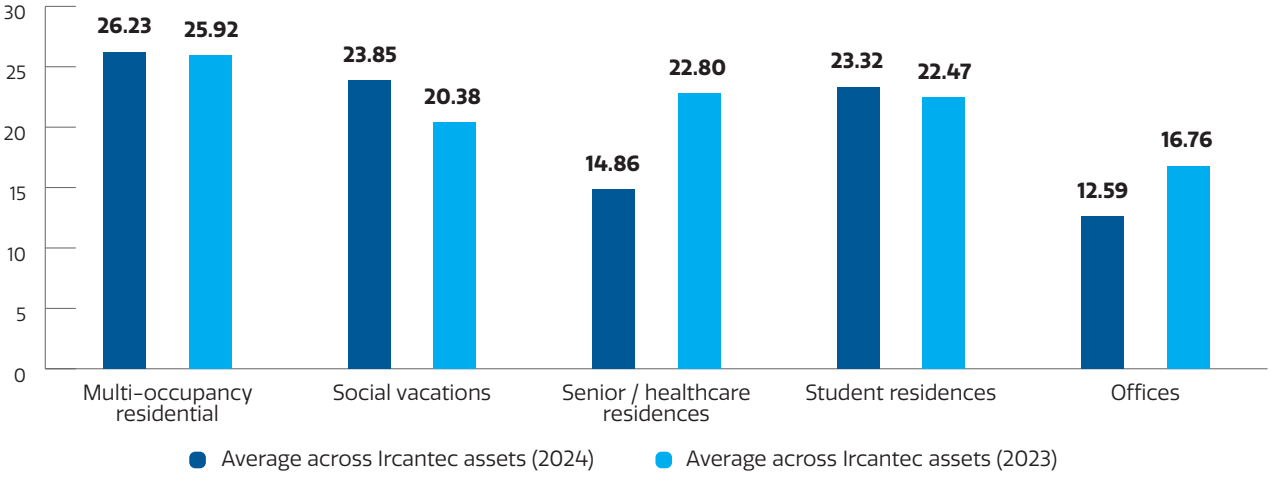
Breakdown of intensities by country (tCO_2e/€million of GDP)



3.1.3 Real estate

The carbon footprint of some of the real estate assets present in the unlisted portion of Ircantec's portfolio was also measured. Thus, a carbon intensity was calculated from the CO_2 emissions (scopes 1 & 2) of each building in relation to their surface area (m^2). The OPPCI (Organisme Professionnel de Placement Collectif Immobilier – undertaking for collective investment in real estate) fund representing the majority of Ircantec's real estate investments, is invested in assets held directly and in equity investments. Its diversified asset allocation strategy combines offices, housing, student residences, health establishments and social tourism. Thirty-one assets were studied for a total carbon footprint of 4,713 tonnes of CO_2 per year and an overall surface area of 217,536 m^2TNFA (Total Net Floor Area), which represents an average of approximately 21.67 $kgCO_2/m^2$/year (compared to 22.50 $kgCO_2/m^2$/year with emissions of 4,585 tonnes of CO_2 in 2023). This reduction in absolute terms of the carbon footprint is explained by the implementation of new assets with strong energy performance (in particular for offices and senior residences).

Average carbon intensity by asset category ($kgCO_2/m^2$) – OPPCI scope



Moreover, since 2024, Ircantec now aims to align its real estate assets [1] on a trajectory compatible with the Paris Agreement. In this way, the Scheme aims to invest in new assets with a high level [2] of energy performance, and in the case of existing property acquisitions, to conduct a systematic audit to quantify the work required to reduce GHG emissions and thus help limit global warming.

(1) This engagement concerns assets held directly within the dedicated OPPCI fund (excluding the Vesta portion), which represents most of Ircantec's real estate investments.

(2) A new asset will be considered to have a high level of performance if it justifies an energy consumption at least 10% lower than that set by the NZEB standards (Nearly zero energy building) defined by the European Union. It is worth noting that:
- According to the OID [Sustainable Real Estate Observatory], the 2020 Environmental Regulation makes it possible to comply with the NZEB -10%;
- the NZEB level is likely to evolve in line with revisions to various European regulations (SFDR, Taxonomy, EPBD).

As part of its OPPCI real estate portion, several energy audits have been conducted – covering a part of real estate assets considered as the lowest performing in environmental terms [1] – in order to complete a review and define appropriate recommendations to improve the energy performance of these buildings. Following this work, the multi-year deployment of an action plan has been defined with a view to reducing carbon emissions by almost 50% and complying with all the regulations introduced as part of France's Stratégie Nationale Bas Carbone (SNBC – National Low Carbon Strategy) [2]. This reduction in GHG emissions and the progressive exclusion of gas as an energy source (through work representing an investment of several tens of € million) is today part of a proactive and pragmatic approach to limit the global temperature rise to 1.5°C. Analysis of the portfolio carbon trajectory using the CREEM [3] tool also enables us to monitor the alignment of the portfolio on a 1.5°C trajectory until 2033, once the required work has been completed, with the support and assistance of lessors and subject to the assumptions used by the CREEM tool remaining unchanged.

3.2 Green share

3.2.1 Listed companies

The positive impacts that companies can have on the climate remain difficult to quantify for most companies. In March 2018 therefore, the European Commission (EC) adopted an action plan on sustainable financing, with the aim of integrating environmental, social and governance considerations into its financial policy in order to obtain financing for sustainable growth. Amongst the proposals was the development of a unified classification framework for the EU, or the "EU Taxonomy", which defines which economic activities are sustainable in environmental terms. In March 2020, the Technical Expert Group (TEG) on sustainable finance published its final recommendations on the definition and implementation of this Taxonomy. The first delegated act on sustainable activities for climate change mitigation and adaptation objectives was published in December 2021. The Taxonomy therefore sets out precise criteria and thresholds that activities must observe to be considered sustainable. These criteria include: a substantial contribution by the activity to at least one of the six environmental objectives [4] ; the *Do No Significant Harm* principle (DNSH) and minimum social safeguards.

Now, the European Union's green Taxonomy provides a common framework. Each economic activity covered has performance thresholds that measure its contribution to environmental objectives. The Taxonomy describes 96 business activities – linked to the 13 macro-sectors of the NACE (Statistical Classification of Economic Activities in the European Community) classification – which can be classified as "general", "transitional" or "enabling".

- general activities are those with a direct potential to attenuate carbon emissions (for example renewable energies);
- transitional activities are those that may have a relatively high carbon intensity but which have high potential to reduce their carbon emissions over time (for example steel production);
- enabling activities are those that could support reduction in carbon emissions in other sectors (for example wind turbine manufacturing).

What is more, distinction must be made between eligibility and alignment, which requires that several cumulative conditions must be met:

- make a substantial contribution to at least one of the six environmental objectives;
- do no significant harm to any of the five remaining environmental objectives – *Do No Significant Harm*;
- comply with a certain number of minimum social safeguards: meet OECD guidelines, UN guiding principles and ILO requirements on fundamental rights.

Trucost data provides an assessment of the proportion of company turnover eligible for alignment with the Taxonomy using a proprietary Trucost mapping of the Taxonomy system classification of sectors and the business activities described in the Taxonomy. Trucost also provides an assessment of the final proportion aligned on the two criteria published by delegated acts: climate change mitigation and adaptation.

In accordance with the EU Taxonomy disclosure directives, Institutional investors are required to declare the share of their aligned turnover generated with companies subject to the EU *Non Financial Reporting Directive* (NFRD). This may be supplemented by voluntary disclosure of alignment concerning companies not subject to the NFRD.

Therefore, 47.28% of the turnover generated by the global portfolio is eligible for the Taxonomy. The green share of the thirteen eligible macro-sectors (weighted average of the green shares of companies) amounted to 39.03% in 2023 compared to 32.86% for the benchmark index. In 2024, the green share of the 13 eligible macro-sectors reached 47% compared to 40.1% for the benchmark index. Moreover, the alignment improved from 3.93% in 2023 to 10.63% in 2024. These results reflect a clear improvement in turnover generated by sustainable activities according to the Taxonomy classification.

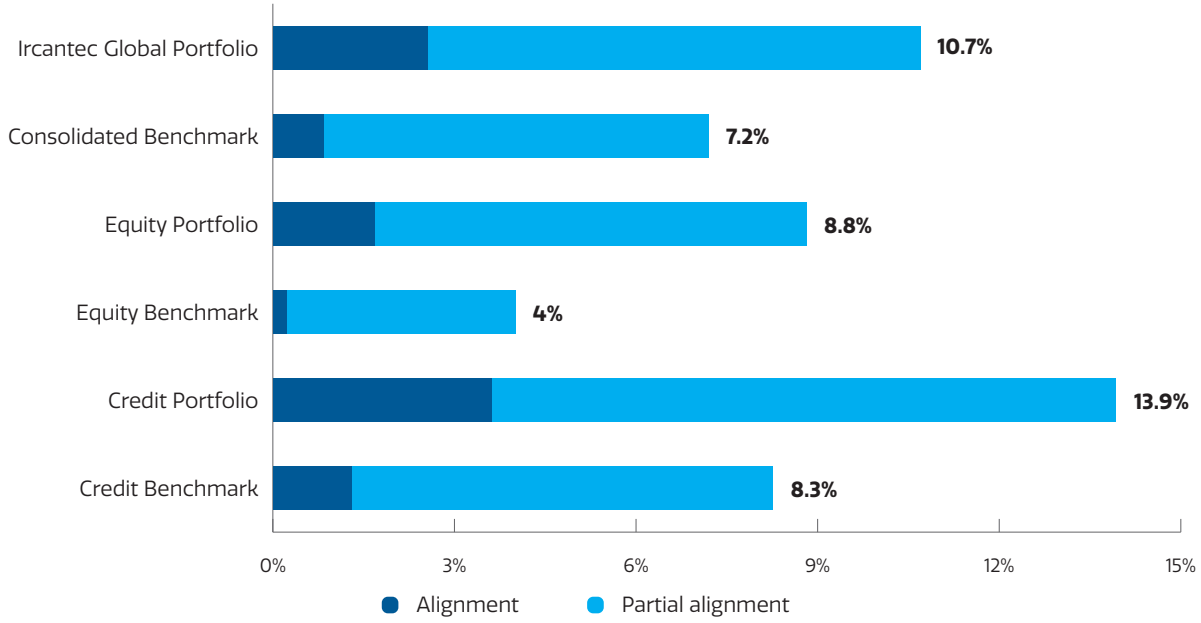
(1) Of the 31 assets making up the portfolio, 20 assets were subject to an energy audit (the Vesta real estate company is not included in the scope of analysis).
(2) The SNBC is France's roadmap to combat climate change. This strategy aims to achieve carbon neutrality by 2050. It has also defined a 49% reduction target for greenhouse gases by 2030.
(3) The CREEM (*Carbon Risk Real Estate Monitor*) tool enables the analysis of risk assessment of a real estate stock in light of decarbonization needs. This tool plots a trajectory (2018–2050) taking into account greenhouse gas (GHG) emissions and the energy consumption of real estate assets. Note that this trajectory has been defined for all European Union countries as per the recommendations of the Paris Agreement and for all types of buildings.
(4) Climate change mitigation and adaptation; sustainable use and protection of water and marine resources; transition to a circular economy; pollution prevention and control; protection and restoration of biodiversity and ecosystems.

Furthermore, in 2023, 7.64% of the portfolio's eligible turnover was related to general activities, 27.29% to enabling activities and 4.10% to transitional activities. In 2024, eligible turnover distribution is 7.7% for general activities, 26.3% for enabling activities and 6.7% for transitional activities. We can therefore see that the share of eligible turnover allocated to activities with a high potential for carbon emission reductions rose between 2023 and 2024. This reflects the Scheme's SRI policy, which aims to influence the economy as a whole, incorporating players in high-impact sectors and indispensable to the transition to a low-carbon economy.

In this way, the eligibility of business income for the European Taxonomy grew slightly compared to 2023. The contribution from the Industry sector and Utilities is particularly strong compared to the benchmark.

The graph below shows the total amount of aligned or partially aligned turnover broken down by potential objective and type of activity. Given the lack of available data to assess the substantial contribution of each activity, Trucost uses a Taxonomy Alignment Coefficient (TAC) to define the portion of eligible turnover aligned with the Taxonomy. We note a clear difference between the share of Taxonomy-eligible turnover and aligned turnover, which is normal considering the many cumulative criteria that must be satisfied. Indeed, for Opex and Capex to be considered as aligned, all the cumulative criteria referred to above must be met. In the Trucost methodology, Capex or Opex may be partially aligned if it respects the substantial contribution criterion without forcibly observing the other two criteria. Thus, Taxonomy-aligned turnover of the portfolio amounts to 2.27% compared to 0.89% for the benchmark.

All objectives and types – With TAC



In the absence of a provider on the unlisted segment, we are as yet unable to calculate the Taxonomy alignment of these assets.

3.2.2 Sovereign funds and similar

In terms of the sovereign portfolio, we analyzed the energy mix. In 2024, the mix comprised 31% of brown energies, 43% of green energies and 26% nuclear. The results concerning the green energy portion are up compared to 2023 (30%) and the portion of brown energy fell slightly compared to the benchmark, the share of which is 35% compared to 34% in 2023. The portfolio energy mix improved in relation to 2023 and the relative portion of green energies improved compared to the benchmark. What is more, the composition of the portfolio energy mix is aligned with a 1.5°C scenario modeled by the International Energy Agency. In 2030, the model portfolio will comprise 26% of fossil energies, mainly natural gas, in order to achieve a 1.5°C target, which is almost reached by the portfolio in 2024. In addition, the portion of low-carbon energy (renewables and nuclear) must be 74%. It currently lies at 69%. In this way, the portfolio is on a trajectory that complies with the IEA objectives but the Scheme will need to reduce the portion of nuclear energy and increase that of renewables excluding biomass and hydropower.

3.3 Climate Impact Investments

3.3.1 Green bonds

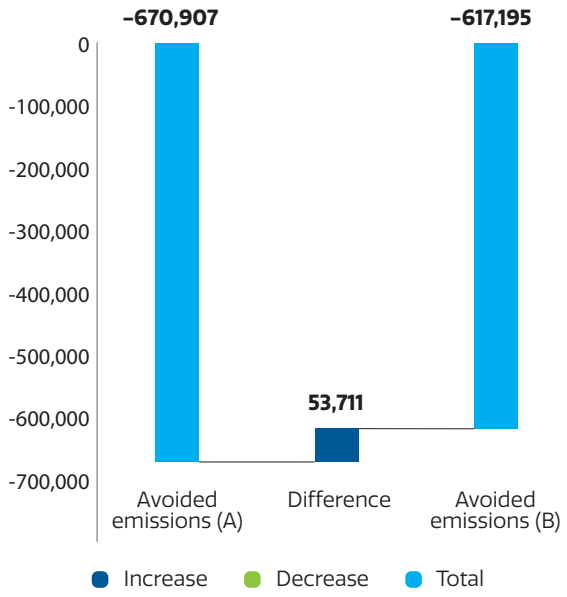
Green bonds are specifically used to raise funds for projects offering environmental benefits such as renewable energies, energy efficiency, reduction of water use and climate change adaptation. However, for the time being there are few solutions available on the market to assist investors in systematically evaluating and quantifying the positive impacts of green bonds. For this reason, measuring the positive impacts of green bonds using Trucost's proprietary tool Sustainable1 meets the growing concerns of the market in terms of self-proclaimed "green" financial assets, which are not audited or assessed in a consistent manner. Sustainable1 has developed a dataset to estimate the potential positive impacts and carbon emissions avoided thanks to these investments. Trucost estimates that the quantification of absolute and avoided carbon emissions offers issuers and investors the opportunity to develop a robust, credible and transparent green bond market. By quantifying the environmental benefits of these bonds, all market players could compare the performance of different bonds on the same basis and investors could measure the positive impact of their green bond portfolios in a consistent manner.

The green bonds invested in by the Scheme are grouped together in two dedicated funds which were created to accommodate the specific aspects of these assets in terms of market depth, issuer profile, audit requirements and labeling in particular. Having specialized managers on these mandates improves the monitoring of the use of funds received by issuing companies and ensures consistent treatment of these instruments. The main difficulty is indeed investing in debts with an adequate financial profile and suitable transparency as to the "green" classification they claim. To ensure this last condition, the two dedicated funds have received the Greenfin label, which implies the following conditions: majority of activities financed in the fund belong to an eligible classification, certain activities are excluded, ESG criteria are integrated in the fund and impacts are measured (mechanism for measuring the effective contribution of its investments to the EET).

Moreover, to systematically assess and quantify the positive impacts of green bonds, 552 such green bonds from across the portfolio and spread across various credit funds, were aggregated together (representing coverage in the range of 82%, up 17% on last year). In addition, the value of the covered portfolio is €1,846 million, with €1,774 million of projects classified as green. Total annualized avoided emissions amount to 670,907 tCO_2e. What is more, the breakdown of funds by project category according to the Taxonomy classification indicates that the share of production of renewable electricity and heat amounts to 17%, that of green transport 17% and green buildings 21%.

The graph below shows the potential reductions in carbon emissions achieved by the green bond portfolio on an annualized basis. Avoided emissions are calculated by comparing the emissions over the life cycle of each project – including the phases of construction, operation, and end-of-life of financed assets – to the emissions of a Business as Usual baseline scenario. The left hand measurement "Avoided Emissions (A)" gives priority to published data and only uses calculated data if no disclosures are available. The right hand measurement "Avoided Emissions (B)" gives priority to calculated data rather than disclosures. Lastly, the "difference" measurement shows the net difference in the event that both disclosed and calculated data are available. According to published data, avoided emissions amount to 670,907 tCO_2e compared to 617,195 tCO_2e for calculated data. Renewable electricity and heat production, alongside energy transmission, transport, distribution and storage represent the categories with the highest annualized avoided emissions. Moreover, avoided emissions grew strongly in 2024, up by 250 tCO_2e on 2023, representing an increase of 60%.

Annualized avoided emissions



3.3.2 Financing the energy transition

Ircantec supports the energy transition of the territories by financing local authorities, public institutions, small infrastructure projects, mainly French, in the fields of renewable energies, energy transition and the environment. Financing green infrastructures contributes directly to the Sustainable Development Goals, in particular SDG 7 (ensure universal access to affordable, reliable, sustainable and modern energy) and SDG 9 (build a resilient infrastructure, promote sustainable industrialization and foster innovation). These investments are made through:

- a dedicated multi-asset fund that invests directly in projects or unlisted companies compatible with these objectives and twelve funds (infrastructure funds and thematic private equity) that contribute to this objective: BTP Impact Local, CapEnergie 3, Demeter 4 Infra, Paris Fonds Vert, Infragreen II, Infragreen IV, Eurofideme 3, Eurofideme 4, Effithermie, Pearl Infrastructure Capital, Swen Impact Fund for Transition and

its successor SWIFT 2. Seven of these funds are certified GreenFin (Infragreen II, Infragreen IV, Eurofideme 3, Eurofideme 4, Paris Fonds Vert, Pear Infrastructure Capital and SWIFT 2). Ircantec has invested €285 million in these green infrastructures: at December 31, 2024, the market value of these funds amounted to €193.86 million.

- two funds dedicated to green bonds: at the end of 2024, the amount of its investments in green bonds amounted to €1,202.04 million, or 6.99% of its reserves;
- a dedicated European equity fund managed by Mirova whose investment strategy focuses on environmental issues and more particularly environmental innovation in the following areas: renewable energy, clean transport, energy efficiency, sustainable waste and water management, sustainable agriculture and green buildings. These investments amount to €245.55 million, or 1.43% of the reserves;
- two dedicated funds introduced in 2022 and 2023 (Actions Monde Mirova and Janus Henderson), where certain companies invested in by the fund make a positive contribution to climate stability by limiting greenhouse gas emissions to limit the global temperature rise to below 2°C. This represents assets in the order of €791.88 million, or 4.60% of reserves;
- two dedicated funds introduced in 2024 (TEE CPR global equity fund and Nomura), whose strategy is focused on the energy and environmental transition and in particular the following themes: production of alternative energies, energy efficiency, energy distribution and energy management. At the end of December 2024, these investments amounted to €400.55 million, or 2.33% of the reserves. These funds will be progressively topped up in 2025.

At the end of 2024, Ircantec has committed a total of 16.48% of its reserves to financing the EET [1].

In addition, an unlisted fund of €250 million dedicated to EET infrastructures will be introduced in 2025 through management company Eiffel. This fund could invest directly in companies that aim to build, own or operate infrastructures for the energy and environmental transition.

AWARDS AND PRIZES

In 2024, Ircantec was recognized twice for its commitment to responsible finance.

At the "Impact, Finance & CSR" awards hosted by Option Finance and AF2i, Ircantec received the Impact award in the "Institutional Investor" category. This award underlines its positive commitment to responsible and supportive finance, in particular through its investment strategy in social tourism. Ircantec was recognized for its investment vehicles (including the Tourisme social investissement - TSI fund and a part of the Villers Immobilier OPPCI) which aim to facilitate access for people living in vulnerable situations to vacations.

Furthermore, at the Couronnes Instit Invest award ceremony organized by Agefi, Ircantec received an award in the "Best initiative contributing to the environmental transition" category. This award recognizes the Institution's efforts in terms of climate policy and biodiversity, strengthening its position as a benchmark player in these fields.

3.4 Exposure to other environmental factors (excluding climate)

Forests have three functions: economic, social and environmental. Forest managers seek to reconcile these three functions, although the production function has historically taken precedence. In recent years, the other two functions have been gaining in importance, particularly due to better visibility of forestry activities by the general public. Thus, forests have a special role to play in mitigating the effects of climate change (carbon sequestration in forests and carbon storage in wood), in preserving biodiversity and supplying many ecosystem services (preservation of landscapes, water quality, etc.). In particular, forests absorb around a third of global CO_2 emissions, shelter over 80% of terrestrial biodiversity, protect soil against erosion, and much more besides.

Consequently, forestry management must in particular ensure it is possible to continuously produce wood, a material with many uses and an intrinsically renewable resource that combines performance, durability and adaptability, while integrating environmental issues into silviculture (preservation of biodiversity, quality of soil, water, etc.) or taking into account stakeholder expectations.

As of December 31, 2024, Ircantec owns almost 5,127 hectares (19.8 sq. miles) of forest land in France through the forestry investment vehicle "Gestion Forestière de Brèves". As part of these management activities, the forestry company has a socially responsible and eco-friendly forest management, policy, in particular:

- by ensuring the multi-functional use of forests to pursue an objective of wood resource production to meet the growing needs of the industry, indispensable to achieving France's climate objectives and to reducing the effects of imported deforestation;
- by ensuring the renewal of forests after each parcel is felled, using the most suitable solution for the local context (plantation or natural regeneration) as part of sustainable land management;

(1) Does not include the PAB Amundi fund.

- by seeking to ensure the diversity of species, especially when renewing mature populations to improve their resilience and land biodiversity; their selection is subject to lengthy examination to ensure their suitability for the land plot;
- with sustainable forest management certification (PEFC) audited according to processes defined by the applicable standard; and
- by respecting the engagements in the European Green Deal which will be addressed in an annual report.

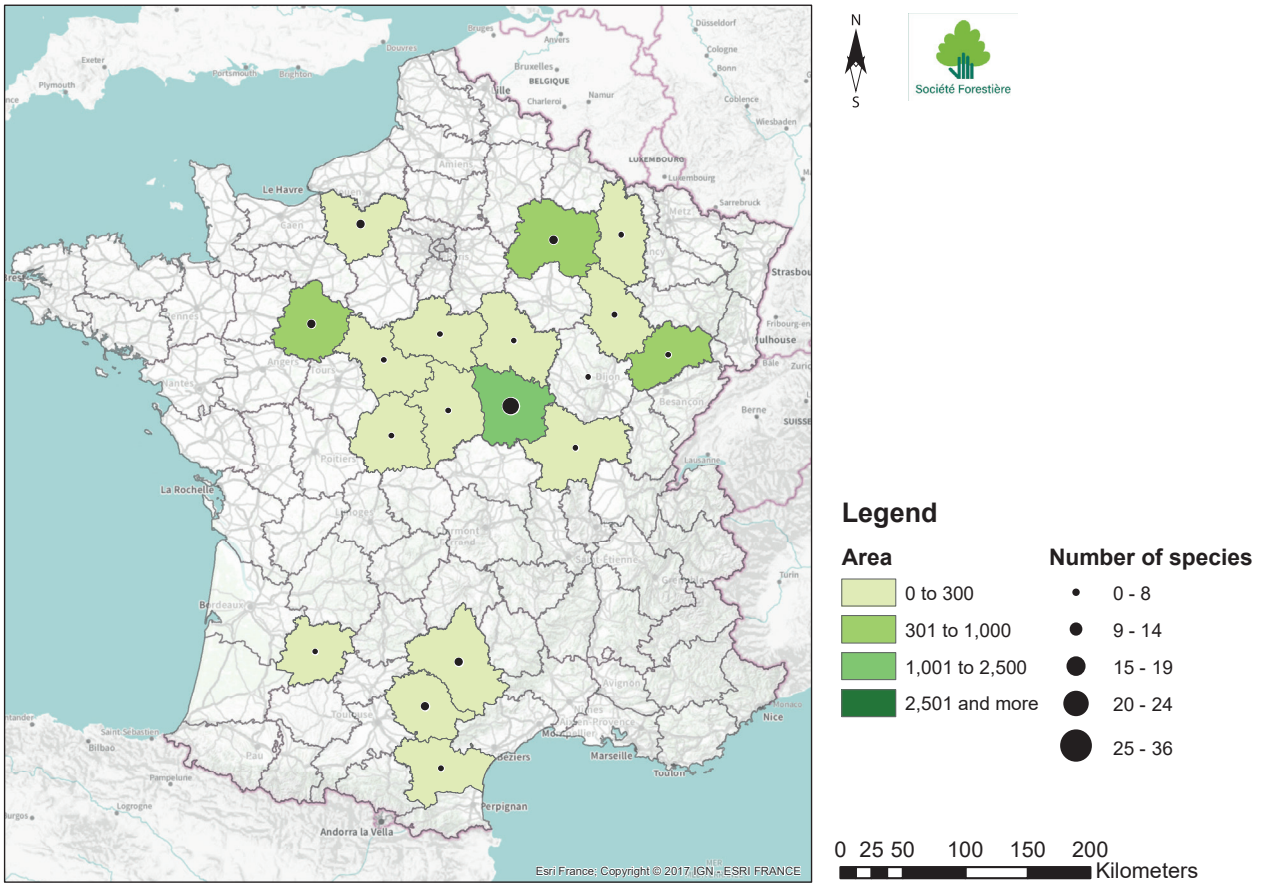
As part of its sustainable forestry management strategy and the renewal of its mandate, in 2022 Ircantec sought to promote new missions and define indicators that would provide a long-term goal to its objectives of meeting social, environmental and economic issues which define the multi-functional nature of forests.

