

Triodos Bank Greenhouse Gas accounting methodology 2025

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Introduction

Background and objective

From the beginning, Triodos Bank has championed the conscious use of money and its direct impact on the world. We have always envisioned a world in which all people have the necessary tools and resources to live fulfilling lives, and in which the economy operates in harmony with nature. We do this by enabling individuals, institutions and businesses to use money more consciously to make money work for positive social, environmental and cultural change.

Our mission is deeply rooted in all our activities and how we operate. We only finance sustainable entrepreneurs and enterprises, or those transitioning to sustainable practices, and we only use the money entrusted to us by savers and investors in the real economy. This means that our financing is aimed at directly supporting the production of sustainable goods and services, as opposed to focusing primarily on buying and selling in the financial markets. This approach is supported by our business principles, minimum standards, and transparency. More information on these can be found in the "About Triodos Bank" section of the Integrated Annual Report. More information on how we work with our customers to realise impact can be found in the "Our customers" section of our Annual Report.

The 2018 report from the International Panel on Climate Change states that we need to keep the global increase in temperature from pre-industrial levels to under 1.5 degrees. To do that means urgently decarbonising our economy. It means generating renewable energy, increasing the efficiency of energy supply, improving the reliability of renewable energy systems, and involving society more closely in this transition.

Together this represents an enormous challenge. Financial institutions, as investors in the economy, all have a crucial and constructive role to play in this transition by no longer financing brown assets that emit greenhouse gas (GHG) emissions and contribute to global warming and instead, by focusing on assets that have a positive impact on people and the environment they depend on. And we cannot act as an industry alone. The scale of the challenge requires urgent action from governments, civil society, and business alike. It is both essential and possible.

To understand if their contribution to the low or no carbon transition is on track, financial institutions first need to understand the impact of the decisions they make about where they choose to lend and invest. In particular, they need to know what impact their decisions will have on the environment. In this context, in 2015, at the landmark Paris Climate Conference, Triodos Bank co-signed the Dutch Carbon Pledge to measure and disclose its greenhouse gas emissions, and to ensure these emissions remained in line with the ambitions of the Paris Agreement.

The initiative launched the Partnership for Carbon Accounting Financials (PCAF), a collaboration between financial institutions which has evolved into the Global GHG Accounting and Reporting Standard for the financial industry. The partnership is participative and aims to learn from, and contribute to, similar initiatives to be even more transparent about the GHG footprint of financial institutions' loans and investments. At the end of 2025 over 700 institutions worldwide, many of them members of the Global Alliance for Banking on Values (GABV), were committed to disclose or are already disclosing their financed greenhouse gas emissions following the PCAF Standard. Widespread

adoption of the global PCAF Standard allows stakeholders to compare the GHG emissions of banks and other financial institutions. Triodos Bank played a catalytic role in these developments and is still actively taking part in the development and advocacy of the methodology. As one of the first banks to report in this way, we actively collaborate with our partners to encourage others to do the same.

As our main impact in the economy and society stems from our loans and investments, PCAF's harmonised approach focuses on measuring the carbon footprint of these asset classes. Triodos Bank implemented and reported on the PCAF methodology for the first time in 2018 and discloses the GHG emission accounting of 100% of our loans and investments. Guided by the PCAF Standard and in collaboration with the PCAF consulting team, our GHG accounting methodology is used for our emission reporting in our Annual Report and the Triodos' Green Bond Allocation and Impact Report.

As a pan-European values-based bank, we want to understand, monitor and help to steer on the basis of applying this methodology internationally. We will share this experience inside and outside the PCAF group as part of a powerful, collective effort to demonstrate how a bank can keep its influence within a safe environmental ceiling, while playing a powerful role in keeping addressing the challenge of climate change.

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Structure of this document

The Triodos Bank Greenhouse Gas Methodology describes the way we have implemented the PCAF Standard in practice.

PCAF is recognised as an effective methodology for reporting climate change metrics under the CSRD European Sustainability Reporting Standards (ESRS E1). Therefore, the key methods and assumptions made are outlined in the Consolidated Sustainability Statements of our Integrated Annual Report.

This document provides a detailed overview of our GHG accounting methodology, which is based on PCAF, and explains the practical implementation of measuring ESRS E1. Each chapter includes specific data quality scores, allowing Triodos Bank to identify opportunities for enhancing data quality over time.