Therefore, the following ESG monitoring indicators were determined:

ESG monitoring indicators	Associated objectives	2024 data
Organize the resilience of forests	100% of sites planted with at least two species by 2026	100%
Act with respect for stakeholders	Deploy all opportunities for dialog across all territories by 2026	Consultations organized for 1,550 Ha
Eco-certification	Maintain PEFC certification across 100% of assets	100% of assets certified
Protect biodiversity	Inventory 100% of assets under the Index of Biodiversity Potential by 2026	60.80%
	Monitor and limit the main invasive plant species in forest environments	Zero invasive species detected
Protect the quality of water	Scope of protection of water catchments	Almost 100 hectares identified
Protect soils and prevent erosion	Assess 100% of land areas to replant (excluding Landes de Gascogne by 2026)	Project under way
Increase carbon sinks	Measure the annual carbon balance and surface areas certified with the Low-Carbon label	In 2024, forestry activities enabled the capture of 37,129 tonnes eq. CO. A land area received certification in 2024.

In addition to silviculture, which aims to produce quality wood, forest management offers the ability to optimize carbon stock, biodiversity, resilience to climate change and all the benefits linked to ecosystem services.

Map of Ircantec species diversity 2024



3.5 Biodiversity analysis of the portfolio

Biodiversity refers to all living beings (from whales to micro-organisms such as bacteria) and ecosystems (forests, prairies, oceans, etc.) where they live. This term also refers to the genetic diversity of species, their interactions between themselves and their environments. Biodiversity is the living fabric of our planet, it covers all natural habitats and lifeforms, offering irreplaceable and indispensable assets.

After climate change, biodiversity is the latest environmental crisis. The biodiversity crisis reflects the destruction of ecosystems and the life they support, as a result of human actions. In total, 75% of terrestrial habitats and 40% of marine ecosystems are severely damaged and the pace at which species are disappearing is 100 to 1,000 times higher than the natural extinction rate. This is why today we can genuinely speak of a sixth mass extinction. For this reason, the topic of biodiversity has been neglected by the economic sector for a long time in favor of climate issues, but it now represents an increasing portion of forward-thinking projects, initiatives and regulations around the world.

It was only at the 1992 Rio Conference and through the signature of the Convention on Biological Diversity, that the need to protect biodiversity for all humanity was officially recognized. This Convention has three objectives: (1) the conservation of biological diversity, (2) the sustainable use of the components of biological diversity, and (3) the fair and equitable sharing of the benefits arising out of the utilization of genetic resources.

The Kunming-Montreal Global Biodiversity Framework was adopted at COP15 in 2022. The framework sets out the strategy for all stakeholders in their actions to preserve and restore biodiversity. Aside the global objectives of protecting nature, this new agreement includes 23 priority actions to be achieved by 2030 (1). These objectives have been taken onboard by France in its "National Biodiversity Strategy for 2030 (2)", introduced in November 2023. It sets out a pathway to halt then reverse the decline of biodiversity.

(1) https://www.cbd.int/doc/decisions/cop-15/cop-15-dec-04-en.pdf.
(2) Vivre en harmonie avec la nature : stratégie nationale biodiversité 2020 (Living in harmony with nature: National Biodiversity Strategy 2020) – https://www.ecologie.gouv.fr/sites/default/files/Doc-chapeau-SNB2030-HauteDef.pdf.

The roll-out of the objectives of global conventions brings with it a range of regulations for the financial sector. In Europe, the "Sustainable Finance Disclosure Regulation" (SFDR) requires investors to publish their "principal adverse impacts" relative to biodiversity, and the European Taxonomy requires the publication of a biodiversity protection objective. In France, article 29 of the Energy-Climate act (LEC) of November 8, 2019, aims to clarify and strengthen the non-financial transparency framework for market players. For the first time, biodiversity has been explicitly referred to. Declarants must publish information on the strategy for alignment with long-term biodiversity-related objectives. Ircantec is directly subject to this article and its requirements, and will ensure full compliance.

Contribution by Ircantec to reducing the primary pressures and impacts on biodiversity

Ircantec has developed a policy aiming at fuller integration of biodiversity into the management of its reserves, through a variety of measures, enabling the Scheme to be compliant with regulations.

Measuring Ircantec's biodiversity footprint

The biodiversity footprint offers a holistic vision of the impact of enterprise activities by connecting these activities with the pressure they exert, and these pressures to the impacts that they generate. Various methods are currently used to quantify these impacts, which enable suitable interpretation of the global impact of investments on biodiversity.

The Scheme therefore uses the BIA-GBS (*Biodiversity Impact Analytics – Global Biodiversity Score*) method developed by Carbon4 and CDC Biodiversité to measure its impact on biodiversity. The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) has defined five main anthropic pressures that are responsible for biodiversity loss and the deterioration of natural capital: the changing use of sea and land, direct exploitation of organisms, climate change, pollution and invasive non-native species, as well as three categories of ecosystems: land, fresh water and marine. The GBS covers two domains - land and aquatic biodiversity - and four of the five pressures identified by the IPBES, which are then divided into eleven GBS pressures (see appendix 11).

The GBS provides an estimate of the impacts caused by enterprise activity on ecosystems. This tool has interesting features as it provides an aggregated metric (*Mean Species Abundance*) to assess the level of deterioration of ecosystems attributed to companies or to the portfolio. In addition, it differentiates between static impacts (inventories) and dynamic impacts (flows), while taking into account the impacts on biodiversity across the whole upstream value chain.

The MSA is an important metric of the GBS and describes changes in biodiversity in relation to the undisturbed state of ecosystems. It is defined as the mean abundance of species initially present in relation to their abundance in the undisturbed ecosystem, understood here as the equivalent to a natural state, intact and unaffected by human activity. In tangible terms, the MSA evaluates the integrity of ecosystems on a scale of 0% for a completely modified area, to 100% for a fully intact ecosystem. This metric is then combined with a given surface area to obtain the score in MSA/km^2. Thus, an impact of 1 MSA/km^2 is equivalent to sealing the soil across 1 km^2 of natural unaffected area.

Furthermore, a distinction is made between static and dynamic impacts. The dynamic footprint concerns biodiversity changes or flows over a given period (new erosion, restoration or conservation of biodiversity), while the static footprint encompasses all persistent effects that remain over time. Static impacts can range from the spatial impact of existing facilities to past emissions and pollution that still impact biodiversity today. This differentiation enables us to better measure the impacts on environmental integrity, by separating past cumulative impacts from new impacts, whether they are negative or positive. The GBS method uses this approach, separating the periodical gains or losses (dynamic impacts) from cumulative negative impacts (static), to ensure a comprehensive evaluation of the state of biodiversity.

Lastly, the GBS retains the concept of scopes developed by the GHG protocol for the climate footprint and transposes it to the biodiversity footprint to delineate the impacts through the value chain. For this reason, scope 1 represents the direct impacts of enterprise activities. Scope 2 contains the impacts of the production of energy consumed by the company. Lastly, scope 3 generally includes the impacts on biodiversity of the upstream and downstream value chain.

Measuring the portfolio biodiversity footprint

To assess enterprise biodiversity footprints, the primary approach of the GBS is to link the data on economic activity to the pressures on biodiversity and to translate these pressures into modifications (impacts) of the state of biodiversity. A hybrid approach is adopted to make use of the best data available at each step of the assessment.

In addition, an aggregate score has been introduced in the BUA-GBS to generate a single figure related to biodiversity impact: the MSAppb* [1]. This metric combines the impacts on land and aquatic ecosystems as well as the static and dynamic impacts into a single indicator. It provides an initial overview of the biodiversity performance of portfolio companies before going deeper analysis of their results using MSA.km^2.

Impacts financed by the portfolio in MSA.km^2

	Dynamic	Static
Aquatic	0.7	106.8
Terrestrial	30.7	1,985.8

(1) ppb = parts per billion.

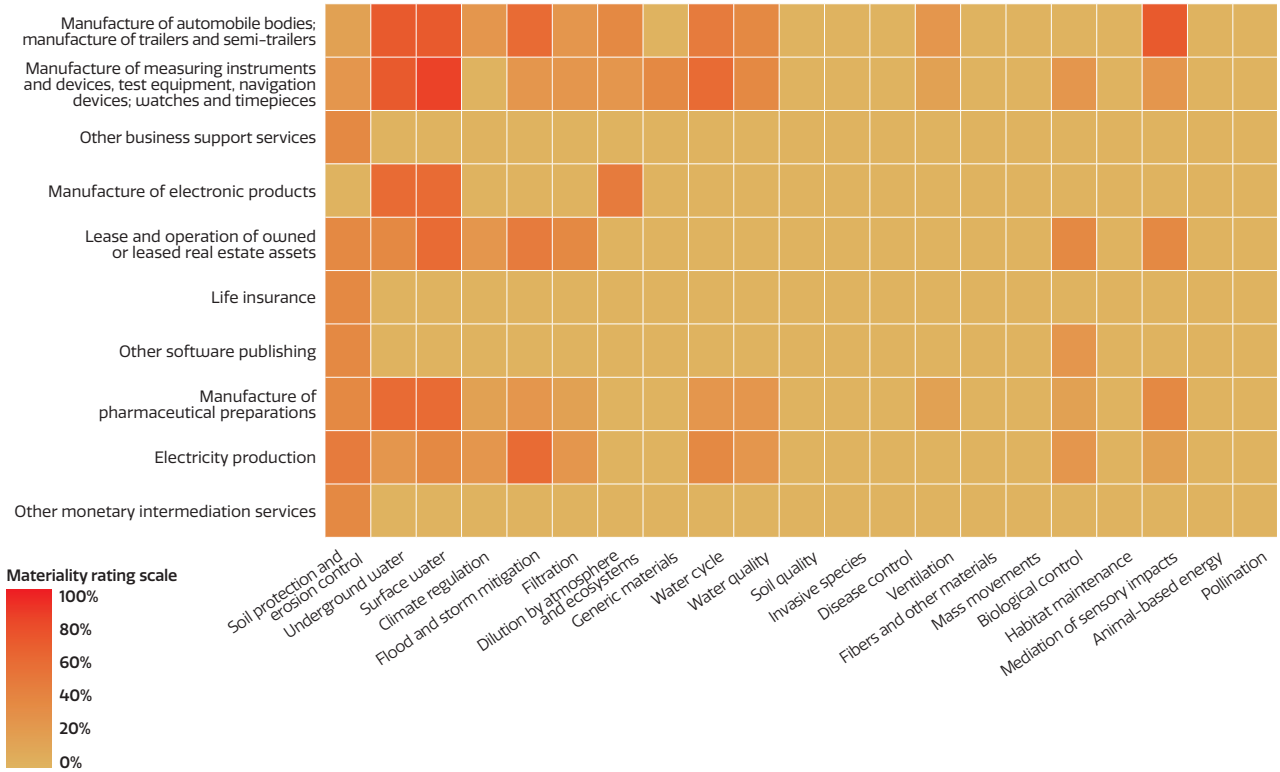
The results of the footprint measurement show that the whole Ircantec portfolio analyzed has generated a cumulative negative footprint of 1,985.80 MSA/km², namely the equivalent of the complete destruction of 1,985.80 km² of virgin ecosystems (static land impacts scope). By way of comparison, this represents soil sealing across an area 18 times the size of the city of Paris. In dynamic terms, i.e. only taking into account the additional impacts over the year in question, this destruction (in land impact) is equivalent to 30.7 MSA/km². Therefore, using the MSA.km² indicator as a basis, the sectors of the portfolio with the highest impact are the manufacture of food products, financial services activities and the manufacture of chemical products. Certain sectors such as agri-food have a significant cumulative impact on land use and therefore a predominantly static impact. In addition, the dynamic impacts related to the pressure of climate change are distinguished for financial services activities, as the downstream impact of financed emissions on climate change is included.

The BIA-GBS analysis also reveals that most of the portfolio's impacts are generated in issuers' scope 3 analysis, which represents between 91.24% and 98.95% of the total impact in MSA.km² depending on the domain (land or aquatic) and the category (static or dynamic). Lastly, using the aggregate MSAppb*, the absolute soil sealing footprint of the portfolio amounts to 798. These estimations are significant as they provide a starting point that enables us to define a target trajectory.

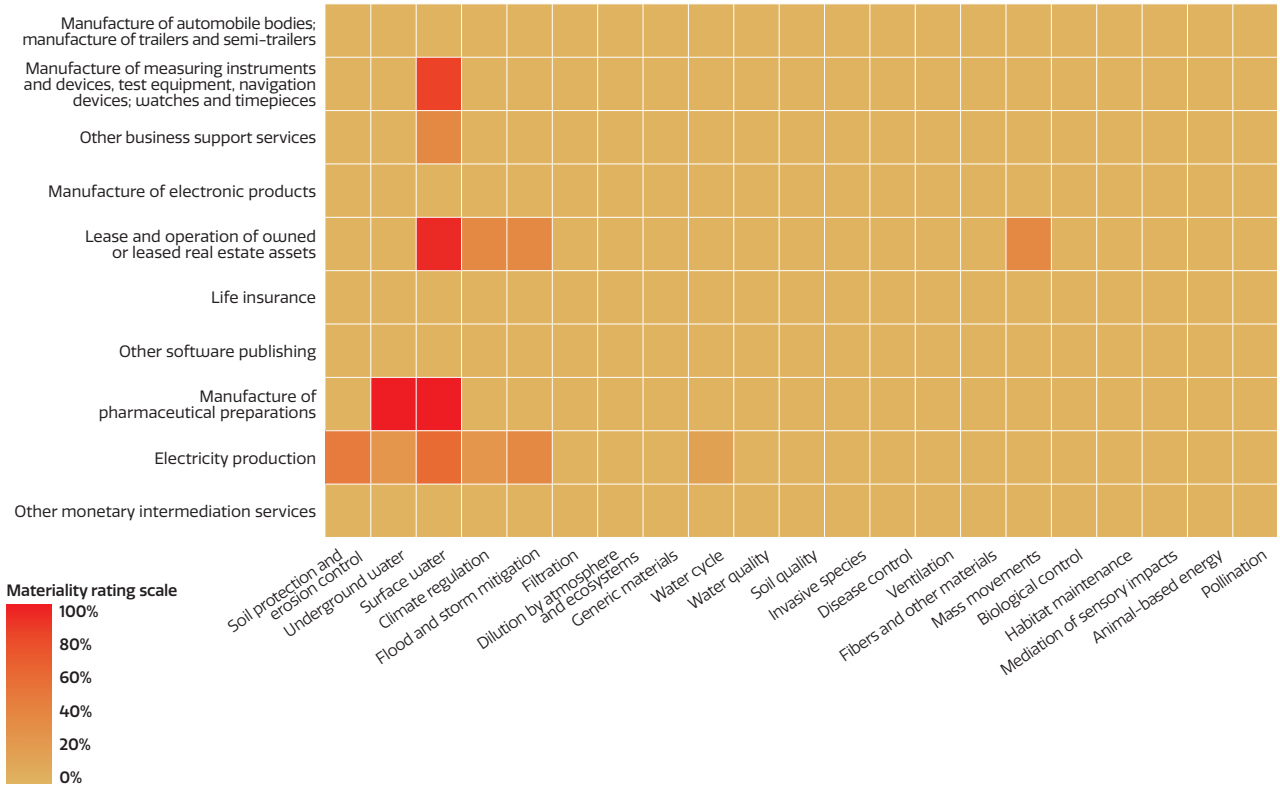
Assessment of dependencies

Although the initial focus of the GBS was on measuring the impact, the estimation of dependency on ecosystem services was added to provide an overview of the risk assessment in line with the double materiality approach. Ecosystem services are those supplied by biodiversity and which enable or facilitate human activities, in particular economic activities (pollination, water purification, etc.). The GBS serves to estimate dependencies on the 21 ecosystem services classified in the ENCORE methodology (*Exploring Natural Capital Opportunities, Risks and Exposure*), using two materiality ratings ranging from 0% (no known dependency) to 100% (very high dependency). The mean materiality rating measures the average dependency of the business on all ecosystem services. This materiality rating can mask high dependencies on a small number of ecosystem services if the dependency on all other services is low. For this reason it is completed by a critical materiality rating, which focuses on the part of a business that is highly dependent on at least one ecosystem service, i.e. dependent on at least one non-replaceable service. The services are considered non-replaceable if the dependency is rated as high or very high according to ENCORE.

Mean materiality rating – Scope 1, businesses and financial institutions only



Critical materiality rating – Scope 1, businesses and financial institutions only



These graphs highlight the distribution of mean dependency (first table) and critical dependency (second table) by ecosystem service and by sector, for the most represented industries on scope 1 in the Ircantec corporate portfolio.

We can observe that the highest dependencies concern ecosystem services related to ground water and underground water, as well as erosion control. Water is a vital resource for most economic sectors. Its progressive disappearance could generate significant disruption in activities which depend on it, thus impacting on companies present in Scheme portfolio. In addition, soil protection is essential to maintain the structure and function of ecosystems, protect natural habitats, and prevent damage caused by erosion and natural catastrophes.

This indicator also highlights which economic sectors are the most dependent on ecosystem services. Companies in sectors such as consumer goods, energy, real estate and healthcare are particularly concerned. It should be noted that the healthcare sector is particularly dependent on water supply services, and the pharmaceutical industry is extremely dependent on biodiversity. In effect, the genetic diversity of living organisms, in particular the plant kingdom, is essential to the production of most medicines.

Nonetheless, it is important to report that the assessments of the portfolio's biodiversity footprint and dependency on ecosystem services still have to face limitations. These limitations are due to the insufficient quantity of data required for calculations, to the changes in methodology applied by CDC Biodiversité and Carbon4 Finance, and to the use of approximations. And yet, these assessments are crucial in generating a new inventory, which is essential for more effective integration of biodiversity in the Group's investment management.

Divestments from companies for biodiversity reasons

The damage caused by certain activities to ecosystems is now well documented. For this reason, Ircantec has implemented exclusion thresholds in domains related to biodiversity protection, to start limiting the damage caused to nature by its investments.

These thresholds will be in place by the end of the first half of 2025 for all listed assets in Ircantec reserves. Their implementation will be preceded by a campaign to contact businesses potentially divested from. Businesses divested from may also be reinstated to Ircantec's portfolio if they change their activities and fall below the determined thresholds.

Given the changing nature of regulations and availability of data, the thresholds and exclusions may be revised and biodiversity-related themes addressed in the policy for divestments from these activities may change, for example to take into account the theme of forever pollution.

Palm oil

Deforestation and modification of natural ecosystems are among the main causes of global warming. They also have serious consequences in terms of biodiversity loss, such as the disappearance of fauna and flora from forests. The palm oil industry, alongside intensive animal agriculture and the soya, rubber, paper pulp and wood industries, is one of the main causes of deforestation. Large-scale oil palm tree cultivation has devastating consequences for ecosystems and species, but also for the rights of native populations. To limit investment in activities whose consequences include deforestation and soil conversion, Ircantec has set thresholds in the palm oil sector. The Scheme now excludes from the whole value chain companies which:

- generate over 5% of their annual turnover from palm oil and where less than 50% of their palm oil production is RSPO certified (Roundtable on Sustainable Palm Oil) [1];
- generate over 15% of their annual turnover from palm oil and where less than 80% of their palm oil production is RSPO certified.

Ircantec is also divesting from businesses involved in significant controversies on this theme (raw palm oil, palm kernel oil, etc.).

Lastly, for producers, an additional condition must be met to remain in the portfolio: observe social safeguards based on the principles of the UN Global Compact [2].

Pesticides

The French National Institute for Statistics and Economic Research INSEE defines pesticides as "substances or products used to control organisms considered as pests, whether they be plants, animals, fungi or bacteria. They may be classified by type of use (herbicides, insecticides, fungicides, nematicides, rodenticides, etc.), by chemical family or by method of action."

The intensive use of chemical pesticides accelerates biodiversity loss and contaminates water, air and soils. Exposure to these pesticides can involve health risks, particularly for farmers and local communities. In 2020 for example, one or more pesticides were detected above the thresholds of concern in 22% of all river and lake monitoring sites in Europe. 83% of agricultural soils tested as part of a study in 2019 contained pesticide residues. A large-scale human bio-surveillance study undertaken in 2014 and 2021 in five European countries revealed that at least two pesticides were present in the body of 84% participants in the study [3].

Ircantec therefore implements an exclusion threshold concerning pesticides: exclusion of all companies which generate over 5% of their annual turnover from the production or distribution of pesticides.

GMO

From a regulatory standpoint, European legislation (and in particular the European Directive 2001/18/EC) define a GMO as "an organism, with the exception of human beings, in which the genetic material has been altered in a way that does not occur naturally by mating and/or natural recombination." The European regulation forbids a GMO from being introduced onto the market or released into the environment without prior authorization. This authorization can only be issued after a case-by-case examination of the risks of the organism to health and the environment. GMO authorized to be placed on the market require monitoring, traceability and labeling.

Ircantec acknowledges the debate and uncertainties surrounding the production and use of GMO and seeks to ensure minimal, responsible investment in these activities.

Therefore, Ircantec excludes companies where over 5% of annual turnover is generated through GMO.

Furs

Every year, around 100 million animals are killed for their fur. Fur is often obtained under conditions that are violent for animals. To support animal well-being, Ircantec has adopted exclusion criteria for the fur industry.

Companies involved in the production of fur must show one of the following elements:

- a scheduled exit from the use of fur, or
- a responsible policy exhibiting one of the following components:
  - observance of international standards on animal well-being, in particular:
    - Agreement on International Human Trapping Standards,
    - World Organization for Animal Health,
    - European Convention for the Protection of Animals Kept for Farming Purposes,
    - Convention on International Trade in Endangered Species of Wild Fauna and Flora,
    - For feathers and down: European Down & Feather Association and the International Down and Feather Bureau,
  - transparent and traceable sourcing of furs (for example through the *Saga Furs Auction House*),
  - preferably a "Furmark" certification (global certification and traceability system for natural fur which ensures the well-being of animals and compliance with environmental standards throughout the supply chain).

(1) The Roundtable on Sustainable Palm Oil (RSPO) is a global certification system for certified sustainable palm oil.
(2) https://unglobalcompact.org/what-is-gc/mission/principles.
(3) European Environment Agency study: "How pesticides impact human health and ecosystems in Europe" 2023.

Biodiversity strategy for the real estate segment

In 2022, an initial analysis of the quality of outdoor areas was carried out using the BAF (Biotope Area Factor) [1], to enable the identification of assets offering the greatest potential in terms of biodiversity. Following this analysis, a biodiversity score chart was developed in 2023 by the OPPCI's asset management company. It comprises 24 indicators divided into four areas:

- commitments by the grounds maintenance contractor;
- project development according to the environmental engineering of the site;
- reintegration, improvement and increase of on-site flora and fauna;
- reconnection of users with living assets, improvement of their well-being and awareness.

This table takes into account the components of day-to-day management of natural spaces on sites but also proposes action plans to improve the quality of the biodiversity of said sites. To develop these action plans, the management company was assisted in conducting an environmental assessment by environmental experts. Seven sites, with varied characteristics, were selected to conduct the first assessments. Accordingly, following on from these analyses, Ircantec's management company will implement approved actions and monitor performance charts on the seven selected sites.

Starting in 2024, the management company assumed the following commitments:

- request the Biodivercity certification in its letters of interest for 100% of VEFA (sale prior to completion) [2]/heavy renovation projects, with the aim of obtaining it for 70% of said projects with a value over €15 million;
- conduct environmental audits on 60% of sites by 2026;
- calculate the BAF for all OPPCI assets. In addition, an objective of BAF improvement will be requested on new sale prior to completion or heavy transformation projects: promoters will have to calculate before / after the BAF of projects and ensure monitoring;
- an additional constraint on soil sealing for the biodiversity investment table; at least 50% of new acquisitions on new projects (VEFA sale prior to completion) or transformations (heavy renovations) will have to be done on wasteland (industrial or tertiary brownfields, etc.) or buildings left abandoned;
- in accordance with the French Labbé law of 2014 banning the use of pesticides, the asset management company will reiterate in future leases and grounds maintenance contracts, the obligation to apply the law banning the use of pesticides in public areas [3].

Shareholder and collaborative commitments

An increasing number of financial players or companies are making voluntary commitments to protect biodiversity. A range of collaborative commitments on the topic were recently developed based on specific individual sub-themes, actions and objectives. Through collaborative commitment, Ircantec is taking action alongside other investors to protect biodiversity. The Scheme is seeking to prioritize commitments that reduce the pressures on biodiversity identified by the IPBES. Ircantec particularly wished to focus on combating plastic pollution.

Shareholder commitment provides major leverage, particularly via votes at the shareholder general meeting. Ircantec is planning to directly manage resolutions relating to biodiversity for the securities in its portfolio. These resolutions will be listed in the voting results. Ircantec may also change its voting rules to implement rules in favor of protecting biodiversity.

A) Nature Action 100

Ircantec joined the Nature Action 100 collective in November 2024.

Nature Action 100 was created by a collective of institutional investors on December 11, 2022. It is a global initiative that aims to encourage investors to adopt urgent rules concerning the nature-related risks and dependencies within companies in which they hold stock. The initiative is driving commitments from companies in key sectors considered to be of systemic importance in reversing the destruction of nature and biodiversity loss by 2030.

B) PRI Spring Initiative

The Scheme is a signatory of the Principles for Responsible Investment (PRI), a UN initiative that has supported responsible finance since 2014. The Scheme became a signatory of the PRI Spring initiative in 2024.

Spring is an initiative in favor of nature, which invites institutional investors to use their influence to halt and reverse global biodiversity loss by 2030. Spring aims to address the systemic risk that nature loss represents for companies and the long-term creation of value for portfolios, by improving enterprise practices in terms of deforestation and soil erosion.

C) Commitment concerning plastics pollution

Ircantec particularly wishes to make commitments to combating plastic pollution. The Scheme is a signatory of several engagements and declarations. In 2023, Ircantec signed the "Declaration on plastic pollution", calling on companies that consume large amounts of plastic packaging to adopt significant measures. This declaration inspired the PPWR Policy Letter addressed to the main political stakeholders of the European Union, to strengthen environmental regulations. In parallel, the Scheme signed the "Carbon Disclosure Project (CDP)" letter concerning the mandatory disclosure of plastics data. In 2024, it signed an open declaration for finance players, co-sponsored by several organizations, ahead of the intergovernmental negotiation panel on plastic pollution.

(1) The Biotope Area Factor (BAF) quantifies the relationship between the ecologically effective surface area (areas that support plant and animal life) and the total surface area of a land lot, an urban island, a district or a larger territory. The factor ranges from 0 (totally impermeable area) to 1 (in-ground green spaces).
(2) VEFA = vente en l'état futur d'achèvement or sale prior to completion, "off-plan".
(3) The French LABBÉ law of February 6, 2014 governs the use of pesticides across the national territory and since January 1, 2017, it prohibits the use of synthetic chemical pesticides by local authorities to control weeds in public areas such as parks, public gardens and roadsides. The order of January 15, 2021 extended the ban on pesticides as of July 1, 2022 in all public areas except professional sports grounds. This therefore applies to collectively-owned gardens, private parks and gardens, campsites, cemeteries, etc.

Furthermore, the institution also aims to report on its efforts in favor of biodiversity through various objectives / initiatives:

TNFD

Introduced in July 2020, the Taskforce on Nature-related Financial Disclosures (TNFD) has created a set of disclosure recommendations and guidance that enable business and finance to assess, monitor and publish the financial risks related to the decline of biodiversity. The recommendations of the TNFD are intended to be aligned with the global policy goals of the Kunming-Montréal global biodiversity framework. The TNFD disclosure recommendations comprise three segments:

1. conceptual foundations for nature-related disclosures;
2. a set of general requirements;
3. a set of recommended disclosures.

This is consistent with the approach of the TCFD and the ISSB's IFRS Standards. Ircantec applies the TNFD recommendations and reports on them in its sustainability report (see appendix 10).

Contribution to the objectives of the convention on biological diversity

The contributions of Ircantec to the objectives of the convention on biological diversity are published in the sustainability report in accordance with the decree of article 29 (see appendix 12).

Principal Adverse Impacts relative to biodiversity

Ircantec is attentive to the Principal Adverse Impacts (PAI), especially those relating to biodiversity. Ircantec will assess its position in relation to the benchmark and the applicable measures to improve these indicators (see Part 7 of this report).

4

Alignment of investments with climate objectives and the Paris Agreement

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4.2 Sovereign funds and similar 50

The Transition Pathway Assessment enables investors to monitor their portfolios in relation to the objective of limiting the global temperature rise to 2°C above pre-industrial levels. This approach can be described as an analysis of the suitability of emissions reductions achieved over time in relation to the actual needs that would satisfy the objectives of the Paris Agreement. The analysis takes into account historical carbon data (since 2012) and projects future emissions (up to 2030), based mainly on the company's activity levels .

The approach adopted by Trucost is based on two methodologies recommended by the Science-Based Targets initiative (SBTi). The SBTI is a joint project by the Carbon Disclosure Project (CDP), the United Nations Global Compact, the World Resources Institute (WRI) and the World Wildlife Fund for Nature (WWF). Specifically, Trucost uses the following two approaches derived from SBTi, to enable the assessment of portfolio alignment with the 2°C objective:

- The "sectoral" approach – the Sectoral Decarbonization Approach (SDA);
- The "economic" approach – the Greenhouse Gas Emissions per unit of Value Added (GEVA) approach.

These approaches are recommended by the SBTi and are used by companies to define emissions reduction targets or transitional pathways, in accordance with the Paris Agreement. Over 7,700 companies around the world have set verified targets with the SBTi, compatible with maintaining global temperature rise below 2°C or 1.5°C, using these methods or other similar approaches.

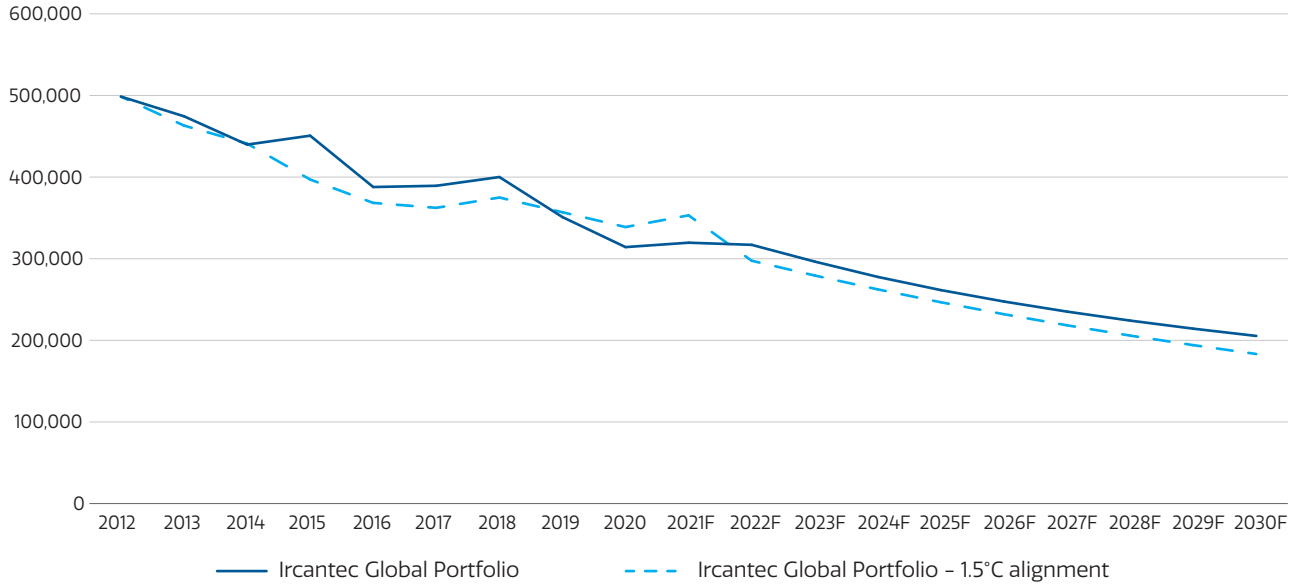
The SDA approach applies to companies whose commercial activities are homogeneous and have high carbon emissions. It is based on the idea that all the companies in a portfolio, regardless of the sector, must converge towards emission intensities in line with a 2°C scenario by 2050. Companies with low reference year emissions and low production growth can therefore reduce their emissions at a gradual pace. In contrast, companies with high emissions or high growth must achieve faster reductions.

The GEVA approach applies to companies whose activities are more heterogeneous or characterized by low carbon emissions. This approach assumes that many companies have diverse business activities for which specific trajectories are not available at the scale of physical production. For these companies, the GEVA method assumes that all the heterogeneous sectors of the economy must reduce their emissions at the same rate. Thus, if the global economy must reduce its emissions by X% per year until 2050, then according to the GEVA approach, each company must also reduce its emissions at the same rate of X% per year, regardless of the starting intensity. In absolute terms, this condition logically implies that the companies that emit the most must reduce their emissions much faster than those that emit the least. Unlike the first methodology, the GEVA value-added unit approach is based on an economy-wide scenario, and emissions intensity is measured against a financial denominator, not a physical one.

4.1 Listed companies

The carbon budget of the overall listed portfolio is estimated at -1,322,044 tCO_2e, and the portfolio is therefore below its carbon budget to align with a 2°C trajectory. This represents a dramatic increase in relation to last year's budget, equal to -796,042 tCO_2e. However, the global portfolio exhibits a higher carbon budget of 237,950 tCO_2e to align with a 1.5°C trajectory. And yet, the surplus carbon budget fell by 58% between 2023 and 2024. This performance indicates a progressive alignment of the Ircantec portfolio with a 1.5°C scenario, reflecting the Scheme's SRI Charter and policy. The listed reserves of Ircantec are aligned on an average temperature trajectory of 1.5°C to 2°C by 2030. The same applies to equity and credit segments which are aligned on a trajectory somewhere between 1.5°C and 2°C.

Emissions trajectory, 2012-2030



At sectoral level within the global portfolio and using the GEVA approach, the telecommunications, energy, healthcare and real estate sectors produce a trajectory with the highest temperature, above 5°C. The information technology sector, but above all the utilities sector are aligned on a trajectory below 1.5°C. Lastly, the sector with the most negative contribution to the 1.5°C trajectory in tCO_2e is the materials sector. Indeed, cement alone is responsible for around 8% of global CO_2 emissions. The portfolio sector for which the 1.5°C trajectory is observed is that of electricity production, with the presence of nuclear energy, which is overweighted in relation to the benchmark, and the low portion of brown energy in the portfolio. Moreover, using the SDA approach, the cement and steel sectors are not aligned. This result is consistent with our analysis of the global materials sector, for which the GEVA assessment indicates a substantially negative contribution to the 1.5°C trajectory.

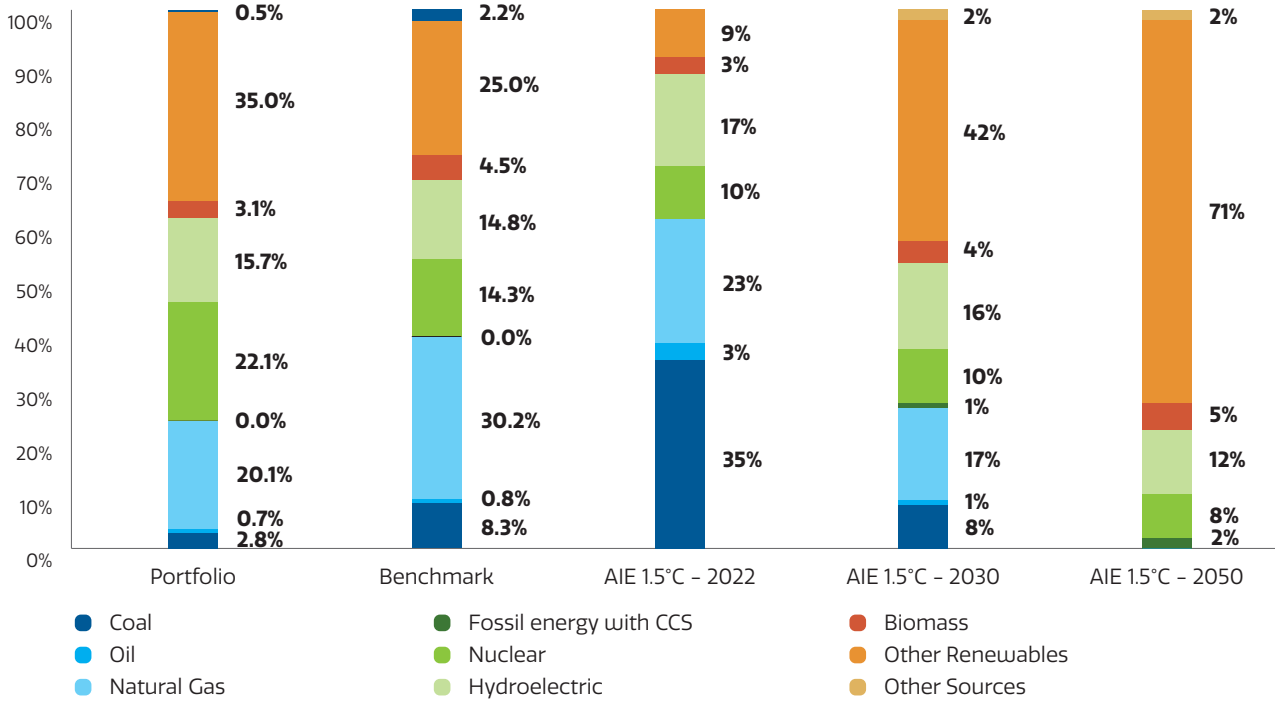
Ircantec Global Portfolio

Method	Sector	Ircantec Global Portfolio	
		Contribution to 1.5°C (tCO_2e)	Trajectory (°C)
SDA	Electricity production	-129,049	<1.5°C
	Cement	79,941	2-2.7°C
	Steel	3,253	>2.7°C
	Air transport	11,416	1.5-2°C
	Aluminum	12	2-2.7°C
GEVA	Communication Services	21,094	>5 °C
	Consumer Discretionary	49,122	3-4°C
	Consumer Non-Cyclical	50,284	4-5°C
	Energy	2,297	>5 °C
	Finance	4,846	2-3°C
	Health	31,706	>5 °C
	Industry	55,312	2-3°C
	Information Technology	-5,406	<1.5°C
	Materials	223,106	4-5°C
	Real estate	17,058	>5 °C
	Utilities	-177,042	<1.5°C

4.2 Sovereign funds and similar

Because energy generation is critical for the transition to a low-carbon economy and alignment with the objectives of the Paris Agreement, it is interesting to look at the average electricity mix produced by the different energy sources of each country, including low-carbon sources (hydroelectricity, wind, solar, geothermal, tidal energy, nuclear), weighted by the weight of each country in the portfolio. Ircantec's reserves are slightly less exposed to natural gas than its benchmark. The evolution of the energy mix to respect a 1.5°C trajectory is also presented in order to position the portfolio on this objective. It is then possible to see that the portfolio is overexposed to nuclear power compared to the 1.5°C scenario due to its high exposure to France. We note that for a 1.5°C scenario by 2050, the energy mix is only oriented towards renewable energies - exposure to coal and oil disappear - with over-exposure to renewable energies. Ircantec is anticipating this trajectory by progressively reducing its exposure to fossil fuels, including gas.

Sovereign analysis of energy mixes



5

Integrating ESG and sustainability approaches in the management of reserves

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5.1 Fund-level ESG strategy

5.1.1 ESG integration

In addition to climate issues, Ircantec is interested in all of the ESG issues its portfolio faces. Like the climate and the environment, social issues such as human rights, freedom of association, health & safety of products and services, accessibility of products and services, etc. and governance such as shareholders' rights, organization of the Board of Trustees, compensation of executive management, etc., are of major importance for security issuers in the portfolio.

ESG considerations are integrated throughout the management process, and Ircantec strives to integrate SRI holistically and pragmatically. ESG issues are therefore taken into account from the selection phase of new asset management companies before assigning mandates.

Each mandate entrusted to a management company applies an SRI methodology specific to this manager, which is based on a selection strategy (positive filter), which can be best-in-class, best effort, best progress or best-in-universe. Unlisted funds focus more on an impact strategy and thematic investments. The climate policy (including exclusions and reduction targets) and the new biodiversity policy apply to all dedicated funds in the portfolio. For all the portfolio funds, the management service ensures that it carefully monitors the most significant controversies that could have a critical financial or reputational impact on issuers. All management companies mandated by Ircantec report on the major controversies to which the companies in the portfolio are exposed, and the management service monitors the entire portfolio through its external ESG service provider for the main controversies requiring monitoring.

In general, integration is ensured through regular dialog with asset management companies (particularly through management committees) and careful monitoring of the portfolio. Crossing a threshold or the occurrence of a controversy systematically triggers a dialog phase with the asset management companies to receive their opinion and their analysis, and possibly request a reduction or sale of the positions affected.

Ircantec is currently working with Sustainalytics, a company from the Morningstar group. It delivers research, assessments, data, as well as environmental, social and governance (ESG) analyses. These elements make it possible to identify, understand and manage the ESG-related risks and opportunities of different asset classes, at the company and fund level.

Furthermore, the Scheme also subscribes to an ESG database provided by this provider. The database is available at all times and allows it to monitor the portfolio if a controversy arises or thresholds are crossed on its invested issuers, as well as an additional dialog tool with asset management companies to be able to compare the ESG assessments of issuers in the portfolio.

Sustainalytics gives priority to global ESG risk assessment, scaled from 0 to 100 (where 0 is the level of least risk). The risk-based approach combines exposure to ESG risks, as well as their management by the issuer (see methodological appendix), and applies to the measurement of the overall level of risk without necessarily breaking it down into each E/S/G pillar.

5.1.2 Non-climate / biodiversity exclusions (tobacco, arms, controversies)

The Ircantec policy was strengthened in 2022 to clearly and transparently exclude sectors presenting negative direct or indirect impacts on environmental, social and governance matters with total exclusions (controversial weapons) and materiality thresholds (tobacco).

Controversial weapons

Ircantec defines controversial weapons as follows: anti-personnel mines, cluster bombs, depleted uranium weapons, chemical and biological weapons, incendiary weapons (including white phosphorus), blinding laser weapons and fragmentation bombs. Issuers involved in the production, storage, distribution, marketing, acquisition, conservation, supply, sale, importation, exportation or supplying assistance, technologies, essential services or components for weapons referred to above, as defined in international conventions.

Furthermore, issuers involved in the brokering and trade of nuclear weapons, as well as those trading components to non-signatories of the nuclear non-proliferation treaty are also excluded.

In addition, issuers owning a stake above 10% in companies involved in the activities referred to above are also excluded.

Tobacco

In line with the WHO, Ircantec considers tobacco to be a recognized threat to public health. Moreover, this industry generates a considerable social and environmental cost.

Ircantec distinguishes between four exclusion scopes for tobacco:

- companies involved in the production, manufacture and storage of tobacco or tobacco alternatives;
- issuers who generate 5% of their turnover from bulk or retail sales of tobacco products, goods/services related to tobacco or tobacco alternatives;
- issuers holding a stake above 5% in companies that produce tobacco, goods/services related to tobacco or tobacco alternatives;
- issuers holding a stake above 5% in companies who generate more than 5% of their turnover from bulk or retail sales of tobacco products, goods/services related to tobacco or tobacco alternatives.

Lastly, Ircantec also applies exclusions when there are proven breaches of fundamental conventions and principles (Universal Declaration of Human Rights, the International Labor Organization Declaration on Fundamental Principles and Rights at Work, the Rio Declaration on Environment and Development, United Nations Convention, violation of the principles of the UN Global Compact).

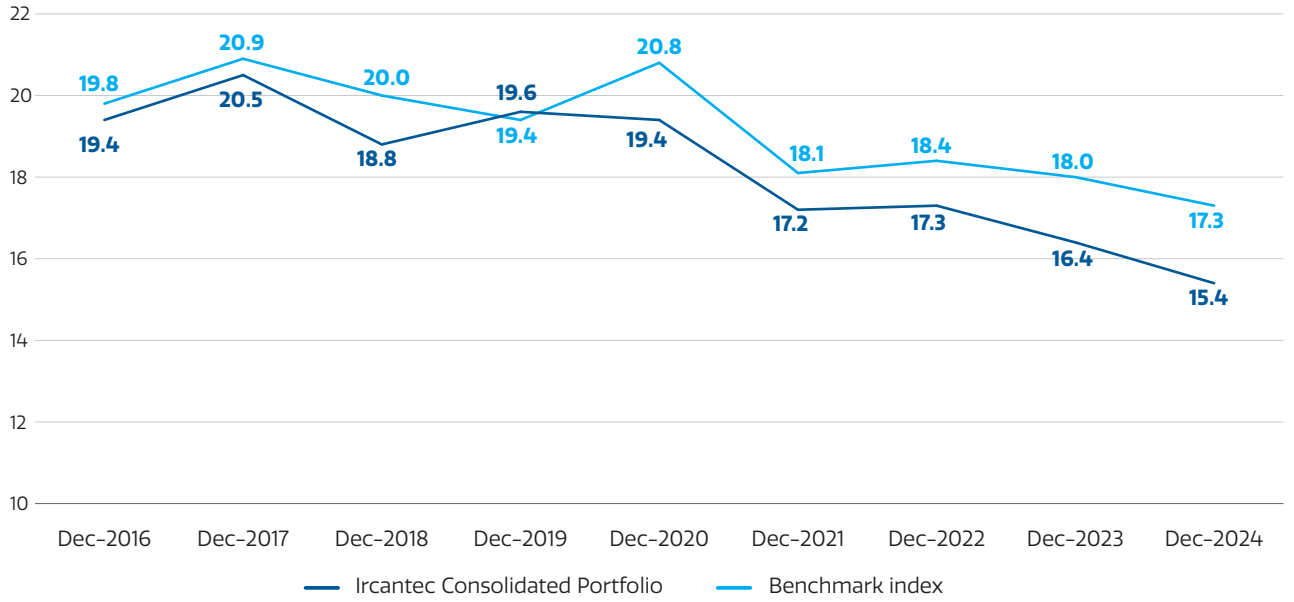
These exclusion filters are updated and monitored regularly and enable Ircantec to avoid investing in dangerous activities.

5.2 Results of the non-financial assessment

5.2.1 Consolidated portfolio (sovereigns and corporate issuers)

Analysis of the level of ESG risk of the consolidated portfolio since the end of 2016 shows a strong correlation between the portfolio and its consolidated benchmark, with a lower level of ESG risk for the portfolio over the period. The only exception to this global trend occurred in late 2019 with the arrival of new dedicated mandates for European and ex-Europe World equity funds, resulting in an extensive change in how the most represented companies in the portfolio are broken down.

History of ESG risk score of consolidated Ircantec portfolio *vs.* benchmark



The portfolio's ESG risk level for the end of 2024 therefore stands at 15.4, a better result than its consolidated benchmark (17.3). A significant fall in the portfolio risk score is visible since 2023, in greater proportions than that of the benchmark index (portfolio risk reduced by 1 point vs 0.7 point for the benchmark). Note that the change in asset allocations in 2023 had an impact on the benchmark as it is now more exposed to at-risk securities due to a higher weighting for North America (where issuers are generally more at-risk). Similarly, this effect can also partly be explained by a modification to the ESG Risk Rating methodology in 2024.

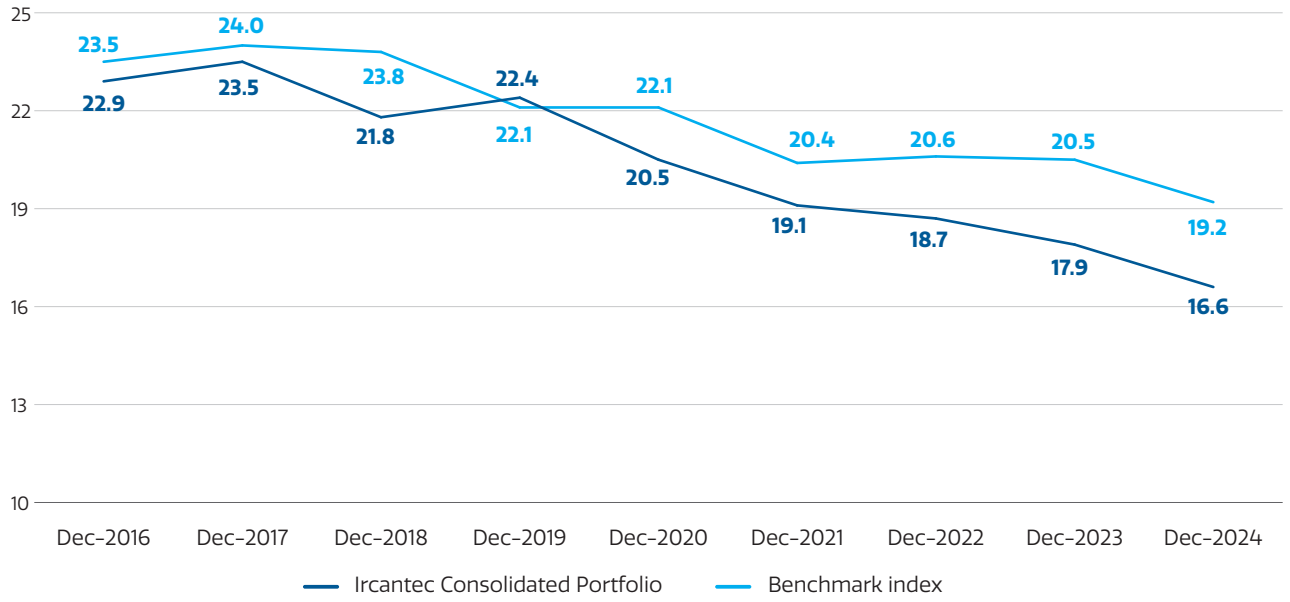
For the year ended, the ESG risk level of the Ircantec corporate portfolio fell by 1.3 point from 17.9 to 16.6, while sovereign investments followed the same trend with a lower risk in 2024 (12.7) compared to 2023 (13.0). These good results illustrate the strong stock selection by fund managers and that the Ircantec portfolio is regularly monitored by the management service (management committee, dialog with asset management companies) to ensure that they comply with all specific requirements of the SRI charter and seek to improve over time and in relation to their benchmark index.

In terms of fund analysis, most Ircantec FCP mutual investment funds have a lower risk than their respective benchmark index. Note that only one fund shows a slightly higher risk than its benchmark (the Ircantec Souverains BNPP AM fund).

5.2.2 Corporate portfolio

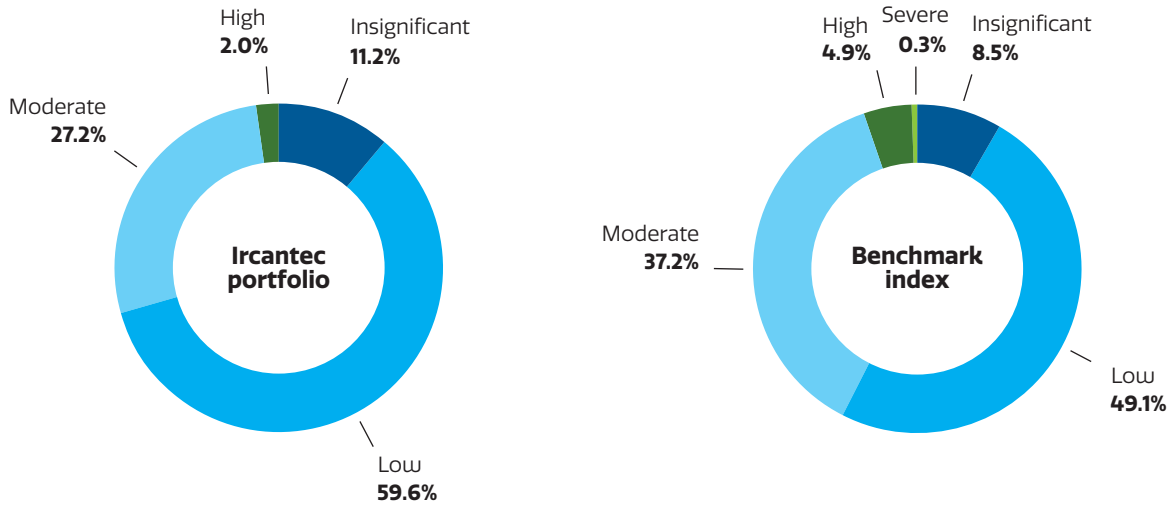
With a score of 16.6 (low risk category), the corporate portfolio (equities and bonds) presents a lower level of risk than its benchmark index (19.2). The portfolio is less risky than its benchmark over the period, except at the end of 2019, which shows a trend reversal due to a rotation of the most represented companies in the portfolio (replacement of low-risk companies by higher-risk companies when changing mandates), as highlighted for the consolidated portfolio. Since 2022, the difference between the portfolio ESG risk rating and that of its index grew further, with a positive change from 1.9 points in 2022 to 2.6 points in 2023 and 2024. As previously indicated, this high jump in the difference is partly explained by a change in asset allocations, a change in the methodology, and good stock selection. These good results compared to the index illustrate the continued effort by Ircantec to ensure a lower-risk portfolio.

History of ESG risk rating of Ircantec corporate portfolio vs. benchmark index



This positive portfolio performance is explained by a significant over-weighting of issuers with low levels of risk and an under-weighting of issuers with a moderate level of risk. Note that in 2024, the Ircantec portfolio only contained one investment with a risk considered severe [1].

Breakdown of investment by risk class (%)



Using an analysis of ESG risk by geography, Ircantec has an over-weighting in Europe and a slight under-weighting in North America but invests in issuers that are generally less risky than the benchmark. Ircantec's geographic allocation, with a very high proportion of issuers in the Europe region, is favorable to the overall level of risk of the corporate portfolio: Europe makes the most significant contribution to reducing the level of portfolio risk by exhibiting a lower level of risk than its benchmark index. This performance of the region is explained by a more restrictive legislative framework in ESG matters, which obliges companies to apply best practices on these subjects: their ESG risk management rating is thus higher overall than that of companies located in other geographic areas.

(1) This is the Mitsui Mining and Smelting Company stock present in the new Actions Monde Syst. Schroders fund.

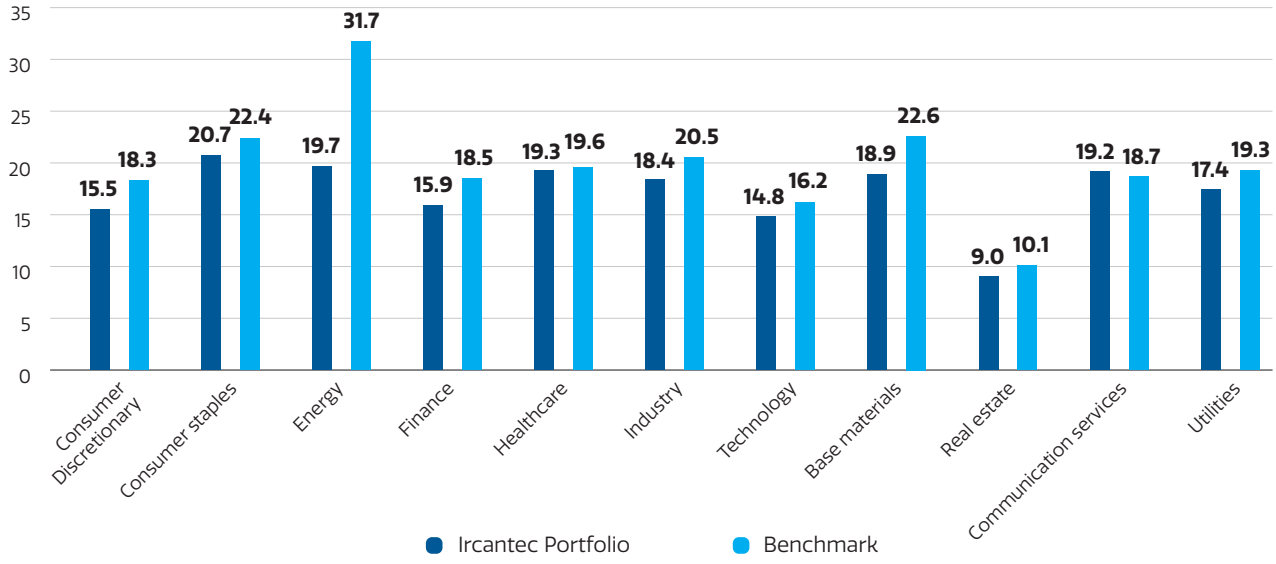
ESG risk rating by geographical region

Zones	Portfolio		Benchmark		*Delta Score*	
	Weight	*Risk Score*	Weight	*Risk Score*	PTF *vs.* Benchmark	PTF *vs.* Global
Europe	67.1%	15.6	62.5%	18.1	-2.5	-1.0
North America	29.6%	18.1	32.7%	20.5	-2.5	1.5
Asia-Pacific	3.2%	19.6	4.4%	22.1	-2.5	3.0
Latin America	0.2%	18.6	0.1%	21.9	-3.3	2.0
GLOBAL	**100%**	**16.6**	**100%**	**19.2**	**-2.6**	**N/A**

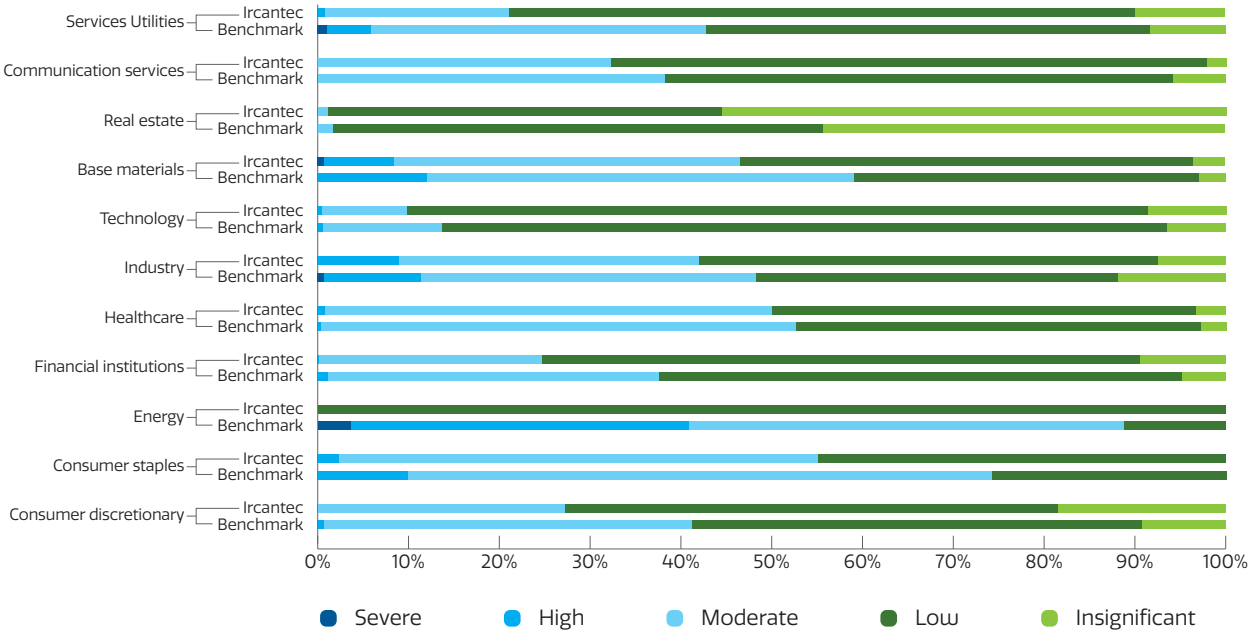
The outperformance of the corporate portfolio compared to its benchmark index is explained by the effects of:

- Allocation: Ircantec's portfolio is over-weighted with financial institutions, technology, real estate or utilities and exhibits an under-weighting in sectors such as consumer discretionary, consumer staples, energy or communication services. This allocation to less risky sectors overall in terms of ESG partly explains the over-performance of Ircantec's portfolio. Except for a 0.7% investment in the base materials sector in the severe risk category, no other Ircantec investment sector features a company in the severe risk category, unlike the benchmark index. In contrast, the benchmark index holds a percentage of severe category companies across three sectors, and principally in the energy sector. As such, the highest-risk companies in the Ircantec portfolio are in the high-risk category and are represented across all sectors except communication services, real estate and consumer discretionary. The Industry sector is where Ircantec's investment allocation is the most exposed to the high ESG risk category, with 8.9% of the investment in the sector;
- selection: the issuers selected within each sector show that the least risky companies are over-represented to the detriment of the riskiest, which allows Ircantec's corporate portfolio to present ESG risk scores that are lower than its index benchmark for the majority of sectors.

Comparison of ESG risk score of Ircantec corporate portfolio vs. benchmark index



Breakdown of investments by sector of activity and ESG risk class



5.2.3 Companies with the greatest impact on the portfolio

By taking into account the weight of the issuers in the portfolio and their ESG risk score, it is possible to highlight the issuers that contribute positively and negatively to the overall risk level of the portfolio.

Thus, KfW, ASML, Intesa Sanpaolo, Schneider and Unibail-Rodamco Westfield (cumulative weight in the portfolio, 5.56%) have a weighted risk score of 7.8, i.e. a difference of -8.8 compared to the rest of the portfolio, thus contributing favorably to reducing the overall risk level of the portfolio.

Inversely, Iberdrola, Novo Nordisk, Alphabet, Siemens and AstraZeneca (cumulative weight 4.72%) have a weighted risk score of 23.3, i.e. a difference of + 6.7 compared to the rest of the portfolio. The controversies over these issuers partly explain the high level of risk of these companies.

5.2.4 Compliance with international norms and standards

No company present in Ircantec's portfolio is suspected of violating international standards as defined by the United Nations Global Compactl [1]. However, 23 are considered as requiring monitoring, including most companies in the healthcare and consumer discretionary sectors. These are potentially at risk on matters such as non-observance of human rights or freedom of association.

5.2.5 Controversial weapons

Concerning controversial weapons, zero presence in the portfolio of companies producing essential or tailor-made components for cluster munitions (CM), anti-personnel mines (APM) or other controversial weapons as defined in the Ircantec SRI Charter.

5.2.6 Controversies

Sustainalytics rates controversies impacting portfolio companies on a severity scale of 1 (low) to 5 (severe). In December 2024, the number of serious and severe controversies is much lower for Ircantec's portfolio than for the benchmark, and no company in the portfolio is exposed to level 5 controversies. This analysis of controversies is consistent with the overall ESG analysis of the portfolio: the management of ESG risks is incorporated in the rating of ESG risk scores.

5.2.7 Involvement in sustainable activities and products

Via its corporate portfolio, Ircantec is exposed to several sustainable investment themes (responding to environmental or social challenges, or products that meet fundamental social needs and are designed in a sustainable manner) in connection with the Sustainable Development Goals (SDG).

- In terms of the "Health" theme (SGD3 - Access to healthcare): a total of ten companies (1.38% of the portfolio) generate turnover that is between 87% and 100% dependent on access to health by treating major and/or neglected diseases as defined by the WHO.

Companies	% aligned turnover	Weight
Vertex Pharmaceuticals, Inc.	100%	0.18%
Edwards Lifesciences Corp.	100%	0.11%
Insulet Corp.	100%	0.002%
United Therapeutics	99.3%	0.004%
AstraZeneca PLC	93.3%	0.90%
Gilead Sciences, Inc	91.8%	0.17%
Argenx SE	90.0%	0.001%
Bristol Myers Squibb Co.	88.1%	0.01%
Grifols SA	88.1%	0.0004%
Exelixis, Inc.	87.0%	0.01%

(1) The Global Compact (Global Compact, 2000) is a set of ten fundamental principles enacted by the UN for companies and non-profit organizations based around four themes: human rights, international labor standards, environment and fight against corruption.

- "Renewable energy" theme (SDG 7 – Affordable and clean energy, SDG 13 – Climate action): on the "renewable energy theme", between 85.3% and 100% of the turnover of the ten companies most involved in this area (1.18% of the portfolio) depends on renewable and clean energy.

Companies	% aligned turnover	Weight
ERG SpA	100%	0.04%
EDP Renováveis SA	99.8%	0.07%
Innergex Renewable Energy, Inc.	99.5%	0.06%
Vestas Wind Systems A/S	98.8%	0.23%
Boralex, Inc.	98.0%	0.12%
Monolithic Power Systems, Inc.	98.0%	0.003%
First Solar, Inc.	93.9%	0.20%
Elia Group SA/NV	88.9%	0.07%
Ørsted A/S	85.9%	0.35%
RTE – Réseau de Transport d'Électricité SA	85.3%	0.04%

- "Resource efficiency" theme (SDG 6 - clean water and sanitation, SDG 11 - sustainable cities and communities, SDG 12 - responsible consumption and production): ten issuers (0.61% of the portfolio) have a turnover that is between 95.8% and 100% aligned with this theme, which supports a circular economy by increasing the efficiency of the use of resources, and by enabling recycling and resource recovery.

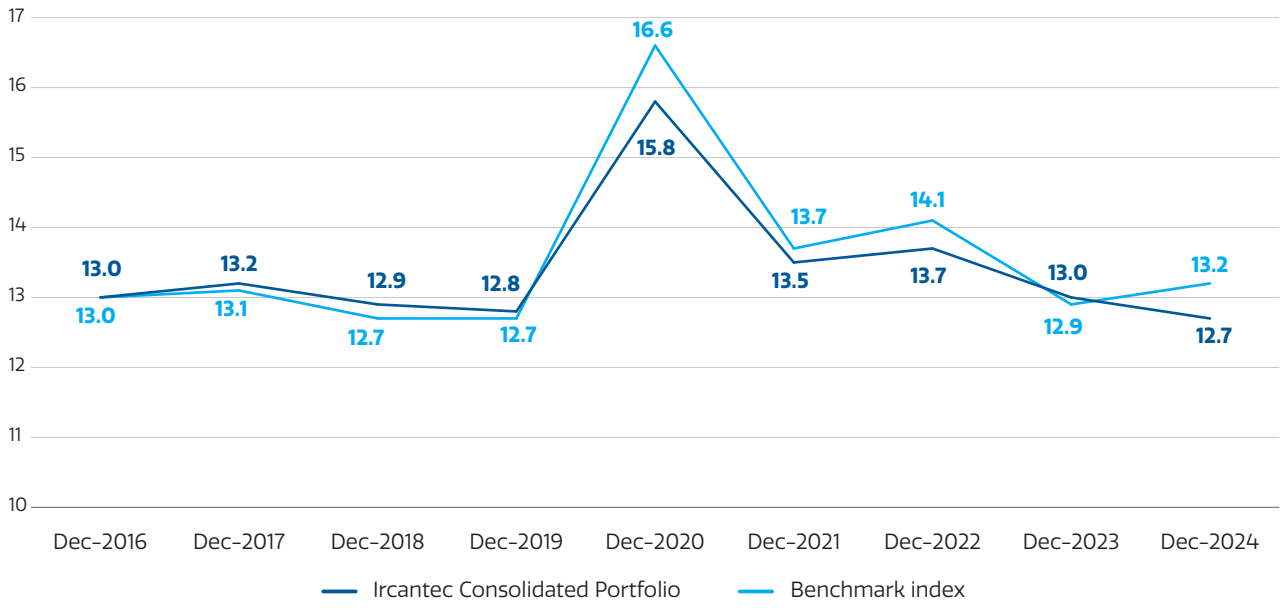
Companies	% aligned turnover	Weight
DS Smith Plc	100%	0.16%
Carlisle Cos., Inc.	100%	0.007%
Pennon Group Plc	99.9%	0.001%
Praemia Healthcare	99.4%	0.11%
Inversiones CMPC SA	99.1%	0.03%
Belimo Holding AG	99%	0.0002%
Klépierre SA	98.8%	0.13%
Mercialys SA	98.2%	0.07%
United Utilities Group Plc	96.2%	0.004%
NEPI Rockcastle NV	95.8%	0.1%

5.2.8 Sovereign portfolio

Analysis of the ESG risk level of sovereign issuers is based on an equal weighting of an ESG wealth score (based on three capitals: natural & product, human, institutional) and an ESG factor score (capacity of a State to manage its assets in a sustainable and responsible way). Development trends over the last five years and major events affecting a State (natural disaster, pandemic) also influence the ESG score.

Historically, the sovereign portfolio tends towards a risk score globally lower than the benchmark index, notably due to the inclusion of supranational issuers. However in 2023, despite a reduction in the risk in relation to 2022, we observed that the Ircantec sovereign portfolio has a slightly higher risk level that its benchmark index. The increase in allocations to supranational issuers in 2024 compared to 2023 (8.1% vs. 7.2%) partly explains the return to a trend where the Ircantec portfolio exhibits a lower risk than its benchmark index. Supranationals have an insignificant risk score (i.e. below 10/100), given than the average of their risk score is 6.5/100, which considerably lowers the global risk of the sovereign portfolio.

History of ESG risk score of sovereign portfolio



The breakdown by country and the ESG risk scores by country illustrate the changes in scores between December 2023 and 2024, as well as changes in weightings. Aside the USA and Slovakia, we observed a higher ESG risk for all countries in 2024. The highest increase was seen in Germany, with a rise of 1.1 points in relation to 2023. It should nonetheless be noted that all countries comprising the Ircantec sovereign portfolio lie within the low risk class (below 20 points).

Country	*Country Risk Ratings* – Score December 2024	*Country Risk Ratings* – Score December 2023	Change	Weight December 2024	Weight December 2023	Change in weight between December 2023 and 2024	Benchmark weight
France	12.99	12.68	0.31	20.9%	23.2%	-2.3%	21.9%
USA	11.66	12.03	-0.37	14.5%	18.4%	-3.9%	28.1%
Italy	15.94	15.61	0.33	15.6%	15.1%	0.5%	15.8%
Spain	15.49	15.16	0.33	13.0%	11.2%	1.8%	9.3%
Germany	12.07	10.96	1.11	9.5%	9.8%	-0.3%	9.9%
United Kingdom	12.71	11.77	0.94	6.5%	5.0%	1.5%	4.8%
Belgium	12.93	12.77	0.16	1.0%	1.4%	-0.4%	1.1%
Austria	11.67	10.98	0.69	1.0%	1%	0.1%	0.6%
Canada	11.7	10.92	0.78	0.5%	1%	-0.3%	0.6%
Netherlands	12.04	11.31	0.73	0.7%	1%	-0.1%	0.9%
Finland	11.67	10.82	0.85	1.6%	0.70%	0.9%	0.3%
Australia	9.67	9.57	0.1	0.7%	0.70%	0.0%	0.5%
Chile	18.11	17.73	0.38	1.5%	0.70%	0.8%	0.0%
Sweden	10.25	9.94	0.31	0.4%	0.40%	0.0%	0.3%
Portugal	15.64	14.92	0.72	0.1%	0.40%	-0.3%	0.3%
Ireland	11.23	11.16	0.07	0.2%	0.40%	-0.2%	0.3%
New Zealand	11.22	10.66	0.56	0.3%	0.40%	-0.1%	0.1%
Slovakia	16.64	16.93	-0.29	0.2%	0.20%	0.0%	0.1%
Slovenia	15.03	14.45	0.58	0.1%	0.20%	-0.1%	0.1%
Hungary	18.93	18.8	0.13	0.03%	0.03%	0.0%	0.0%
Latvia	16.68	15.97	0.71	0.02%	0.02%	0.0%	0.0%
Supranationals	6.81	6.5	0.31	8.1%	7.3%	0.8%	0.0%
TOTAL			**N/A**	**97%**	**98%**		**95%**

5.3 Thematic investments and impact investments

5.3.1 Support for employment and growth of the regions (SDG 13 – Climate action, SDG 7 – Affordable and clean energy, SDG 9 – Industry, Innovation and Infrastructure)

Through its thematic and impact financing, Ircantec aims to strengthen and consolidate its societal engagement by fostering the inclusive development of regions and innovative companies, which are part of a growth dynamic that generates business and creates jobs.

1.29% of the pension scheme reserves are earmarked for financing French and/or European SMEs/mid-caps. The target investments are companies that generate less than €500 million in turnover for the debt segment and less than €250 million in turnover for the private equity segment.

One of the main investment vehicles is a dedicated fund managed by Access Capital Partners. As of December 31, 2024, €189.4 million had been invested in connection with this fund (capital investment and private sector debt) representing 92.89% of the fund's commitment.

Supplementary funds provide diversification in this segment and exposure to supplementary underlying vehicles: Meanings Private Equity Funds B & II, Alter Equity 3P, Alter Equity 3P II, Omnes Croissance 4, Paris Fonds Vert, WCP Impact Dev 1 and Meanings Private Equity Fund IV. The last fund has made engagements with the Science Based Target Initiative (SBTi) so that the assets in its portfolio satisfy the objectives of the Paris Agreement and a 1.5°C trajectory.

In total, Ircantec has committed €300.4 million to financing SMEs/mid-caps. As of December 31, 2024, €262.9 million had been invested, or 87.70% of the commitment.

In addition, Ircantec is invested in two funds dedicated to the Social and Solidarity Economy (SSE): up to €5 million in the NovESS fund launched by Caisse des Dépôts and for the same amount in the Amundi Finance and Solidarity fund.

Lastly, Ircantec financially supports local organizations running projects that develop local areas and ultimately stimulate their growth, through two funds:

- a disintermediated loan fund for local authorities with more than 10,000 inhabitants, managed by Arkea, whose objective is to enable these authorities to finance responsible and long-term investment projects. The fund was created in 2012, when the banking sector was withdrawing from the funding of local authorities. This fund is fully invested, for a maximum commitment of €14.75 million;
- is invested in the Tourisme Social Investissement (TSI) fund (€13.31 million at the end of December 2024, out of a term commitment of €22.5 million). This fund aims to provide funds to social tourism structures (defined by an affordable price level) so that they can carry out renovations or upgrades (refurbishment / reconfiguration of facilities) in order to maintain a significant inventory of beds. This long-term support from Ircantec for the tourism sector is appreciated by accommodation structures, particularly during the difficult period of economic and health crisis over 2020-2021: even in phases of low activity and strained financial equilibrium, Ircantec remains a local investor committed to tourist accommodation structures.

5.3.2 A commitment to decent work and gender equality (SDG 5 – Gender equality, SDG 8 – Decent work and economic growth)

In 2019, Ircantec invested €2 million in the "Mirova Women Leaders" fund. Due to the limited size of the fund, specific authorization has been given to increase the ownership ratio to 20%, thus making it possible to support the fund's development. As part of this support, the position in the Mirova Women Leaders fund was increased by €7 million in 2020 and another €3 million in 2021.

The investment theme of this fund is the empowerment of women to strengthen gender equality, particularly in management positions. Through this fund, Mirova hopes to have an impact on diversity through two channels:

- engagement: the management company proposes an engagement policy to disseminate best practices in terms of gender equality within the companies in which the fund invests;
- a donation to UN Women France: Mirova has set up a partnership with the UN Women France Committee. The company undertakes to pay back 5% of its management fees to finance actions in support of the empowerment of women.

5.3.3 Support for inclusive and socially-aware growth (SDG 8 – Decent work and economic growth, SDG 11 – Sustainable cities and communities)

Ircantec invests to achieve responsible real estate. The real estate investment scheme (OPPCI) Villiers Immobilier applies a social policy on this topic according to four priorities, which have been renewed: intermediate housing, social tourism, student residences, healthcare facilities and EHPAD nursing / care homes. The pension scheme is especially committed to ensuring that the existing assets fits into the sustainable development approach aimed in particular at improving the environmental quality of buildings and tenants' quality of life. In 2020, the real estate investment scheme received the SRI label.

Ircantec is also committed to the tune of €30 million in the Immobilier Impact Investing fund, whose strategy is based on a portfolio of high-yield assets and social real estate assets. This fund received the SRI label in 2021. In addition, the pension fund is committed to two "life annuity" funds - Certivia (€15 million) and Certivia 2 (€30 million) - to provide a solution to the structural decline in the income of the elderly and improve their daily lives.

FOCUS ON THE DEDICATED *SOCIAL BONDS* FUND

In 2023, in line with its latest roadmap, Ircantec started the integration of social bonds in its portfolio, introducing a new dedicated innovation fund with €250 million in assets. The bonds issued on financial markets will finance projects of high social value. The broad investments of the ***social bonds*** will target specific populations such as those in underserved areas, low-income populations, women entrepreneurs, young people in priority education areas, SMEs or VSE, or even public service bodies. They also contribute to achieving the SDG related to the social sphere, especially objectives 3, 4, 5, 8, 10 and 12.

In this way, the Ircantec social bonds fund mainly contributed to financing SDG as follows:

- 40.65% of the fund contributed to SDG 10 – reduced inequalities – by financing unemployment allocations or the construction of affordable housing (Council of Europe Development Bank and Caisse d'amortissement de la dette sociale - state-owned special financial vehicle to repay the French social security system debt);
- 24.2% contributed to SDG 8 – Decent work and economic growth – mainly by financing loans to SMEs (Unedic, Instituto de Credito Oficial [Spanish public bank] and via the Banque Fédérative du Crédit Mutuel);
- 21.6% contributed to SDG 3 – Good health and wellbeing – in particular through financing loans to support sports and healthcare infrastructures (French community in Belgium and Caixabank).

5.3.4 Protection of terrestrial (SDG 15 – Life on land) and aquatic resources (SDG 14 – Life below water)

Ircantec places special importance on the protection of terrestrial flora and fauna, paying particular attention to the preservation of terrestrial ecosystems through its investments.

Ircantec is therefore invested in the dedicated "Groupement Forestier de Brèves" fund, in which €70.19 million have already been invested. More information is provided in the paragraph "Exposure to other environmental factors (excluding climate)" on forest management. Pursuant to article 29, Ircantec continues to work with its ESG and carbon data providers to be able to set biodiversity protection objectives.

5.4 SFDR classification (articles 8 and 9)

Within the framework of the European Sustainable Finance Disclosure Regulation (SFDR), the dedicated funds and open funds held by Ircantec are classified according to their consideration of ESG issues:

- Article 8 brings together funds that have environmental and social characteristics. Most of Ircantec's listed dedicated funds (with the exception of article 9 funds) fall into this category, i.e. 75.87% of total reserves (representing an amount of €11.96 billion) as well as several open-ended and unlisted funds (Villiers Multi-Actifs);
- Article 9 (24.13 %) is the highest requirement level because it is specific to funds with a stated sustainability objective (represents an amount of €3.80 billion). Eight dedicated Ircantec funds (the two green bonds fund, the European equity and credit fund managed by Candriam, European / World equity funds managed by Mirova, the social bonds fund and the global equity fund TEE Nomura) are in this category alongside several open and unlisted funds (Mirova Women Leaders, Mirova Eurofideme 3, Mirova Eurofideme 4, Infragreen IV, Meeschaert Eurofideme 4, SWIFT 1, SWIFT 2, etc.).

Since March 2021, the SFDR requires that asset management companies classify their sustainable funds between articles 8 and 9 according to their characteristics and foresees that from January 1, 2023, article 9 funds must comply with new technical requirements published in 2022. A large number of asset management companies have therefore reclassified their article 9 funds. Within the Ircantec portfolio, one fund was downgraded to article 8 (the SwissLife Immobilier Impact Investing open-ended fund).

5.5 Fund SRI labeling

The SRI label was created in France in 2016, as the first State label enabling the general public to select investment vehicles that incorporated environmental, social and governance principles in their management.

The third version of the label was published in December 2023. It incorporates a climate dimension in its base, excluding companies which exploit coal or non-conventional hydrocarbons, as well as those launching new projects to explore, exploit or refine hydrocarbons (oil or gas). In addition, the SRI label will support companies in their transition, by forcing asset managers to progressively align their SRI portfolios with the Paris Agreement. Alongside this climate-based principle, the SRI label remains generalist, with greater selectivity on other environmental, social and societal criteria, as well as governance.

Ircantec trustees sought to obtain labeling for the funds in question at the end of 2024, to promote the Scheme's advanced practices in terms of ESG. Thus, **most of Ircantec's dedicated funds have received the SRI label** [1], enabling the Scheme to highlight its responsible fund management.

(1) Except for funds with a specific theme such as Green Bonds (they carry the Greenfin label) or the Social Bonds fund.

6

Review of engagement and voting policies

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6.1 Engagement report

Since the formal definition of its engagement policy in 2017, Ircantec initially structured its shareholder engagement actions around three main themes with a long-term outlook, which it has expanded recently with a fourth:

- Energy and environmental transition;
- Respect for human rights in business;
- Corporate tax responsibility in France;
- Protection of biodiversity (since 2023).

Indeed, protecting biodiversity is a core purpose of marketplace work and the basis of article 29 of the French energy and climate law. The aim of this new theme of engagement is to promote a measurement of company biodiversity footprints, while working to preserve and restore biodiversity.

The Ircantec engagement policy lists the avenues of engagement preferred by the pension scheme: shareholder dialog (individual engagement), cooperation with other institutional investors and marketplace organizations (joint engagement), and voting at general meetings.

Ircantec maintains its commitment via various marketplace organizations:

- Member of the PRI (*Principles for Responsible Investment*);
- Member of the FIR (Forum pour l'Investissement Responsable) and active in several working groups and committees.

6.1.1 Energy and Environmental Transition (EET)

Ircantec has long been committed to promoting the energy and environmental transition of the economy. The climate emergency is accompanied by physical and transitional risks that weigh on all economies and all terrestrial and marine ecosystems.

Climate Action 100+

The Climate Action 100+ initiative (in conjunction with the PRI), for which Ircantec is co-lead with Engie. This initiative questions the world's largest emitters on their governance and their strategy with regard to climate-related risks and opportunities, in particular by integrating the social aspects of the ecological and energy transition (just transition).

- Since the start of 2022, ENGIE has dramatically increased its forecast imports of liquefied natural gas (LNG) and above all American shale gas through three contracts with US firms Cheniere, Next Decade and Sempra signed in December 2022. These contracts secure a large volume of LNG until 2042, mainly from US shale gas, generating the risk of a carbon lock-in for the group, or in other words dependency on fossil gas and new emissions, for which the impact and quantification have not been officially audited or measured to date. For this reason, and as co-lead, Ircantec and 26 other investors signed a private letter to Engie in December 2022 to encourage the group to offer greater transparency of its climate trajectory.
- To ensure full transparency, Ircantec wishes to point out that Engie has been placed under surveillance. Indeed, the company is not fully aligned with the limits and objectives of Ircantec's climate policy approved in 2021. As the co-lead on the Climate Action 100+ initiative, Ircantec has pursued a constructive engagement since 2018, for the company to aim for a 1.5°C alignment (compared to well below 2°C currently). Ircantec continues this dialog to ensure greater transparency on the company's climate trajectory and achievement of net zero targets for 2045.
- For the 2023 shareholder general meeting and with 15 other investors, Ircantec also participated in submitting and inserting an item on the agenda, to obtain greater climate transparency from Engie and implement a *Say On Climate*. The resolution was not approved, but received 24% of the vote.
- Ahead of the 2023-2024 season, Ircantec signed a letter outlining the progress made by Engie and requested a meeting with the CEO to discuss the climate resolution proposed at the 2023 shareholder general meeting and identify decarbonization routes. The meeting took place in October 2023 to identify efficient decarbonization strategies.
- In 2024, no resolutions were submitted. CA 100+ and Ircantec as co-lead nonetheless continued their dialog with Engie. Several meetings took place with Engie, in particular on topics surrounding the just transition, the development of green gases, the pro-gas lobbying and carbon offsets. Moreover, the Scheme is closely monitoring the development of liquefied natural gas projects. Ircantec also signed a letter to the Chairperson of the Board of Directors of Engie, underlining its expectations of investors in the CA100+ group on its alignment with a 1.5°C scenario and on the company's transition.

ShareAction

The engagement of financial institutions is one of the four fundamental pillars of Ircantec's climate policy. Ircantec has participated in investor calls and signed letters to financial institutions on climate topics with ShareAction since 2021, with notably HSBC and Barclays. ShareAction is an NGO working in responsible financing to promote demanding market standards and to encourage joint work between private issuers and investors through targeted campaigns.

As a reminder, in 2022, the Barclays *Say on Climate* was rejected by 19.2% of shareholders at the general meeting, including Ircantec. Consequently, Ircantec and other investors turned to ShareAction to organize dialog with Barclays, to enable the bank to explain its climate policy in greater detail, address the high level of opposition and the manner in which they intend to integrate the comments on climate issues raised at the general meeting. Following the engagement of investors and ShareAction, the bank proposed to bring the date of the coal phase-out in the USA forward by five years (currently 2035).

In 2023, Barclays received stronger engagement from ShareAction to which Ircantec contributed, mainly prior to the publication of its new energy policy in early 2024. After much dialog with Barclays, the NGO sought to submit a shareholder resolution to the company at the 2024 general meeting, on topics relating to fossil fuel energies. Discussions with Barclays and investors took place and led to concessions by the bank for its new energy policy, concerning greater clarity on transition plans now expected of the businesses financed. Subsequently, ShareAction decided to withdraw the resolution, determining the progress as acceptable.

Ircantec also took part in a conference call with the Barclays CEO organized by ShareAction, to more fully understand the development of its fossil fuel policy and green financing.

Ircantec also signed the letter sent by ShareAction to Barclays prior to the bank's general meeting on May 9, 2024. This letter strongly encouraged the bank to go further in its fossil fuel policy.

Ircantec is also a signatory of various declarations read out by ShareAction at the 2024 general meetings of several banks:

- **HSBC:** the declaration addressed green financing, requesting the bank to provide a breakdown of how its sustainable finance objective will be distributed across several themes and asking if it would set itself an objective with regard to renewable energy;
- **BNP Paribas:** this declaration focused on oil and gas, and on a request to the bank to make public its decision to no longer participate in structuring bonds related to oil and gas, and also to envisage the application of this decision to other forms of debt/lending instruments;
- **Crédit Agricole:** the declaration concerned indirect emissions, namely a request to the bank to integrate them in its decarbonization objectives, and also to publish them;
- **Société Générale:** the declaration addressed green finance with a request to the bank to publish its methodology that underlies its green activity financing objective, and lastly to set sectoral green finance objectives, incorporating a renewable energy objective.

Each year, as part of its voting policy, Ircantec sends letters to a selection of companies whose transition policy the Institution feels is not sufficiently convincing. In 2024, EET letters were sent to two companies whose efforts were deemed insufficient: Barclays and Stellantis. A detailed analysis of their investment and development plan has highlighted a lack of resources and ambition in the pursuit of an ecological and environmental transition. These EET letters are a means of initiating and expanding shareholder dialog with these issuers.

6.1.2 Protect biodiversity

Ircantec has raised its biodiversity commitment following its inclusion in the avenues of engagement in 2023.

- **Signature of the open declaration for finance players ahead of the intergovernmental negotiation panel on plastic pollution (relayed by the FIR)**

  This declaration asks governments to adopt an ambitious instrument that sets out a clear objective that will put an end to plastic pollution, supported by rules covering the whole life cycle of plastics.

- **Signature of an investor letter requesting the Coca-Cola Hellenic Bottling Company to set targets concerning the reuse of packaging**

  VBDO [1] circulated an investor letter encouraging Coca-Cola Hellenic Bottling Company (one of the largest Coca-Cola product bottling companies) to set an ambitious objective of at least 30% of the volume of beverages sold around the world being sold in recyclable packaging by 2030 and to report annually on the progress made to achieve this objective.

- In late 2024, the Scheme joined the **Nature Action 100** initiative as part of the adoption of its biodiversity policy (general meeting of September 26).

  Nature Action 100 was created in 2020 by a collective of institutional investors. It is a global initiative that aims to encourage investors to adopt urgent rules concerning the nature-related risks and dependencies within companies in which they hold stock. The initiative is driving commitments from companies in key sectors considered to be of systemic importance in reversing the destruction of nature and biodiversity loss by 2030. Ircantec has therefore engaged Amcor, a company specializing in packaging products to reduce plastic pollution.

6.1.3 Respect for Human Rights in business

The interconnection of economies and globalization are accompanied by increased social risks on increasingly long, complex and physically distant value chains. The distance between the principal and its many subcontractors prevents accurate and reliable monitoring of working conditions in the first links of the chain.

Ircantec is engaged in particular through a number of declarations:

- **Signature of an investor letter to Amazon, requesting it to recognize the GMB union in the UK and to cease all anti-union communication in Coventry and across all its other sites.**

  Amazon reports on its activity, in response to union organizations on its Coventry site in the UK, were shown to be in contradiction with the organization's global principles in terms of Human Rights.

- Signature of the **call by the World Benchmarking Alliance to sign the investor declaration to send a strong signal to businesses and governments to take urgent action against violence and harassment in value chains** (relayed by the FIR).

(1) Dutch Association of Investors for Sustainable Development.

6.1.4 Theme – Corporate tax responsibility in France

In a context of globalization in which multinationals need to make decisions based on strategies and tax incentives that differ from country to country, tax responsibility aims to promote the taxation of value creation in the country in which it is actually generated, to ensure that the company contributes to the budget of the community and of the State in which its activities are located. The PRI initiated a program on tax responsibility in 2015 by implementing a dedicated task force, and subsequently launching an engagement group that Ircantec joined. The goal is to gain a better understanding of the internal functioning of tax operations to more effectively encourage tax transparency and the improvement of governance and risk management in this area.

- Initially, the FIR initiative, to which the Scheme has made a significant contribution, consisted of assessing the maturity of companies in terms of their tax responsibility strategy. An engagement campaign on the tax practices of CAC 40 index companies was then introduced to encourage discussions with French multinationals on the concept of tax responsibility, and to publish an engagement report. The objective is to encourage companies to deal with the tax issue no longer exclusively from the angle of regulatory and administrative compliance but as an integral part of their sustainable development policy.
- In May 2021, Ircantec joined 34 other investors (US$5.6 trillion in assets under management) coordinated by the PRI to encourage tax transparency for companies listed in the European Union. In particular, the coalition sent an open letter to the attention of the European Commission concerning the proposed Corporate Sustainability Reporting Directive (CSRD).

The PRI insist on the importance of demanding transparency on tax practices and in particular country-by-country tax reporting so that investors:

- have better information on the issuers in their portfolios and can better understand the risks;
- examine the extent of economic operations of multinational corporations by country and by jurisdiction and can estimate the actual engagement of companies concerning tax evasion;
- raise questions and engage in dialog with companies where tax structures and tax strategies do not align with economic value creation to encourage more responsible corporate behavior.

The PRI open letter proposed points for improvement for integration by the European Commission so that the objective of the law remains fiscal transparency.

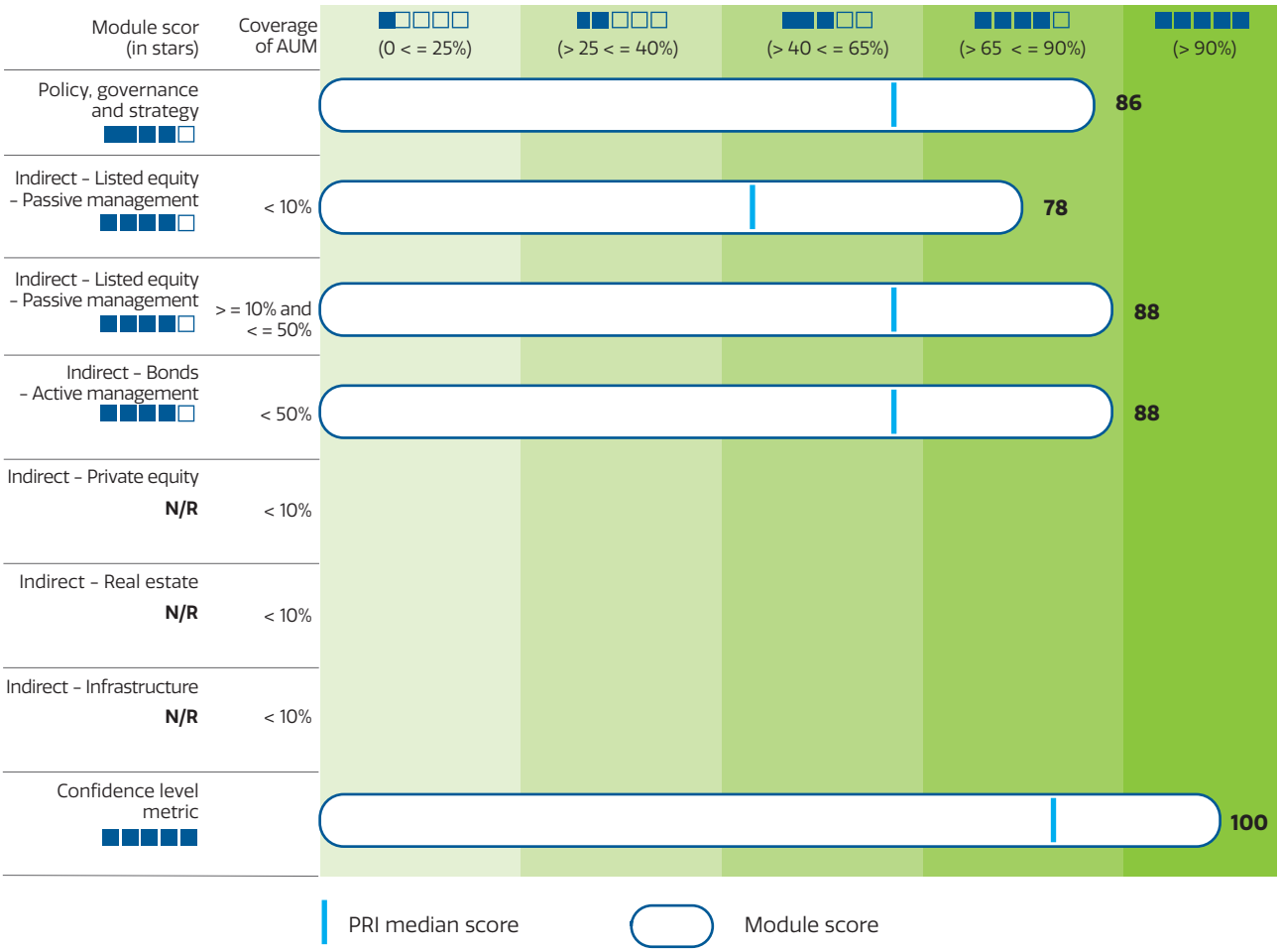
These commitments were in line with the May 2019 open letter to the Financial Accounting Stability Board (FASB) to encourage country-by-country reporting.

In the continuity of this coalition, as of 2022 Ircantec has been involved with the PRI Tax Reference Group, on how it can be more fully integrated in the investment process and how to engage with companies on the matter of taxation.

6.1.5 Commitments beyond priority themes

Ircantec's commitment is not limited to the main themes identified and other commitments are broader than the Pension Scheme's priority areas of interest. As an example, Ircantec signed the Charter of French investors in favor of the SDG. Since 2014, Ircantec has also been a signatory to the PRI established by the United Nations. It files an annual report on its commitment to respecting the founding principles. Every year (with a hiatus in 2022), the PRI require that signatories report on their non-financial activities and then award scores. In 2024, Ircantec once again received an excellent rating with a score of 86/100 for its SRI strategy and governance, and 88/100 for its listed and unlisted equity portfolio, positioned above the median of its peers across all categories.

Rating of Ircantec RSI strategy and governance



6.2 Voting report

Being an active shareholder is a way to encourage companies to be more transparent, adopt better governance, and integrate social and environmental impacts more effectively. As part of its Voting Policy adopted in 2013, Ircantec decided to make a commitment, among other things, to socially acceptable compensation of directors, the independence of Boards of Trustees and inclusion of female trustees, support for the EET and company climate strategies, or the implementation of responsible dividends.

The exercise of voting rights associated with the securities held by Ircantec is carried out by the asset management companies in accordance with Ircantec's Voting Policy and Voting Rules on all of the equity stocks present in Ircantec's portfolio.

Furthermore, since 2015, Ircantec has also organized specific monitoring of 30 companies in its portfolio with the support of a voting consulting firm. Each of the resolutions proposed during these thirty general meetings is individually managed to ensure that the voting rules are uniformly and consistently applied.

6.2.1 Very active voting to support the EET and climate

Initially, the companies subject to this enhanced monitoring were the top thirty in the portfolio in terms of market value. In 2018, with a view to better integrating aspects of the energy and ecological transition, this list was updated to incorporate the 20 largest stakes held by Ircantec, the five largest emitters of CO_2 and the five largest holders of stranded assets. Since 2022, further changes have been made to reflect the Scheme's new climate policy.

To respond to the climate emergency, Ircantec strengthened its engagement to ensure its reserves are on a trajectory compatible with a 1.5°C scenario as defined by the Paris Agreement. Amongst others, these decisions impact stricter exclusions on the operation and development of thermal coal-related activities or non-conventional activities (shale gas and oil, oil sands, extra-heavy oil, etc.).

The list now includes the main stakes in financial institutions involved in controversial practices such as thermal coal or non-conventional energies without a credible exit plan. An engagement will also be formed with these financial institutions. These securities are intended to replace stranded assets that have progressively disappeared from Ircantec portfolios following the implementation of the new climate policy.

Furthermore, to remain consistent with these new engagements, Ircantec will expect the following from companies whose stock it owns:

- the adoption of a strategy to achieve a 1.5°C global warming scenario with validation by a scientific body such as the Science Based Targets initiative, or to align with an annual decarbonization trajectory of greenhouse gas emissions of 7% on average (in terms of intensity);
- The implementation of quantitative targets for reducing CO_2 emissions for all scopes for companies in high climate-impact sectors [1];
- the definition of intermediate targets (short, medium and long term) to ensure a sufficient reduction in greenhouse gas emissions in order to comply with the 1.5°C global warming scenarios;
- for companies involved in the mining, production and use of coal, the implementation of a plan to exit coal before 2030, alongside a conversion plan for activities and employees (just transition).

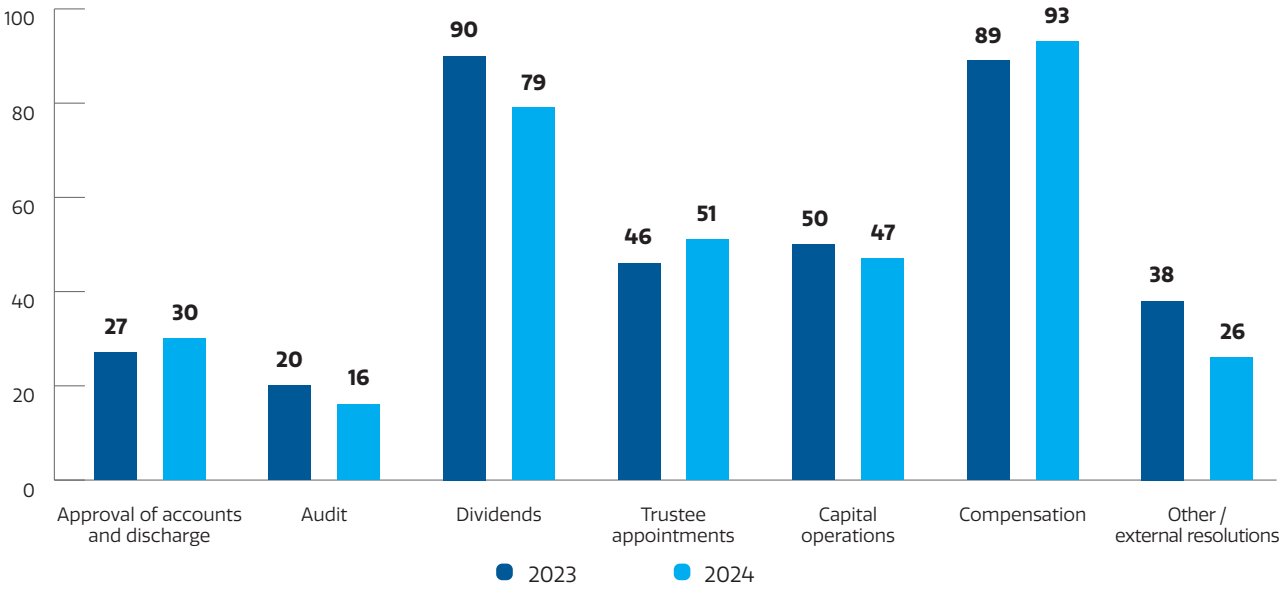
Ircantec will also ensure the establishment of regular voting on the implementation of the climate strategy and the regular publication of a climate strategy update, in accordance with the recommendations of the Taskforce on Climate-related Financial Disclosures (TCFD).

In addition, prior to the general meeting campaign, the management service carries out an analysis of the EET strategy of several companies considered critical. This year, this preliminary work was carried out with 14 companies. The EET strategy was assessed favorably for seven of these companies, while the strategies of three others were found to be insufficient (four "neutral" judgments were also issued).

A letter signed by the Chairman of Ircantec was therefore sent to the executives of companies whose transition policies are considered insufficiently developed by Ircantec, whether in terms of the strategy presented or the expected results. The purpose of this approach is above all to inform companies on the assumption that it may be useful to them in their current and future efforts on these issues. In 2024, the EET contribution of these 31 companies (on the "Focus List") was assessed based on 181 resolutions. Ircantec voted against 17 of them:

- resolutions approving the financial statements were rejected where the EET strategy was not sufficiently engaging;
- certain dividend payment resolutions were rejected where the EET and R&D investments were insufficient;
- resolutions concerning executive compensation were rejected where the structuring of the variable portion did not involve ESG criteria and indicators;
- some resolutions concerning the re-election of executives were not approved where the EET strategy was assessed as insufficient.

Focus List: changes in opposition rate according to category of resolution



(1) Sectors with high climate impact are defined using the NACE classification which is recommended for the Paris Aligned Benchmark (*PAB*).

6.2.2 "Say on climate" and biodiversity-related resolutions

This year, the "Say on Climate" meetings of companies in the global portfolio were monitored, to ensure voting was aligned with Ircantec expectations**. The following SoC were voted on:**

- **Unilever:** opposed, mainly due to the carbon neutrality ambition which excludes a significant part of scope 3 and the lack of quantified reduction targets after 2030;
- **National Grid:** approved, mainly due to the SBTi validation of intermediate objectives and the Net Zero 2050 ambition;
- **SSE:** approved, mainly due to SBTi validation of its intermediate objectives and its Net Zero 2050 ambition.

In addition, this year the Scheme also asked management companies to communicate the **biodiversity-related resolutions** to ensure voting was aligned with Ircantec expectations. The following resolutions were voted on:

- **PepsiCo:** shareholder resolution to publish a report on the risks impacting biodiversity and the loss of natural habitats. Ircantec voted for the resolution;
- **The Home Depot Inc:** shareholder resolution to disclose an assessment of dependency and impact on biodiversity. Ircantec voted for the resolution.

The voting report is published annually and is posted on Ircantec's website [1].

(1) https://www.ircantec.retraites.fr/nous-connaitre/investissement-socialement-responsable.

7

Principal Adverse Impacts (PAI)

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Ircantec opted to publish the Principal Adverse Impact (PAI) indicators for its portfolio in the 2024 Sustainability report. EU regulation 2019/2088 on sustainability-related disclosure in the financial services sector, or the SFDR, imposes the disclosure of policies on the integration of sustainability risks in the investment decision processes and their principal adverse impacts (PAI) on sustainability factors. Ircantec is excluded from the scope of application of the SFDR but is subject to alignment of internal regulations with European standards, which impose the publication of information on risks associated with climate change and biodiversity risks in an annual report in a standard format published within six months of the year ending.

This list of indicators contains a foundation of 14 PAI indicators and four others concerning investments in sovereign bonds and real estate assets. Companies subject to the SFDR must report on these 18 PAI indicators. They encompass the following topics: greenhouse gas emissions, biodiversity, water, waste, social issues, personnel, human rights and corruption.

Moreover, financial market players are required to adopt two optional indicators from a list of 46. The list contains 22 climate and environment indicators, as well as 24 addressing social aspects, human rights and anti-corruption measures.

In total, Ircantec reports on 20 PAI indicators: 18 mandatory indicators including two applied to real estate assets and two to sovereign assets, as well as two optional indicators.

7.1 Performance of "mandatory" PAI

Two data suppliers are provided:

- **S&P Trucost** for mandatory indicators concerning greenhouse gas emissions *(1.1, 1.2, 1.3, 1.4, 1.15)* to be consistent with the portfolio carbon emissions measurements published in the 2022 sustainability report;
- **Sustainalytics** for the eleven other mandatory indicators *(1.6 to 1.14 and 1.16)* and for the optional indicators.

The two indicators "1.8 – Releases into water system" and 1.12 – "Uncorrected gender pay gap" are not reported due to very low coverage rates, explained by limited disclosures by issuers on data relating to these indicators.

The results of the mandatory PAI indicators for the Ircantec portfolio and its benchmark are presented in the two tables:

Results of five mandatory PAI supplied by S&P Trucost

Name of PAI	Metric (units)	Portfolio		Benchmark		Ratio B/P (in %)
		Value	Coverage	Value	Coverage	
CORPORATE						
1. Total GHG emissions by portfolio (scopes 1, 2 and 3)			99%		67%	
	Scope 1 (tCO_2eq)	221,243		457,921		51.7%
	Scope 2 *Location Prioritized* (tCO_2eq)	92,696		101,488		8.7%
	Scope 3 *Upstream* + *Downstream* (tCO_2eq)	3,643,631		5,172,641		29.6%
	Total scopes 1 + 2 + 3 (tCO_2e)	3,957,570		5,732,050		31.0%
2. Portfolio carbon footprint	Total scopes 1 + 2 + 3 (C/V: tCO_2e / €million invested)	366		530		30.9%
3. GHG intensity of companies receiving investments	Total scopes 1 + 2 + 3 (WACI: tCO_2e/€million)	1,054		1,264		16.6%
4. Portion invested in companies active in the fossil fuel sector	Portfolio involvement (%)	0.62%		1.43%		56.6%
SOVEREIGNS						
15. GHG intensity	(tCO_2e /€million GDP)	315	91%	313	100%	-0.6%

Results of eleven mandatory PAI supplied by Sustainalytics

Name of PAI	Metric (units)	Portfolio		Benchmark		Ratio B/P (in %)
		Value	Coverage	Value	Coverage	
CORPORATE						
5. Portion of non-renewable energy in the production and consumption of energy by portfolio companies (%)			58%		56%	
	Consumption (%)	54.78		56.3		2.7%
	Production (%)	20.87		24.44		14.6%
6. Intensity of energy consumption by high climate impact sector			48%		53%	
	Agriculture, forestry and fishing (GWh/€million)	-		2.17		-
	Construction (GWh/€million)	0.08		0.13		38.5%
	Supply of electricity, gas, steam and air conditioning (GWh/€million)	2.86		3.35		14.6%
	Industry (GWh/€million)	0.26		0.31		16.1%
	Mining and extraction (GWh/€million)	1.32		1.05		-25.7%
	Real estate (GWh/€million)	0.58		0.5		-16.0%
	Transport and storage (GWh/€million)	0.89		1.04		14.4%
	Water supply and sewage treatment, waste management and pollution removal (GWh/€million)	0.45		0.57		21.1%
	Wholesale and retail trade, vehicle and motorcycle repairs (GWh/€million)	0.06		0.07		14.3%
7. Activities with adverse impact on biodiversity-sensitive areas	% of involvement	1.2	97%	4	99%	70.0%
8. Releases into water system	(t/€million)	-	-	-	-	-
9. Ratio of dangerous waste and radioactive waste	(t/€million)	0.5	69%	6.28	70%	92.0%
10. Violation of the principles of the UN Global Compact and the OECD guidelines for multinationals	% of involvement	0	97%	0.28	99%	100.0%
11. Lack of process and compliance mechanisms to verify observance of the principles of the UN Global Compact and OECD guidelines for multinationals	% of involvement	37.26	94%	38.43	99%	3.0%
12. Uncorrected gender pay gap	% difference	-	-	-	-	-
13. Diversity in governance bodies	% of women	38.91	82%	38.97	85%	-0.2%
14. Exposure to controversial weapons (anti-personnel mines, cluster munitions, chemical or biological weapons)	% of involvement	0	97%	0	99%	-
SOVEREIGNS						
16. Investment countries exhibiting violations of social standards			92.00%		100.00%	
	Number	0		0		-
	Percentage	0		0		-

Globally, the Ircantec portfolio performs better than its benchmark.

The portfolio greenhouse gas intensity dropped by 5.6% between 2023 and 2024 (PAI 1.3). This result enables Ircantec to reach the objective of a 7% annual average reduction, as over the last three years, the percentage in reduction is 12.3%. In terms of investments in the fossil fuel sector (PAI 1.4), Ircantec's exposure is much below that of the benchmark and the investment portion has fallen from 0.93% to 0.62%. This reduction can be explained by its progressive disengagement from the mining of fossil resources, reflecting the trajectory of Ircantec towards an exit from fossil fuels by 2030.

Concerning the sovereign segment, the unfavorable positioning of the portfolio in terms of greenhouse gas intensity (PAI 1.15) is explained by an over-weighting in certain countries exhibiting a high carbon intensity (tCO_2e/million GDP). As an example, Spain is the main contributor to the increase in the portfolio WACI in 2024, with Italy and the USA both making strong contributions. Concerning Italy, an increase in its intensity was observed between the two years. However, for the USA, this increase in the weighted average carbon intensity is explained by a higher weighing in the portfolio in relation to last year. Lastly, the GHG intensity of the sovereign segment moved from 346 to 315 tCO_2e/million GDP in 2024.

Furthermore, the results of the eleven indicators supplied by Sustainalytics are overall better than those of the benchmark. Indeed, the portion of non-renewable energy is low in the portfolio, the biodiversity-related indicators show better results and no companies are seen to violate the United Nations Global Compact nor the OECD guidelines.

7.2 Real estate assets

Performance of indicators applicable to investments in real estate assets [1]

Name of PAI	Value	Portion of eligible assets	Data coverage rate	Response completeness rate
1.17 – Exposure to assets involved in the production, storage or distribution of fossil fuels (% of assets under management)	0%	100%	100%	100%
1.18 – Assets under management associated with inefficient assets in energy terms (%)	83.89%	100%	100%	90.64%

For 2023, two indicators on real estate assets as part of the OPPCI are defined. A definition is provided here (source: SwissLife).

- **Exposure to fossil fuel assets through real estate assets**
  The indicator is calculated as the market value on the reporting date of real estate assets involved in the extraction, storage, transport or manufacture of fossil fuels, divided by the total market value of real estate assets in the financial product on the reporting date of the period. Only market values of real estate assets used in the activities described above are considered (e.g. service stations). However, they exclude real estate assets heated with fossil fuel heating systems or lessees involved in the fossil fuel industry. If only a part of the real estate asset is used for mining, storage, transport or manufacture of fossil fuels, the pro-rated market value is calculated from rental income.
- **Exposure to energy-inefficient real estate assets**
  The indicator is calculated as the market value of energy-inefficient real estate assets divided by the total market value of real estate assets [2] in the financial product on the reporting date of the period. Buildings built before December 31, 2020 are considered to be energy-inefficient if their energy performance class rating is C or less. For buildings completed after December 21, 2020, energy inefficiency reflects a primary energy demand (PED) below the EU level of European Directive 2010/31/EU ("Net Zero Emission Building").

The result for indicator 1.17 for Ircantec real estate assets is good, thanks to its zero value. In terms of indicator 1.18, the European SFDR considers that an asset is efficient if it exhibits a class A or B EPC. Yet most OPPCI assets are classified as C or D, meaning that the OPPCI assets are listed as inefficient and the indicator result poor-performing.

EPC	Percentage of total value
A or B	14.50%
C	41.52%
D	31.82%
E	2.19%
N/A [1]	9.96%

(1) Lack of information on EPC: potentially due to the fact that certain assets have been delivered recently or remain under construction, or that the EPC is blank due to a lack of historical data on consumption. These assets are mainly assets for sale prior to completion (VEFA), and by default are considered as inefficient according to SFDR criteria.

Note that Ircantec conducted several energy audits through its asset manager to draw up an inventory and define suitable recommendations to improve the energy performance of the assets in question. The completion of this work will improve this indicator.

(1) The scope of analysis for these two indicators is the OPPCI fund (excluding the Vesta segment).
(2) i.e. PED rating of C, D, E, F and G.

7.3 Performance of "additional" PAI

Ircantec opted to create additional PAI to be consistent with the main themes of the SRI Charter and in line with the engagement issues where it has made commitments. Two additional PAI are therefore used:

- 2.4 – Investment in companies not taking initiatives to reduce their carbon emissions;
- 3.9 – Lack of a human rights policy.

Performance of two additional indicators used

Name of PAI	Metric (units)	Portfolio		Benchmark		Ratio B/P (in %)
		Value	Coverage	Value	Coverage	
CORPORATE						
2.4 – Investment in companies not taking initiatives to reduce their carbon emissions	Engagement percentage	21.78	97%	21.19	99%	-2.8%
3.9 – Lack of a human rights policy		3.39	96%	3.02	99%	-12.3%

Ircantec has bolstered its engagements in terms of human rights, which are a major concern in Ircantec's policy. In particular, in 2023, Ircantec adopted a declaration in favor of more robust regulations against forced labor, jointly with IAHR and FIR. Ircantec also subscribed to the FIR declaration in 2023, for a European Directive on due diligence aligned with international standards, developed in partnership with several businesses and civil society organizations. These actions bear witness to Ircantec's commitment to protecting human rights and bolster its social responsibility.

Justly, indicator 3.9 measures the percentage of the portfolio exposed to companies involved in activities without any policy on the protection of human rights. The results indicate an increase in 2024 in the number of companies having no human rights policy over the 2023 number. However, the absolute increase is only 0.46 percentage points. According to Sustainalytics, it is very complicated to attribute to a specific event any change below one percentage point. In fact, they observed a significant volatility in the reporting of indicators by companies. This result is not satisfactory for the Scheme but in no way alters its SRI strategy, in particular stronger checks and observance of human rights.

In terms of the environment, Ircantec announced a new climate policy in October 2021, deemed ambitious as it is committed to an alignment trajectory with the Paris Agreement and compatible with a 1.5°C scenario. As a reminder this policy incorporates an objective to reduce carbon emissions by 7% a year, several phases of exclusion measures on conventional and non-conventional energies aligned with PAB indexes, and an objective to finance companies with major concerns.

Despite the roll-out of this policy, it appears that indicator PAI 2.4 which measures the percentage of the portfolio exposed to companies without carbon emission reduction initiatives aiming to align with the Paris Agreement, seem slightly less well positioned in the portfolio than the benchmark (21.78% vs 21.19%). Nonetheless, the relative performance of the portfolio against the benchmark index improved from -3.1% to -2.8% in 2024.

We observe that the financial, information technology, industrial and health sectors are overweighted in the portfolio in relation to the benchmark. These sectors invest more in companies which have not yet made any commitments to align with the Paris Agreement.

The engagement of financial institutions is one of the four fundamental pillars of Ircantec's approach in its climate policy. Since 2022, Ircantec has taken part in collaborative commitments with ShareAction, notably sending a letter in 2023 to five banks (Société Générale, Barclays, BNP Paribas, Crédit Agricole and Deutsche Bank), requesting them to cease the operation of new oil and gas deposits.

This indicator bolsters Ircantec engagements in favor of climate sustainability, underlines its commitment to the objectives of the Paris Agreement and supports its search for transparency.

7.4 Additional PAI related to biodiversity

PAI related to biodiversity will be monitored as part of the implementation of Ircantec's 2024 biodiversity policy.

Biodiversity encompasses all living beings, ecosystems and genetic diversity, playing a crucial role in the operation of human activities through natural assets and ecosystem services. However, biodiversity is in danger, reflected by the destruction of ecosystems and the life they support due to human activities. According to the IPBES, one million species are threatened with extinction, 75% of Earth's surface is significantly damaged and 85% of wetlands have disappeared, giving rise to a sixth mass extinction. The WWF also reports that of 69% of vertebrate animals disappeared between 1970 and 2018, underlining the urgency of the situation. Ircantec acknowledges the adverse impacts on biodiversity and the associated risks (physical, transitional, reputational). To reduce the five pressures identified by the IPBES, Ircantec is driving action on: 1) changing land use (exclusion filters for palm oil and GMO, followed by soil sealing); 2) resource use (conservation indicators for forestry assets and limitation of resource over-exploitation); 3) climate change (ambitious climate policy, EET financing objectives up to 20% of reserves); 4) pollution (exclusion of activities relating to pesticides, commitment against plastics); and 5) invasive species (annual review of invasive species in forestry assets managed).

For this reason, the Scheme decided to include three opt-in metrics to its PAI indicators, to publish its biodiversity-related performance with transparency and enable an assessment of the results of the actions taken over time.

Results of optional biodiversity-related indicators

Name of PAI	Metric (units)	Portfolio		Benchmark		Ratio B/P (in %)
		Value	Coverage	Value	Coverage	
CORPORATE						
Opt-in						
3.10 – Deterioration of soil, desertification, soil sealing	% of involvement	13.86	97%	21.95	99%	36.9%
33.14 – Natural species and protected areas	% of involvement	2.43	97%	5.39	99%	54.9%
3.15 – Deforestation	% of involvement	76.51	96%	74.64	99%	-2.5%

Globally, the Scheme portfolio exhibits better risk management performance in terms of deterioration of soils, desertification, soil sealing, natural species and protected areas, as shown by the portfolio's positive ratios compared to the benchmark. However, it is slightly less well positioned in terms of deforestation, with a negative B/P ratio. Overall, the relative performance of the portfolio improved significantly in relation to the benchmark this year, improving from -7.2% in 2023.

8

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Appendix 1 – Progressive reinforcement of Ircantec climate exclusions

Starting in 2022	Starting in 2024	Starting in 2030
THERMAL COAL		
Exclusion from the portfolio of companies: • where the share of thermal coal in overall turnover is **above 5%** (mining companies and energy producers); • whose annual production of coal is **greater than 10 Mt**; • whose electricity production capacity from coal is **greater than 5 GW**. However, these exclusion thresholds do not apply to companies that present **a credible plan to phase out coal by 2030:** • companies that develop or contribute to **new projects;** • **partners of this industry** (for whom 5% of turnover is associated with thermal coal or who take part in new projects). **Investments in green bonds will be maintained** if the company has committed to phasing out thermal coal by 2030.	**Stronger exclusions** • The exclusion threshold will change from **5 to 1%** of turnover, in accordance with the "Paris Aligned Benchmark– PAB" European indexes. **Exclusion** from the portfolio of companies: • whose annual production of coal is **greater than 10 Mt**; • whose electricity production capacity from coal is **greater than 5 GW**. These exclusion thresholds will not concern companies that present a **credible plan to phase out coal by 2030** • companies that develop or contribute to **new projects**; • **partners of this industry** (for whom 5% of turnover is associated with thermal coal or who take part in new projects). Investments in green bonds will be maintained if the company has committed to phasing out thermal coal by 2030.	**Commitment to ensure zero exposure to thermal coal in the portfolio across all geographical areas.**
OIL AND GAS		
Exclusion of companies from the portfolio due to their **non-conventional production**: • which develop **new projects** in non-conventional energies; or • which **increase their capacity** in non-conventional production; • which produce **over 10 mmboe** in non-conventional energy; • for which **over 30% of production** is associated with a non-conventional activity. The exclusion limits above do not concern companies that present a **credible plan to phase out non-conventional energies by 2030**. **Investment in green bonds will be maintained if the company has committed** to phasing out non-conventional fossil energies by 2030.	**Stronger exclusions** Application of Paris Aligned Benchmark thresholds: • **oil** represents **over 10% of turnover**; • **gas** represents over **50% of turnover**. These thresholds do not apply to companies **presenting a credible plan to reduce their emissions, compatible with a 1.5°C scenario validated by the "Science-based target initiative" (SBTi).** **Exclusion of:** • any company initiating **new projects in conventional energies or contributing to the development of new projects**; • any company **whose production is related to non-conventional activities** and which is **not engaged** in a credible exit plan. **Investment in green bonds will be maintained if the company has committed** to phasing out non-conventional fossil energies by 2030.	**Commitment to ensure zero exposure to any company in the oil and gas sector that has not adopted a credible emissions reduction plan compatible with a 1.5°C scenario validated by the SBTi.**
FINANCIAL SECTOR		
Engagement of companies which finance or insure**:** • companies in the **thermal coal** sector; • companies involved in **non-conventional** activities, so that they develop **credible plans to phase out coal and non-conventional energies** by 2030.	**Engagement of the companies** most involved in financing coal and non-conventional energies so that they develop **credible plans to phase out coal and non-conventional energies** by 2030.	

Appendix 2 – ESG methodology

For listed and quasi-sovereign companies

The ESG Risk Rating reflects the residual ESG risk of an issuer, namely the risk it does not control. The aim is to analyze the factors that will impact the financial performance of the issuer in the medium and long term. These factors are selected on a financial materiality basis.

The ESG risk ratings comprise three components that contribute to the overall company rating. These components are corporate governance, Material ESG Issues (MEI) and idiosyncratic ESG questions.

Component no. 1: Corporate governance and stakeholder relations

Corporate governance and stakeholder relations represent a fundamental component of ESG risk analysis. They reflect our belief that poor corporate governance poses material risks for issuers. These ESG factors are analyzed for all companies in our research universe, regardless of their sector of activity.

Component no. 2: material ESG issues

Material ESG issues focus on a set of related topics that pose a risk to the financial stability of the company. These require good management in terms of internal policies, programs for implementing these policies and communication with the public. For example, the themes of recruitment, development, diversity, engagement and labor relations are all encompassed under the material ESG topic of human capital, as they relate to employees and require initiatives and human resource monitoring. The common thread running through all human capital topics is attracting and retaining skilled employees. The selection and assessment of material ESG issues take place at the sub-sector level. They are reviewed annually as part of a comprehensive and structured process. At the company level, material ESG issues can be removed from the assessment if they are no longer relevant to the company's business model.

Component no. 3: idiosyncratic events

Idiosyncratic events of an environmental, social or governance nature are not specific to an economic sub-sector or business model. For this reason, they are not analyzed under Material ESG Issues. They have an unforeseeable or unexpected character and can randomly impact any company, whatever its sector of activity. An accounting scandal, for example, can occur in any economic sector. Idiosyncratic events therefore become material ESG issues if the assessment of the associated event exceeds a materiality threshold. This threshold has been set at a category 4 or 5.

Rating scale

The ESG risk rating is classified on a scale of 0 to 100 with five levels of severity, from negligible to severe. This scale makes it possible to define categories of residual risk. For the assessment of controversies, Sustainalytics assesses the involvement of companies in incidents resulting in negative environmental, social and governance (ESG) consequences. Involvement in controversy is a key measure of ESG performance that can inform the investment decisions of our clients. The controversy rating reflects the level of a company's involvement in issues and how it handles those issues.

Incident

An incident is the core component of the controversy rating. It is a business activity that has unintended and/or undesirable negative environmental and/or social impacts on stakeholders. Incidents are mainly assessed according to the negative environmental and/or social impact of the company's activity, as well as the reputational risk that this activity represents for the company. The incidents are tracked by various media and NGOs, and usually fuel the controversy rating for a period of three years. In exceptional cases, long-lasting, high-impact incidents continue to fuel the controversy rating for more than three years, until they no longer pose a risk to the business.

Events

Events are series of isolated or related incidents that pertain to the same ESG issues. Events are classified using 40 event indicators that relate to these ESG issues. For example, a series of strikes by employees at a company's operational locations constitutes an event under one of the event indicators, "Labor Relations". To assess an event, an analyst looks at the underlying series of incidents holistically and rates it based on the following factors:

- impact: negative impact of incidents on the environment and society;
- risk: business risk for the company due to the incidents;
- management: enterprise management systems and incident response;
- an event is assessed on a scale of five levels:
  - Category 5 – Severe
    The event has a severe impact on the environment and society, posing serious business risks for the company. This category corresponds to exceptional behavior by the company, a high frequency of recurrence of incidents, very poor management of ESG risks and a manifest lack of will on the part of the company to deal with these risks,

- Category 4 – High
  The event has a high impact on the environment and society and presents high business risks for the company. This rating level represents systemic and/or structural issues within the business, weak management systems and business response, and recurrence of incidents,
- Category 3 – Significant
  The event has a significant impact on the environment and society, posing significant business risks for the company. This rating level represents evidence of structural problems in the business due to recurrence of incidents and inadequate implementation of management systems or lack thereof,
- Category 2 – Moderate
  The event has a moderate impact on the environment and society and presents moderate risks for the company. This rating level represents a low frequency of incident recurrence and adequate or robust management systems and/or business response that mitigate additional risks,
- Category 1 – Low
  The event has a low impact on the environment and society, and the risks for the company are minimal or negligible.

For sovereigns

The country risk ranking assesses the ESG risks to a country's long-term prosperity and economic development by looking at its three types of "capital":

- Natural capital and produced capital: natural capital includes energy, mineral, agricultural and forestry assets. Produced capital includes assets such as machinery, buildings, equipment, residential and non-residential urban land;
- Human capital: includes the value of the skills and efforts of the working population over their lifetime;
- Institutional capital: measures the quality of a country's institutions. The table below shows how the three types of capital are assessed based on a set of metrics that are scored and summarized in ESG Factor Scores.

Performance and trends

Natural + produced capital (environment)		Human capital (social)		Solutions capital (governance)	
ENERGY & CLIMATE CHANGE	• Energy intensity • Carbon intensity • Renewable energy consumption • Energy imports • Percentage of land less than 5 m • Risk of natural catastrophe	**ESSENTIAL NEEDS**	• Access to water • Access to sanitation • Food safety • Access to electricity • Secondary education	**INSTITUTIONAL ROBUSTNESS**	• Efficiency of public authorities • Quality of regulations • State of law • Corruption • Ease of doing business
USE OF RESOURCES	• Water productivity • Water stress • Habitat protection	**HEALTH & WELL-BEING**	• Life expectancy at birth • Doctors per 1,000 residents • Air pollution	**RIGHTS & FREEDOMS**	• Political rights • Civil liberties • Voices and responsibility
GOVERNANCE	• Corruption • State of law	**EQUITY & OPPORTUNISMES**	• Development of gender equality • Unemployment • Percentage of people using Internet	**PEACE & SAFETY**	• Political stability • Level of peace

A country's ability to leverage and manage this capital effectively and sustainably is determined in the model by aggregating three ESG factor scores into an overall ESG factor score.

These three individual factors are:

- ESG performance: assesses how a country manages its three types of capital based on a set of ESG metrics;
- ESG trends: capture the dynamics of a country's ESG performance based on a 5-year moving average for each of the three types of capital;
- ESG events: systematically capture incidents / events based on the news flow that can impact on a country's prosperity and economic development; measure its ability to manage the impact of these incidents/events on its three types of capital in an efficient and sustainable manner.

Finally, the overall ESG factor score is combined with a wealth score for each of the three types of capital, which measures a country's wealth and is based on World Bank estimates to form our final country risk rating score.

This final score ranges from 0 to 100, reflecting a country's ESG risk on an ascending scale (low score = "good', high score = "bad"). As part of our rating, all countries are assigned to five risk categories, ranging from negligible risk (risk score ≤ 10) to severe risk (risk score > 40). This approach allows for a comparison with the ESG risk score of companies and a precise calculation of the ESG risk score of a diversified investment portfolio including sovereign securities and private issuers.

Appendix 3 – Carbon cost methodology

Trucost has compiled a database of public information on current carbon prices in over 44 jurisdictions, valid as of January 2022. The Unpriced Carbon Cost (UCC) is the estimated additional financial cost per tonne of greenhouse gas emissions in a future year. It is the difference between current carbon prices and possible future carbon prices for a given sector, geographical area and year.

Rising carbon prices have direct financial implications for businesses where regulations impose a higher price on greenhouse gas emissions from direct business operations. Businesses also face indirect financial risks associated with the repercussions of higher carbon prices on emissions from suppliers, which, in turn, seek to partially or fully recover additional regulatory costs through price rises. Factors have been developed to estimate the proportion of carbon price increases on scope 2 emissions that are passed on from suppliers to businesses.

The carbon price risk premium varies by geography due to differences in government policies and by sector due to the differentiated treatment of sectors within many climate change policies. The sectors are based on OECD research and include:

1. Agriculture and fishing;
2. Electricity;
3. Industry;
4. Air transport;
5. Off-road transport;
6. Residential and commercial real estate;
7. Road transport.

Each of Trucost's 464 business activities were then classified into one of these seven sectors.

High Carbon Price Scenario (RCP 2.6)

This scenario represents the implementation of policies considered sufficient to reduce greenhouse gas emissions in accordance with the objective of limiting the global temperature rise to 2°C by 2100 (Paris Agreement). This scenario is based on research by the OECD and the IEA.

Moderate Carbon Price Scenario (RCP 4.5)

This scenario assumes that policies will be implemented to reduce greenhouse gas emissions and limit the temperature rise to 2°C in the long term, but with delayed measures in the short term. This scenario is based on research by the OECD and IEA as well as NDC assessments by Climate Action Tracker, Ecofys, Climate Analytics and New Climate Team. Countries whose nationally determined contributions are not aligned with the short-term 2°C goal are expected to increase their climate change mitigation efforts in the medium to long term.

Low Carbon Price Scenario (RCP 8.5)

This scenario represents the full implementation of NDCs, based on OECD and IEA research.

Appendix 4 – Methodology for alignment with the objectives of the Paris Agreement

Trucost's approach to assessing transition trajectories is adapted from two methodologies put forward by the Science Based Targets Initiative (SBTi), namely the Sectoral Decarbonization Approach (SDA) and the Greenhouse Gas Emissions per unit of Value Added (GEVA).

SDA approach

The first methodology (SDA) applies to companies whose commercial activities are homogeneous and have high carbon emissions. It is based on the idea that all the companies in a portfolio, regardless of the sector, must converge towards emission intensities in line with a 2°C scenario by 2050. The method uses 2°C transition scenarios that are specific to each industry, and the performance of companies is measured according to their emission intensity and their production level (for example in tCO_2e per GWh or per ton of steel). Indeed, trajectories may vary from one sector to another (i.e. faster for energy and slower for cement), depending on available technologies, mitigation potential and mitigation costs. Companies with low reference year emissions and low production growth can therefore reduce their emissions at a gradual pace. In contrast, companies with high emissions or high growth must achieve faster reductions.

The scenarios used in the SDA approach are the International Energy Agency's (IEA) scenarios taken from the 2017 Energy Technology Perspectives (ETP) providing compliant SDA assessment parameters with a global warming of 1.75°C, 2°C and 2.7°C. The integration of a 1.5°C scenario is in progress.

GEVA approach

The second methodology (GEVA) applies to companies whose activities are more heterogeneous or characterized by low carbon emissions. This approach assumes that many companies have diverse business activities for which specific trajectories are not available at the scale of physical production. For these companies, the GEVA method assumes that all the heterogeneous sectors of the economy must reduce their emissions at the same rate. Thus, if the global economy must reduce its emissions by X% per year until 2050, then according to the GEVA approach, each company must also reduce its emissions at the same rate of X% per year, regardless of the starting intensity. In absolute terms, this condition implies that the companies that emit the most must reduce their emissions much faster than those that emit the least. Unlike the first methodology, the value-added unit approach is based on an economy-wide scenario, and emissions intensity is measured against a financial denominator, not a physical one.

Each company's transition trajectories are measured in terms of carbon per unit of value added, adjusted for inflation, which represents their contribution to total global emissions. These results are then compared to global decarbonization trajectories satisfying a given temperature rise scenario.

The scenarios used in the GEVA approach are the Representative Concentration Pathways scenarios used in the IPCC's AR5 report, providing GEVA assessment parameters consistent with 1.5°C, 2°C, 3°C, 4°C and 5°C warming scenarios.

Evaluation horizon and data sources

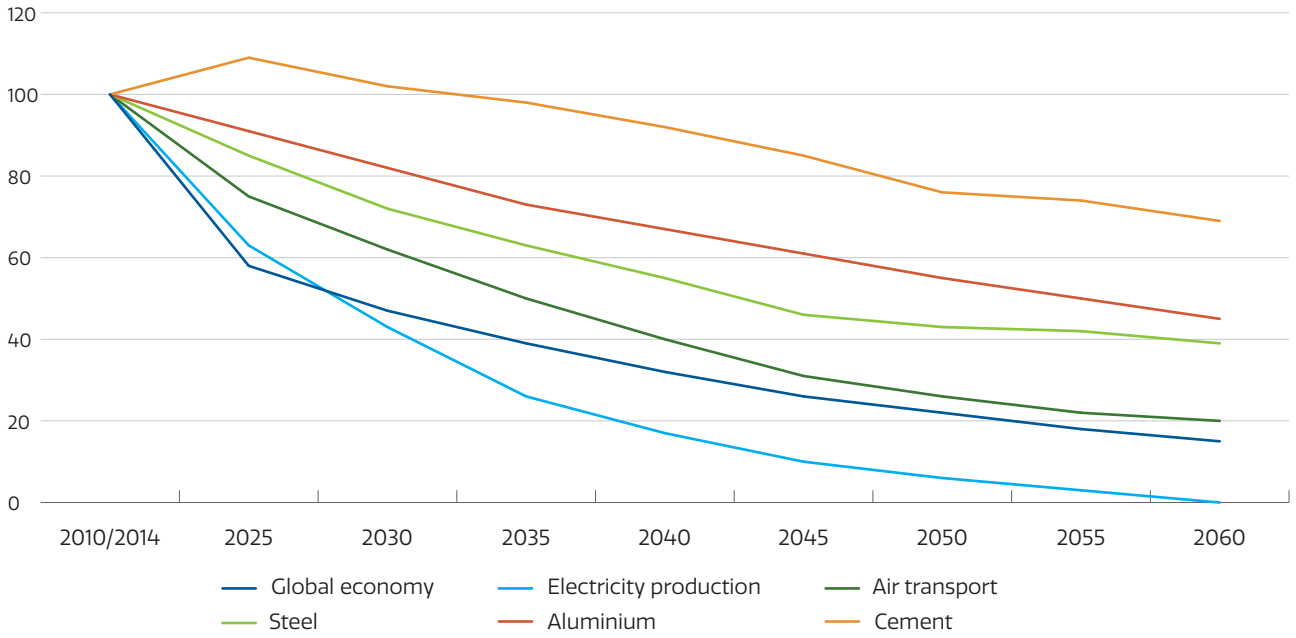
The transition trajectories analyzed incorporate both historical and prospective data to provide a medium-term assessment. This minimizes the uncertainties of using only forward-looking data and provides sufficient time to minimize the effect of any year-to-year volatility. Historical data on greenhouse gas emissions and business activity levels are incorporated from a reference year of 2012. Forward-looking data sources are used to track likely future transition trajectories from the most recent year of disclosed data through 2025. Forward-looking data are used based on an established data hierarchy, consisting of the following sources:

1. emission reduction targets disclosed by the company;
2. asset-level data sources that provide signals about potential future changes in production from high-emitting;
3. historical trends in company-specific emissions for companies assessed on the basis of homogeneous business;
4. average historical trends in emissions by sub-sector for companies assessed on the basis of heterogeneous business;
5. no change in emissions intensity beyond the last year.

Evaluations of the portfolio use the combined scopes 1 and 2 emissions as the evaluation limit.

The graph below illustrates the decarbonization trajectories for the five sectors covered in the SDA approach, as well as the trajectory used for the remaining sectors in the GEVA approach ("Global Economy" in the key). Each sector's unique intensity unit has been indexed out of 100 for ease of comparison. Sectors where carbon-saving technologies and/or processes are most profitable are expected to decarbonize faster and end at a lower overall intensity than sectors where these measures are not profitable. For example, carbon intensity reductions are expected to be greater in power generation than in cement production.

Decarbonization trajectories aligned with 2°C by sector



Appendix 5 – Environmental Footprint Methodology

Traditional approaches to measuring environmental impact provide a variety of different metrics. For example, carbon and other pollutants are measured in tons, and water is measured in cubic meters. This makes it difficult to compare the relative contribution of each impact and therefore to prioritize the risks. Trucost solves this problem by applying monetary assessments to each impact, providing a common global metric to assess risk and opportunity across companies and portfolios.

The analysis quantifies the impacts associated with the company' s own activities and those of its upstream suppliers, up to the extraction of raw materials. Environmental impacts are often hidden in global supply chains, so we use an Extended Environmental Input-Output (EEIO) model to isolate responsibilities at each level of the value chain for a holistic analysis of risks and opportunities.

Environmental indicators:

- greenhouse gases: carbon dioxide, methane, nitrous oxide, sulfur hexafluoride, perfluorocarbons, hydrofluorocarbons and nitrogen trifluoride;
- water abstraction: direct cooling and direct process water but also purchased water (i.e. water acquired from utilities);
- waste generation: waste incineration, landfill waste, nuclear waste (e.g. from product manufacturing, nuclear fuel combustion or other industrial and medical processes) and recycled;
- air pollutants: all emissions released into the air from fossil fuel consumption and company-owned or controlled production processes. This includes acid rain precursors (nitrogen oxide, sulfur dioxide, sulfuric acid, ammonia), ozone depleting substances (HFCs and CFCs), dust and particulates, metal emissions, smog precursors and volatile organic compounds (VOCs). Each has a set of impacts on human health, buildings and/or crop and forest yields;
- terrestrial and aquatic pollutants: pollution from fertilizers and pesticides, metal emissions into the soil and water, acid emissions in water, pollution of nutrients and;
- use of natural resources: mining/extraction of minerals, metals, natural gas, oil, coal, forestry, agriculture and aggregates.

Appendix 6 – Physical Risk Methodology

The publication of the TCFD recommendations has highlighted the importance of climate change as a significant financial risk driver for businesses and investors and the fact that these risks need to be assessed, disclosed and managed. The task force divided these risks into two broad categories, the first being transition risks (including political and legal risk, technology risk, market risk and reputational risk), and the second being physical risks. Trucost has developed physical risk assessment data and analytics to complement the existing suite of transition-focused products. Key features include:

- a robust and scientific methodology for characterizing physical risks related to climate change based on the latest climate change models available and exclusive methodologies.
- coverage of eight major physical risks associated with climate change: coastal flooding, river flooding, extreme heat, extreme cold, tropical cyclone, forest fires, water stress, and drought;
- coverage of four climate change scenarios based on SSP (Shared Socioeconomic Pathway) and RCP (Representative Concentration pathway) scenarios produced by the IPCC, and offering annualized ten-year averages for all risks from 2020 to 2090;
- physical risk exposure scores representing occasional exposure to climate risks, and measurement of the financial impacts of physical risks describing the financial consequence of changes to the climate risk exposure of over 250 types of unique assets:
- built on a proprietary database of nearly 3.1 million physical assets linked to corporate entities and ultimate parent entities – based on S&P Market Intelligence and all data gathered by Trucost;
- an estimation methodology for businesses without asset information, covering Trucost's Core Plus universe of over 20,000 companies.

Exposure score and financial impact metrics

	Physical risk exposure scores	Financial impacts related to physical risks
What does this metric represent?	Occasional exposure to climate risks in relation to world conditions, independent of the nature of the asset present at a given location.	The financial consequences of the modification of exposure to climate risks in relation to a baseline specific to the asset at a given location.
Benefits	• Efficient for a brief examination of large asset portfolios. • Offers an overview of climate risks present at a given location without limitation to risks supposed significant. • Easily applicable when limited information is available (location only) about the assets analyzed. • Precious as a risk indicator at a given location if data on assets are not available.	• In-depth analysis to quantify the financial impact of changes in exposure to climate risk based on the best data available. • Granular analysis based on 250 asset types and associated impact models. • Easy integration into financial analyses (e.g. evaluation models, credit risk models, accounts restated for climate risk). • Precious to inform climate resilience strategies.

Practical cases	• Exercises in risk selection and portfolio analysis to understand:
	  • global exposure of the asset, company or portfolio to physical risk, compared to appropriate benchmarks;
	  • what climate risks represent the greatest exposure;
	  • the assets or companies in a portfolio making the biggest contribution to the portfolio;
	  • inform the initial disclosures of the TCFD and the risk selection initiatives;
	  • focus attention on the most exposed assets, companies or portfolios in order to orient research to fields with the greatest potential impact.
		• In-depth analysis of physical risks, oriented to the financial materiality of exposure to climate risks for specific asset types.
		• Inform disclosures and detailed TCFD reports.
		• Integration of climate physical risk in financial model, including the creation of adjusted financial accounts, a credit risk model and stock value modeling.
		• Climate resilience strategy.

What results have been obtained?	• Exposure score: score from 1 to 100 representing exposure to each risk in relation to global conditions.	• Financial impact: financial losses (e.g. Capex, Opex, activity shutdowns), expressed as a percentage of the asset value due to the exposure to climate-related physical risks.

Physical risk types

Physical risk	Indicator	Description of indicator	Spatial resolution	Data source
Coastal flooding	Frequency of 100-year flood	Forecast frequency of reference historical 100-year coastal flood	30x30 m (USA) 90x90 m (RoW)	*GTSR Hydrodynamic Surge model* *Kopp et al. SLR Data* *MERIT /US3DEP* *USGS Global Coastlines*
River flooding	Frequency of 100-year flood	Forecast frequency of reference historical 100-year coastal flood	~ 25x25 km	*Hydro Atlas* *NEX-GDDP Downscaled CMIP6*
Extreme heat	Projection Tx90p Exposure scores Tx50pAbsChg (Financial impact)	Annual percentage of days when the maximum temperature is higher than the 90th percentile of the local benchmark daily maximum temperature.	~ 25x25 km	*NEX-GDDP Downscaled CMIP6*
Extreme cold	Projection Tx10p	Annual percentage of days when the minimum temperature is below than the 10th percentile of the local benchmark daily minimum temperature.	~ 25x25 km	*NEX-GDDP Downscaled CMIP7*
Tropical cyclone	Frequency of Category 3 storms and higher	Forecast annual frequency of category 3 tropical cyclones and higher	~ 25x25 km	*HURDAT / Archives JTWC TC* *CMIP5/6 SST*
Forest fire	Days of existing conditions of forest fire	Forecast of number of days where the Z index is below or equal to the 10th historic percentile.	~ 25x25 km	*NEX-GDDP Downscaled CMIP7*
Water stress	Water stress index	Forecast future ratio between water abstraction and total supply of renewable water in a given area.	Hydrographic Basin	*WRI Aqueduct*
Drought	Palmer drought severity index	Forecast of number of days where the self-calibrated Palmer drought severity index (scPDSI) is below or equal to the 10th historic percentile.	~ 25x25 km	*NEX-GDDP Downscaled CMIP7*

All data is focused on four future climate change scenarios based on representative concentration pathways (RCP) and shared socio-economic pathways (SSP) of the IPCC, and informed by TCFD technical directives:

- **high (RCP 8.5)**: low-mitigation scenario where the total emissions of greenhouse gases triple by 2075 and average global temperatures by 3.3 to 5.7°C by 2100;
- **moderately high (RCP 7.0)**: limited-mitigation scenario where total greenhouse gas emissions double by 2100 and global average temperatures increase by 2.8 to 4.6°C by 2100;
- **intermediate (RCP 4.5)**: high-mitigation scenario where total greenhouse gas emissions remain stable at current levels until 2050, then decline until 2100. This scenario should result in an increase in global average temperatures of 2.1 to 3.5°C by 2100;
- **low (RCP 2.6)**: stringent mitigation scenario where total greenhouse gas emissions are reduced to zero by 2050, leading to an increase in global average temperatures of 1.3 to 2.4°C by 2100, in line with the objectives of the Paris Agreement.

The Trucost data set evaluates the physical risks associated with climate change for the 10-year averages from the 2020s to the 2090s. The financial impact quantification pathways are not currently available for extreme cold but are available for all other risks.

Analytical approach

The quantification method for physical risks and the related financial impacts is based on the five analytical steps. Details are provided below.

1. climate risk modeling;
2. quantification of exposure to physical risks;
3. calculation of physical risk exposure scores for assets and the company;
4. modeling the financial impact function;
5. calculation of the financial impact of physical risks on assets and the company.

The details of each of these steps are described below.

1. Climate risk modeling

Trucost assembled models and data representing the estimated absolute risk of eight global-scale climate change-related risks based on four climate change scenarios and eight time periods to produce maps of physical risks related to global climate change. Each indicator, scenario and period is represented as a set of geospatial data with risk values assigned at a resolution considered appropriate for each event. This enables us to model the exposure to each climate risk for a given period and changes in the risk exposure over time and in relation to a historical basis.

2. Quantification of exposure to physical risks

Exposure to physical risks related to climate change is quantified by overlaying the locations of assets impacted on the climate risk maps described in step 1. In this analysis, the "assets" represent any structure or physical asset owned or leased by a company listed in the Trucost database of over 20,000 companies. The database on climate change-related physical risks is generated from a vast corpus of data on the location of physical assets, cross-referenced to owner companies (or lessees), developed and updated by S&P Global.

3. Physical risk exposure scores for assets and the company

The Trucost physical risk exposure score model assigned risk exposure scores from 1 (lowest risk) to 100 (highest risk) to each asset in the database, according to its location in the climate risk maps described in step 1. The exposure score is intended to represent the relative level of risk exposure for each risk at each location compared to the global conditions in all scenarios and time periods. The exposure scores for physical risks involving assets are aggregated on company level as a weighted average of all assets mapped for the company in question, based on assumed asset values for each type of asset. The assumed asset values are produced by document analysis and supposed to represent the relative value of each type of asset. The businesses assessed using asset data are classified in the Data Quality A category.

For some companies in the Trucost universe, there is insufficient asset-related data to calculate the exposure scores to different physical risks. In these cases, exposure is estimated based on a combination of exposure to physical risk at the company head office (20% weighting) and a turnover-weighted average of the average physical risk for each country where the company generates turnover (80% weighting). Country physical risk profiles are calculated as an average weighted by the GDP within country borders, using the data on climate risks described in step 1 and spatial data on GDP to scale. Companies assesses for physical risk exposure using this method are designated as Data Quality B.

The composite exposure score is intended to provide a combined measure of the company's exposure to the eight climate change-related physical risks. It is calculated using an additive combination of equal weightings of the company's physical risk score for each risk for a given scenario and year, then adjusted to a scale of 1 to 100 using a logarithmic grading curve. The grading curve is designed to ensure that assets or companies highly exposed to one risk but weakly exposed to all others, will receive a moderate to high composite physical risk exposure score. Other approaches such as a simple average of risk exposure scores for a given scenario and period, risk under-estimating the exposure of an asset or company to the physical risks of climate change.

4. Modeling the financial impact function

The Trucost physical risk model quantifies the expected financial impacts of changes in physical risk exposure, both for assets and companies. This model is based on a library of impact functions developed by S&P Global, and which describes the relationship between the degree of change to climate risk exposure and the financial impact on a given asset type over time and in different climate change scenarios. The impact functions were developed for over 250 unique asset types, each focusing on a set of pathways where climate risks could impact on the value, turnover, operations, or other value factors for this asset type. The impact function database was developed over several years through in-depth document research and analytical development. In asset terms, the financial impact is quantified as forecast financial costs associated with changes in climate risk exposure, expressed as a percentage of the asset value.

Measurement of the financial impact is calculated on the asset for each risk and can be added to produce a combined measurement of the financial impact, and aggregated at company level as a weighted average based on the assumed asset value. The financial impact is expressed as a relative measurement as we do not currently have precise data or estimations of the actual value of each asset. The example below describes the process applied to the development of impact functions for a unique combination of risks and asset types.

Step 1 – Identify the material impacts

S&P Global has developed over 1,280 impact functions associated with over 250 asset types for application to all data on physical risks and the associated tools. The example below shows the extreme heat impact function for the office building asset type, from the standpoint of the owner/occupant. The temperature risk measurement used in this function is the projected Tx 50 pAbsChg, which measures the absolute change in annual local daily maximum temperature to the 50th centile, in relation to the historical value (1950–1999). To analyze the impact of the maximum temperature increase on owned/occupied office buildings, the research documentation available was searched to identify a series of impact pathways where operations and the value of an office building could be impacted by the temperature increase. The following impact pathways have been identified as important to the office building asset type:

- Cooling costs: spending on excessive use associated with increased use of cooling equipment or systems to maintain optimal temperatures for employees and facilities / equipment in a context of rising temperatures;
- Deterioration of Heating, Ventilation and Air Conditioning (HVAC) systems: annualized costs of reduced lifetime and early replace of HVAC systems due to increase use in response to higher temperatures;
- Employee productivity: costs associated with reduced employee productivity and associated spending due to higher ambient temperatures (including employees working indoors).

Step 2 – Modeling impact pathways

For each impact pathway, a series of research projects and pertinent data sources are gathered to quantify the impact of a unit change to the risk on suitable financial performance metrics:

- Cooling costs: excess electricity consumption related to higher temperatures was estimated based on trends identified in a series of documents concerning changes to energy demand and electricity production, as well as the estimated economic harm resulting from climate change in the USA. Based on these data, the energy demand for cooling should rise by 5% per °C of increase in the average maximum temperature;
- Deterioration of HVAC systems: the excess costs associated with the reduced operating lifetime of HVAC systems per unit of temperature change were estimated from a series of studies, in particular Fenaughty and Parker (2018). Based on this data, the lifetime of HVAC systems should fall by 6.76% per °C of increase in the average maximum temperature;
- Employee productivity: reduced employee productivity has been estimated based on a global study of the effects of heat on active populations. Based on this data, the productivity of labor should fall by 1.14% per °C of increase in the average maximum temperature.

Step 3 – Quantify the financial impact

To quantify the total financial impact on asset values, the impact pathways described in the previous section are weighted based on a set of financial ratios reflecting the proportion of the total value of a given asset type, represented by the value factor impacted by the temperature change for each pathway. The asset value metric for the type of office building owned/occupied is the replacement value and the financial ratios applied to each impact function are described below (these assumptions are based on an in-depth review of the literature and an analysis by S&P Global):

- Cooling costs: 1.19% of the asset value;
- Deterioration of HVAC system: 13.29% of the asset value;
- Employee productivity: 7.84% of the asset value.

The financial impact (%) of each impact pathway is multiplied by the corresponding financial ratio and added to quantify the aggregate financial impact on the asset value of an office building occupied by its owner, of a 1°C increase in the average maximum temperature, extrapolated to the range of forecast future temperature rises.

5. Calculation of the financial impact of physical risks on assets and the company

The Trucost financial impact model for the physical risk quantifies the percentage of the asset value at risk for each asset, based on: [1] the change in physical risk related to climate change in the case of a scenario and given time period in relation to a historical base, and [2] the classification of the asset type and the related impact functions, for an asset in a given location.

The financial impact on assets is aggregated on company level as a weighted average of all assets related to the company in question, based on assumed asset values for each type of asset. The assumed asset values are taken from document analysis and are supposed to indicate the relative value of each asset type. The financial impacts on the asset and the company are calculated for each climate risk, scenario, and time period. They are aggregated into a combined financial impact metric covering all risks. The financial impact metrics are not calculated for companies without associated data for their assets (other than the company head office) in all 2022 data on physical risks.

Appendix 7 – Exposure to the European Taxonomy methodology

Analytical approach

The Taxonomy describes around 96 business activities related to 13 NACE macro-sectors. Business activities include those that have direct carbon mitigation potential (e.g. renewable energy) as well as those that are relatively carbon intensive but have significant potential to reduce their carbon emissions (e.g. steel manufacturing).

Trucost uses a blended approach to assess a company's turnover eligibility for the Taxonomy. First, Trucost performed a direct mapping between the 464 business activities of its proprietary sector classification system with the Taxonomy activities mentioned above. All business activities that are not mapped directly by this process are reviewed using a bottom-up assessment of their alignment with the Taxonomy goals. During this stage, Trucost reviews the company's turnover and emissions data in its Core Plus universe. Any remaining business activities after this step are considered not Taxonomy-aligned. Note that the dataset covers over 15,000 listed companies in Trucost's Core Plus universe.

Transitional and enabling activities

This component assesses the share of turnover from products, services and technologies that contribute more directly to climate change mitigation ("transitional activities") and activities that are more indirectly related that involve providing services and products to transition activities ("enabling activities").

The portfolio's exposure to these two types of activities is evaluated as a weighted average as well as in terms of the value of the holdings (VOH). The Taxonomy defines most activities as transitional or enabling. However, on occasions where this distinction is not explicitly made, Trucost uses indirect references from the Taxonomy to decide which activities are transitional and which are enabling.

The 'multiple' sector category

During the business activity mapping process, three Trucost business activities were mapped to several specific NACE business activities in the EU Taxonomy. These are summarized below:

- **"Water, sewage & other systems"** was mapped to the "Generation and distribution of electricity, gas, steam and air conditioning" and "Generation and distribution of water, sewage, waste management and pollution removal" activities;
- **"Non-residential maintenance and repair"** was mapped to "Transport & warehousing (low carbon emission infrastructure construction)" and "Construction & real estate" activities;
- **"Other non-residential structures"** was mapped to the "Transport & warehousing (low carbon emission infrastructure construction)" and "Construction & real estate" activities.

Appendix 8 – Data Collection Methodology

Trucost's unique approach to environmental data collection and modeling allows for near-complete coverage of most investment universes, despite often low levels of reporting amongst companies. A four-step process is used in our data collection exercise:

1. **Analyze financial and sectoral data –** A company's financial statements are analyzed by collecting consolidated revenues from all companies and specifying their reporting scopes and operational limits;
2. **Map activities on Trucost's Environmentally Extended Input-Output –** Trucost's EE-IO model uses over 450 business activities (largely aligned with NAICS, with some additional sectors included to distinguish key activities with significantly different physical impacts) to model the environmental impacts of a company by allocating a portion of each company's turnover to one or more of these activities. The EE-IO model then estimates the pollutant emissions and resource use associated with each business activity, both directly (for a company's own operations) and through the supply chain, using a breakdown by income sector;
3. **Incorporate disclosures and public registry data –** Trucost searches all publicly disclosed company data sources to find usable environmental data that will be used to make modeled estimates. Trucost verifies that the scope and time horizon of all environmental data found matches that of its financial statements;
4. **Engage with the company and verify data –** Trucost analysts verify the quality of the entire research process internally, then share the results with each company directly through a secure online portal. Companies have one month to respond to Trucost to verify its data or directly commit to providing additional or non-public information. If appropriate and applicable data are provided, Trucost will incorporate the data into its analysis before publishing the data.

Appendix 9 – Previous & terminated commitments

- Ircantec joined the *Assessing Low Carbon Transition* initiative in 2018 (led by the *Carbon Disclosure Project* and Ademe) to encourage companies to take relevant action in terms of climate strategy.
- Between March 2018 and October 2020, the commitment group *Climate Change Transition for Oil and Gas* spoke with 25 companies in the energy sector about the evaluation of their exposure to climate risks, the implementation of the TCFD recommendations, the adaptation to the climate regulations, as well as the structure of their future investment expenses. Ircantec was the leader of the initiative to engage with Total.

Appendix 10 – Concordance tables TCFD/article 29 of the Energy and Climate Law

TCFD recommendations	Pages
GOVERNANCE	
Describe how the Board of Trustees supervises the risks and opportunities of climate change	6
Describe the role of management in the assessment and management of climate change risks	6
STRATEGY	
Describe the risks and opportunities identified by the company for the short, medium and long term	14; 16–23
Describe the impact of these risks and opportunities on company strategy, policies and financial planning	25–38
Describe the resilience of organizational strategy in the range of scenarios, including a 2°C or lower scenario	48–50
RISK MANAGEMENT	
Describe the process of identifying and assessing climate risks	13–42
Describe the process of managing climate risks	13–52
Describe how the climate risk identification, assessment and management processes are incorporated into the risk management system	9
INDICATORS AND OBJECTIVES	
Publish indicators tracked by the company to measure and quantify climate change risks and opportunities	25–50
Publish scope 1, scope 2 and where appropriate scope 3 GHG emissions data and the associated risks	4; 27; 30
Describe the objectives set by the company to manage risks and opportunities, and how their achievement is monitored	4

Article 29 of the Energy-Climate Law (resulting from the draft decree of February 2021)	Pages
Summary presentation of the entity's general approach to the integration of environmental, social and quality of governance criteria, particularly in the financing and investment policy and strategy	9
Content, frequency and means used by the entity to inform subscribers, affiliates, contributors, beneficiaries or customers regarding criteria on the environmental, social and quality of governance objectives incorporated in the financing and investment policy and strategy	10
Global share of assets integrating environmental, social and quality of governance criteria in the total amount of assets managed by the entity, as a percentage	25-42
Adherence of the entity or of certain financial products to a charter, code, initiative or label on the consideration of environmental, social and quality of governance criteria, as well as a brief description thereof	8
Description of the financial, human and technical resources dedicated to taking into account environmental, social and quality of governance criteria in the investment strategy by comparing them to the total resources of the entity	52
Means of informing holders and subscribers on how the entity meets regulatory requirements in terms of non-financial reporting	9-10
Actions taken to strengthen the entity's internal capacities	6
The knowledge, skills and experience of governance bodies, in particular administrative, supervisory and management bodies, in terms of decision-making relating to the integration of environmental, social and governance quality criteria into the entity's policy and investment strategy	6
The integration, where appropriate, of sustainability risks in compensation policies	10
The integration of environmental, social and quality of governance criteria in the operation of internal committees	7
Information on the entity's engagement strategy with issuers or asset management companies	62
Presentation of the voting policy, filing of resolutions, voting instructions and voting on resolutions on environmental, social and quality of governance issues at general meetings	65-66
Consideration of environmental, social and quality of governance criteria in the decision-making process for the allocation of new management mandates	52
Decisions taken in terms of sector disengagement policy	14-15
Information concerning the portion of assets managed for activities dependent on the exploration, production, transformation, transport, refining and sale of fossil fuels	19-20
Information on the strategy for alignment with the international objectives for limiting global warming defined by the Paris Agreement	14-15
Information on the strategy for alignment with long-term objectives related to biodiversity	44-46
The process of identifying, evaluating, prioritizing and managing risks related to the consideration of environmental, social and quality of governance criteria	52
A description of the main environmental, social and quality of governance risks incorporated and analyzed (including physical risks, transition risks)	13-25
An indication of the review frequency of the risk management framework	4; 6
An action plan aimed at reducing the entity's exposure to the main environmental, social and quality of governance risks taken into account	13-25
A clear distinction between the risks emanating from impacts caused by the investment strategy and the risks emanating from the biodiversity dependencies of the assets and activities in which the entity has invested	25-40

Appendix 11 – Pressures covered by BIA-GBS

IPBES pressures	GBS pressures	Definitions
LAND PRESSURES		
Changing use of sea and land	Human encroachment (E)	Human encroachment refers to the expansion of human activity into natural habitats. Direct disturbances (noise, light, etc.) and indirect disturbances (hunting licenses, tourism, etc.) caused by human activities are included.
	Fragmentation of natural habitats (F)	Fragmentation is the pressure caused by the reduction and separation of natural habitats and by the disappearance of environmental corridors, which prevents the movement of wildlife and limits their living space (the population size of a species is positively correlated to the surface area of its habitat).
	Land use (LU)	The intensity of land management impact on the quality and quantity of natural habitats. Intensive management modes - such as intensive agriculture - maintain a high level of pressure which prevents the ecosystem from returning to a more natural state. The conversion of natural ecosystems into urban areas, agricultural areas, managed forests, etc. also directly damages ecological integrity.
Climate change	Climate change (CC)	Excessive greenhouse gas emissions are disrupting the global climate. A rising average temperature and the induced climate change modify the distribution areas of biomes, thereby threatening the survival of many species that are unable to adapt sufficiently rapidly to this phenomenon.
Pollution	Airborne nitrogen deposition (N)	Agricultural and industrial activities contribute to nitrogen emissions in the atmosphere. Nitrogen can be transported by wind or water (acid rain) and deposited on land ecosystems. If the maximum load sustainable by the ecosystem is exceeded, the imbalance caused by excess nitrogen deposition harms ecological integrity by such incidences as eutrophication and alterations to rivalry between plants.
	Terrestrial ecotoxicity	Terrestrial ecotoxicity is the pressure exerted by chemical substances (organic substances and metal ions) on land ecosystems. It includes actions such as harm to ecosystems caused by certain pesticides.
AQUATIC PRESSURES (FRESHWATER)		
Changing use of sea and land	Wetland conversion (WC)	The conversion and drainage of wetlands for human use causes the loss of water-based ecosystems, which are now converted into degraded land ecosystems.
Direct exploitation	Hydrological disturbance resulting from direct water use (Hdwater)	Hydrological disturbance is caused by the difference between current system flows and natural flows. The causes behind these changes in flow are multiple, including in particular human use of water, climate change and infrastructures (e.g. dams). In the GBS, the "Hydrological disruption" pressure is sub-divided according to the origin of the change, to distinguish between disruption caused by direct water use and that caused by climate change.
Climate change	Hydrological disruption resulting from climate change (HDcc)	The second component of the "Hydrological disruption" pressure assessed in the GBS is the change in flow as a result of climate change (i.e. due to altered rainfall or evaporation).
Pollution	Aquatic ecotoxicity (X)	Aquatic ecotoxicity is the close relative of terrestrial ecotoxicity, impacting freshwater ecosystems: the harmful effects of chemical substance on aquatic ecosystems.
	Freshwater eutrophication (FE)	Human activities can result in the excessive leaching of nutrients into water bodies. The imbalances caused can stimulate the excessive growth of algae and aquatic plants, depleting the oxygen available and thereby harming other organisms.
	Land use in catchment areas: rivers (LUR) and wetlands (LUW)	Changes in land use upstream, and in particular intensified land use upstream of a catchment area – resulting from urbanization or intensive agriculture – have an indirect negative impact on downstream water bodies. The type (and intensity) of land use is a good indicator of nutrient leaching released by human activities into ecosystems. In the GBS, this pressure distinguished two types of ecosystems affected: rivers and wetlands.

Appendix 12 – Biodiversity – contribution to objectives of COP 15

Protection and preservation of natural spaces

No.	Target	Associated action(s)
Target 1	**Spatial planning →** Bring the loss of areas of high biodiversity importance close to zero by 2030, while respecting the rights of indigenous peoples and local communities.	These targets mainly concern national objectives (FR: 2030 national biodiversity strategy / EU: 2030 European Union strategy for biodiversity). Nonetheless, Ircantec can contribute indirectly to achieving these targets, for example through its engagement in various initiatives.
Target 2	**Restoration →** Ensure that by 2030 at least 30% of areas of degraded terrestrial, inland water and coastal and marine ecosystems are under effective restoration.	
Target 3	**Protect terrestrial and marine environments →** Ensure and enable by 2030, that at least 30% of terrestrial, inland water, and of coastal and marine areas are effectively conserved and managed.	

Protect species

No.	Target	Associated action(s)
Target 4	**Management actions to protect species and genetic diversity →** Halt human induced extinction of threatened species and foster the recovery and conservation of species, in particular those threatened.	Target 4 is covered by exclusions concerning GMO. Also appearing in the Ircantec SRI Charter is the requirement to observe "the Rio Declaration on Environment and Development, as well as the main conventions on the preservation of natural resources, protection of biodiversity and management of waste." Investment in companies that do not observe this declaration could be questioned by Ircantec.
Target 5	**Sustainable use, harvesting and trade of wild species →** Ensure that the use, harvesting and trade of wild species is sustainable, safe and legal, preventing overexploitation, minimizing impacts on non-target species and ecosystems, and reducing the risk of pathogen spill-over.	

Reduce invasive alien species and pollution

No.	Target	Associated action(s)
Target 6	**Prevent and reduce invasive species →** Eliminate, minimize, reduce and or mitigate the impacts of invasive alien species on biodiversity and reduce their rate of introduction by 50% by 2030.	Concerning target #7, exclusion thresholds on pesticides partly meet the objectives. Engagements are also planned in terms of plastics. Regarding invasive species, Ircantec is committed to monitoring the presence of invasive species through its forest asset manager. Furthermore, the climate policy meets certain aspects of this objective.
Target 7	**Reduce pollution →** Reduce pollution risks and the negative impact of pollution from all sources, by 2030, to levels that are not harmful to biodiversity; reduce excess nutrients lost to the environment (fertilizer) by at least half; reduce the overall risk from pesticides and highly hazardous chemicals by at least half; and also prevent, reduce, and work towards eliminating plastic pollution.	

Minimize the impacts of climate change

No.	Target	Associated action(s)
Target 8	**Target 8 aims to minimize the impact of climate change** and ocean acidification on biodiversity and increase its resilience through mitigation, adaptation, and disaster risk reduction actions, through nature-based solutions and/or ecosystem-based approaches.	Ircantec fully addresses this target through its SRI Charter and its climate policy. Furthermore, the voting policy includes rules on invested company energy transitions.

Sustainable management of species and areas

No.	Target	Associated action(s)
Target 9	**Protect the benefits →** Ensure that the management and use of wild species are sustainable, thereby providing social, economic and environmental benefits for those most dependent on biodiversity.	The scheme works towards target #10 through its investments in forestry assets. These are managed sustainably with specific biodiversity protection actions in place.
Target 10	**Ensure sustainable area management →** Ensure that areas under agriculture, aquaculture, fisheries and forestry are managed sustainably (sustainable intensification, agroecology, etc.).	

Integration of biodiversity in public sector policy and corporate strategy

No.	Target	Associated action(s)
Target 11	**Maintain and increase nature's contributions →** Restore, maintain and enhance nature's contributions to people, including ecosystem functions and services, such as regulation of air, water, and climate, soil health, pollination and reduction of disease risk.	Of the three targets indicated, Ircantec can indirectly respond to objective #12. Through its investments in the OPPCI, the scheme promotes biodiversity across its sites through the environmental management of parks and gardens.
Target 12	**Increase green and blue spaces in urban areas →** Significantly increase the area and quality and connectivity of, access to, and benefits from green and blue spaces in urban and densely populated areas sustainably, and ensure biodiversity-inclusive urban planning.	
Target 13	**Access and share the benefits →** Ensure the fair and equitable sharing of benefits that arise from the utilization of genetic resources and from digital sequence information on genetic resources, as well as traditional knowledge associated with genetic resources. By 2030, facilitate an increase in the sharing of these benefits.	

Integration of biodiversity in public sector policy and corporate strategy

No.	Target	Associated action(s)
Target 14	**Fully integrate biodiversity in the public and all economic activities** through policies, regulations, planning and development processes, poverty eradication strategies, strategic environmental assessments, environmental impact assessments within and across all levels of government and across all sectors, in particular those with significant impacts on biodiversity, progressively aligning all relevant public and private activities, fiscal and financial flows with the goals and targets of the post-2020 framework.	Ircantec clearly responds to target #15 through applicable French regulations (article 29 of the ECL) and its biodiversity policy.
Target 15	**Integrate biodiversity in the private sector →** Develop non-financial reporting by business on their dependencies and impacts on biodiversity along their operations, supply and value chains and portfolios.	
Target 16	**Integrate consumer biodiversity awareness** to foster more sustainable consumption choices	

Biotechnologies and reduction of subsidies for harmful activities

No.	Target	Associated action(s)
Target 17	**Target 17 aims to establish, strengthen the capacity for, and implement in all countries biosafety measures** as set out in article 8(g) of the Convention on Biological Diversity.	The two targets imply country-level action. Consequently, it may be difficult for the scheme to work toward these targets. Nonetheless, the creation of a biodiversity-related exclusion policy may have an impact on target #18.
Target 18	**Target 18 aims to identify by 2025 and eliminate incentives and subsidies harmful for biodiversity.** It foresees a reduction to the tune of US$500 billion per year by 2030 (which matches the OECD 2020 estimate of the world total). Positive incentives for the conservation and sustainable use of biodiversity will be scaled up.	

Financial engagements decided at COP 15

No.	Target	Associated action(s)
Target 19	**(1)** A target of US$200 billion in financing from all sources (national, international, public and private) to be obtained every year by 2030. This financing must contribute to implementing national biodiversity strategies and action plans. **(2)** A target of US$30 billion in financial resources from developed countries transferred to developing countries to be achieved by 2030, with an intermediate objective of US$20 billion by 2025. • This triples the current international financial resources according to the OECD (US$8 billion on average between 2015 and 2020). • Certain developing countries (African Group, Brazil and Argentina) were seeking an objective of US$100 million per year.	The target concerns developed countries and other donors: multilateral organizations (international banks and financial institutions) or the private sector (implicitly mentioned), for which the financing potential is largely untapped. Ircantec will investigate the possibility of working towards this target, in particular through thematic fund financing.

Mobilization of non-financial resources and integration of diversity

No.	Target	Associated action(s)
Target 20	**Mobilization of non-financial resources →** Strengthen capacity-building and access to technology in developing countries.	These targets can be met through appropriate engagement, which Ircantec will support through collaborative engagement opportunities.
Target 21	**Traditional knowledge →** Ensure that the best available data, information and knowledge, are accessible to decision makers and that practices and technologies of indigenous peoples and local communities are only be accessed with their free, prior and informed consent.	
Target 22	**Inclusion →** Ensure inclusive representation in decisions relating to biodiversity with regard to women and children, young people, indigenous peoples and people with disabilities.	
Target 23	**Gender →** Ensure gender equality in the implementation of the framework through a gender-responsive approach where all women and girls have equal opportunity and capacity to contribute to the three objectives of the Convention.	

Appendix 13 – TNFD reporting

Governance

A. Describe the control exerted by the Board of Trustees on nature-related dependencies, impacts, risks and opportunities.

B. Describe the role of management in the assessment and management of nature-related dependencies, impacts, risks and opportunities.

C. Describe the engagement policies and activities by the organization in terms of human rights and the control exerted by the Board of Trustees and Management in terms of indigenous peoples, local communities, impacted people and other stakeholders in the assessment of the organization, and the response to nature-related dependencies, impacts, risks and opportunities.

The Ircantec Board of Trustees plays a central role in **reviewing and validating** the SRI policies of the Scheme, including the Biodiversity policy. This policy represents one of Ircantec's current ESG priorities. It aims to create a **biodiversity impact mitigation approach**.

To urgently respond to these issues, the Board is seeking to implement tangible measures, notably through the creation of exclusion thresholds for activities that are particularly harmful to biodiversity.

Ircantec is also a **committed investor in promoting human rights** in business. As part of its commitment to the Investors Alliance for Human Rights (IAHR), Ircantec **has signed several declarations on this issue,** in particular:

- The *Make Finance Work for People and Planet* declaration dated February 2019, which invites the members of the European Commission to require investors to put in place a systematic due diligence approach throughout the value chain, as part of the European Commission's action plan to finance green growth, and
- The *Investor Case for Mandatory Human Rights Due Diligence* declaration of September 2019 to support the implementation of mandatory human rights due diligence for all companies.

In 2018, Ircantec joined the *Know The Chain* initiative (partnership between NGOs, research centers and non-financial audit firms), which produces benchmarks on respect for human rights within the subcontracting companies of major contractors. In 2022, the Scheme also signed a declaration in favor of more robust regulations against forced labor (Forum for responsible investment – FIR, and IAHR), as well as a declaration on due diligence via the FIR in March 2023.

Strategy

A. Describe the nature-related dependencies, impacts, risks and opportunities identified by the organization for the short, medium and long term.

B. Describe the nature-related dependencies, impacts, risks and opportunities on the organization's business model, value chain, strategy and financial planning, as well as any transition plans or analyses in place.

C. Describe the resistance of the organization's strategy to the nature-related risks and opportunities, taking into account different scenarios.

D. Indicate the location of assets and/or activities in the organization's direct activities and if possible, in the upstream and downstream value chains which meet priority location criteria.

Ircantec is currently examining the implications of these **nature-related dependencies, impacts, risks and opportunities** on the organization's business model, strategy and financial planning.

Ircantec intends to publish a **biodiversity policy** in 2024, and thus provide the initial elements in responding to the requirements of article 29 of the French law No. 2019-1147 of November 8, 2019 on Energy and the Climate (article 29 ECL). Initially, the strategy to mitigate the impacts of Ircantec investments on biodiversity involves **the exclusion of activities harmful to biodiversity** beyond a certain level of associated turnover. Moreover in terms of the **forestry and real estate scope**, Ircantec is working with asset managers to reinforce the biodiversity-related approaches and strategy.

In 2023, the Ircantec **engagement policy** was extended to integrate a fourth main theme: **protecting biodiversity,** a core purpose of the Marketplace work and the basis of article 29 of the French Energy and Climate law. The aim of this new theme of engagement is to promote a measurement of company biodiversity footprints, while working to preserve and restore biodiversity.

In 2022, the Scheme signed an Investor PRI statement ahead of the COP 15 conference on Biodiversity, to support the creation of a global framework to halt and reverse biodiversity loss. In 2023, Ircantec signed two declarations on plastics, sponsored by VBDO and Client Earth:

- For business: declaration to encourage companies which make intensive use of plastic packaging to take robust and immediate measures;
- In European regulations: signature of a letter addressed to the main EU policy decision makers. The letter recalls the key messages of the declaration on plastics and asks the European Parliament and Council to adopt an ambitious position on "Packaging and Packaging Waste Reform" (PPWR).

In 2022 and 2023, Ircantec proposed questions relating to biodiversity as part of the collaborative engagement campaign orchestrated by FIR for the CAC 40 (ESG questionnaire for listed companies).

Currently, the pension scheme intends to join **initiatives in favor of biodiversity**, in particular *Nature Action 100,* the section of *Climate Action 100+* devoted to Biodiversity. The scheme has also signed the PRI Spring initiative on biodiversity.

Lastly, in 2024 the Scheme opted to declare its **PAI *(Principal Adverse Impacts),*** in line with the European SFDR regulation. The aim of the principal adverse impacts is to examine the negative effects on ESG issues generated by an investment decision. A mandatory PAI (activities negatively impacting biodiversity-sensitive areas) and several optional PAI (deterioration of soils, desertification, soil sealing, anti-deforestation policy) are associated with biodiversity.

Risk and impact management

A (i) Describe the processes implemented by the organization to identify, assess and prioritize the nature-related dependencies, impacts, risks and opportunities in the course of its direct activities.

A (ii) Describe the processes implemented by the organization to identify, assess and prioritize the nature-related dependencies, impacts, risks and opportunities in its value chain(s) upstream and downstream.

B. Describe the organizational processes implemented to manage nature-related dependencies, impacts, risks and opportunities.

C. Describe how the processes of identification, evaluation, prioritization and monitoring of nature-related risks are integrated into the organization's global risk management processes and clarify them.

Ircantec is fully aware of the risks related to biodiversity. The Scheme is seeking to integrate these concerns into its management processes through **targeted exclusions** considered harmful to biodiversity above certain related turnover thresholds.

Article 29 of the French Energy-Climate law demands the use of a biodiversity footprint. **A call for proposals will be implemented in late 2024** to identify a biodiversity footprint service provider.

Nonetheless, the 2022 and 2021 sustainability reports already highlight **several biodiversity-related indicators** before arriving at footprint tool solutions:

- **Environmental intensity**, provided by Trucost, quantifies in Euros the environmental impact of investments, assigned an environmental cost to each resource and pollutant. The Ircantec global portfolio generated lower environmental costs than its benchmark in 2022 and generally succeeded in reducing them between 2021 and 2022;
- **Biodiversity score**, also provided by Trucost, evaluates the awareness of business to risks related to biodiversity. It reveals whether they integrate stakeholders in the development of their biodiversity strategy and if this implementation is subject to an internal or external assurance process. Biodiversity scores are taken from the annual Corporate Sustainability Assessment process and represent the weighted average of individual biodiversity scores of companies making up the portfolio or the benchmark. Although the Ircantec portfolio was slightly below its benchmark in 2022, the focus is on continuous improvement.

By continuing to demonstrate its engagement toward biodiversity, Ircantec intends to **scale-up its biodiversity strategies in the real estate and forestry scopes.** These efforts will further reinforce the monitoring and assessment of biodiversity-related dependencies and impacts.

Metrics and objectives

A. Indicate the parameters used by the organization to evaluate and manage significant nature-related risks and opportunities, in line with its strategy and its risk management process.

B. Indicate the parameters used by the organization to evaluate and manage dependencies and impacts on nature.

C. Describe the targets and objectives used by the organization to manage the nature-related dependencies, impacts, risks and opportunities, as well as its performance in relation to these targets and objectives.

Ircantec has already introduced **metrics to evaluate and manage nature-related risks and opportunities,** aligned with its strategy and risk management process, as set out in its 2022 sustainability report. Two indicators are currently used for this purpose, namely **environmental intensity and the biodiversity score**. The two indicators are supplied by Trucost:

- **Environmental intensity** is calculated at corporate portfolio level. It quantifies the environmental impact of greenhouse gas emissions, water use, waste, air, soil and water pollutants, as well as the use of natural resources. The analysis not only incorporates the impacts associated with the company's own activities, but also those of its upstream suppliers, up to the extraction of raw materials;
- **The biodiversity score** is a weighted average of the individual biodiversity scores of companies making up the portfolio or benchmark. This evaluation examines the awareness of risks related to biodiversity, the inclusion of stakeholders in the development of their strategy, and if this implementation is subject to internal or external assurance process.

In a continuous improvement approach, Ircantec is currently preparing a call for proposals to **select a biodiversity footprint service provider by the end of 2024**. This initiative aims to complete existing tools by providing a specific biodiversity dependence and impact score, thereby reinforcing Ircantec's capacity to assess and manage its interactions with nature in the most comprehensive manner possible.

Appendix 14 – Definition of non-conventional fossil energies

Ircantec considers the following fossil fuel energies to be non-conventional:

- **Shale gas and oil**: stored deep underground in impermeable and non-porous rock, extracted by fracking. This method raises many issues, especially the extensive use of water and chemical products that can pollute sub-soils, the resulting emission of methane and the risk of earth tremors;
- **Oil sands**: these comprise a mixture of rough tar, sand, mineral clay and water. For this reason they are very viscous and cannot be pumped like conventional oil. The production of oil from oil sands (or tar sands) required immense quantities of water and energy. The production of a barrel of oil from oil sands generated over 190 kg of greenhouse gases. Using a life cycle analysis, it is estimated that the fuel derived from oil sands generates up to 37% more greenhouse gas emissions than fuel derived from conventional oil;
- **Extra-heavy oil**, with an API gravity above 15°. Due to its composition, its extraction and refining process, extra-heavy oil consumes large amounts of energy and high emissions levels;
- **Deepwater hydrocarbons** this concerns sea wells with a depth equal or greater than 1,500 m. These extraction operations are controversial because it is impossible to contain potential leaks at this depth, which would result in adverse environmental impacts;
- **Coal gas**: this gas is extracted from coal veins, usually by fracking. It presents multiple issues (methane leaks, water contamination, health risks for local populations, etc.).
- **Arctic oil and gas resources**: the definition of Arctic used by Ircantec is that of the *Arctic Monitoring and Assessment Program* (AMAP): "The terrestrial and marine areas north of the Arctic Circle (66°32'N), and north of 62°N in Asia and 60°N in North America, modified to include the marine areas north of the Aleutian chain, Hudson Bay, and parts of the North Atlantic Ocean including the Labrador Sea." Potential leaks cannot be mitigated in cold waters and would have an adverse impact on fragile marine and coastal ecosystems of the Arctic. This also contributes to developing maritime traffic in the region and black carbon emissions limit the region's capacity to reflect solar radiation, which limits climate change.

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