Next to describing our approach and the guiding principles for GHG accounting, we present the GHG accounting of Triodos Bank own operations, such as energy consumption, employee commuting and business travel. These are all items that the organisation has footprinted for many years.

For the GHG reporting of Triodos Bank, please refer to the section "Environmental information" in the Consolidated Sustainability Statements in Triodos Bank Annual Report at www.triodos.com/reporting.

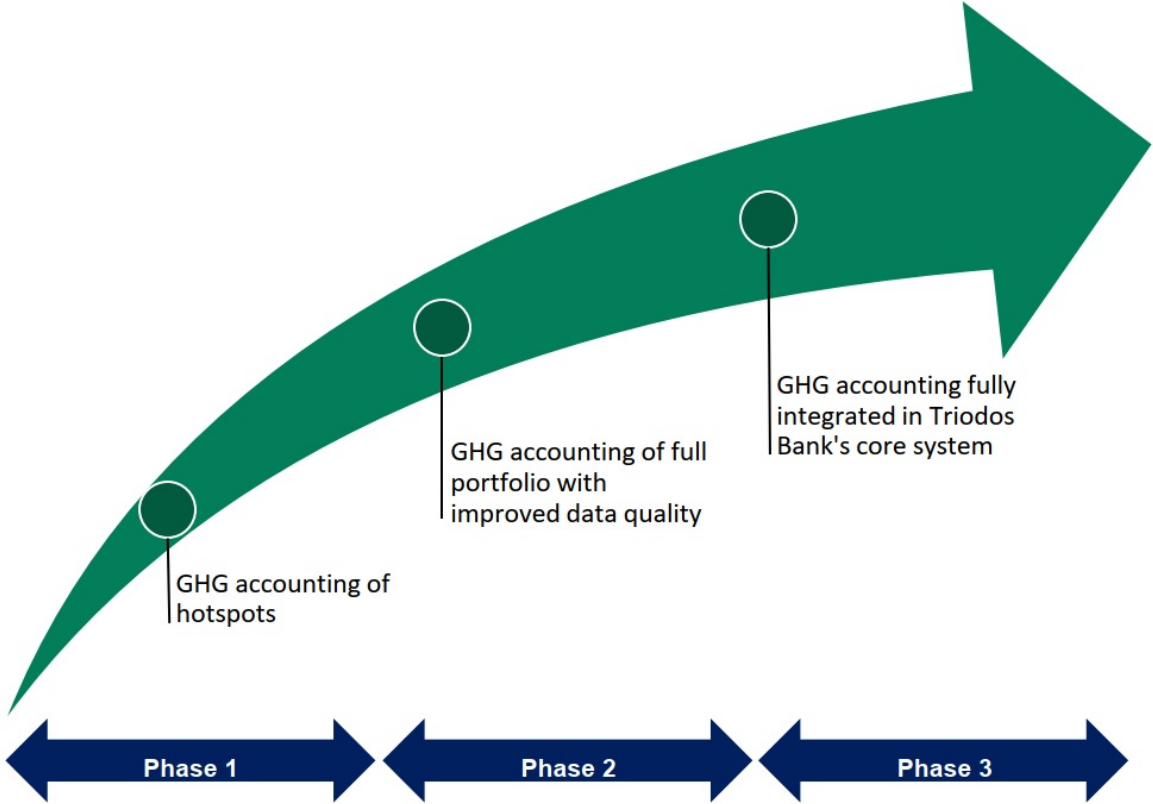
Approach

In alignment with the PCAF methodology, Triodos Bank developed a robust and comprehensive GHG accounting approach that suits its portfolio and business. This approach is built on principles of consistency, transparency, prudence, and accuracy with a focus on data quality.

We have applied a phased approach (see below) to implement GHG accounting, starting with the ares that accounted for about 68% of our direct loans and investments in 2018. In phase 2, starting in 2019, we included all other loans and direct investments. For these assets and where no emissions could be determined with detailed higher quality data, we made an estimate based on the outstanding amounts and the average emission per financed euro in that sector. Since 2022 and retroactively from 2020, we have also included the financed emissions from all other loans and investments, including those related to our Treasury activities. As off 2024, we include the reporting on the financed scope 3 emissions for our entire portfolio. Additionally, we report on all relevant categories of our operational emissions.

As part of phase 3, we have integrated the GHG accounting in our core systems for residential mortgages, business loans and the investment management portfolios. This automating will help us to monitor and steer on our financed emissions more frequently.

Each year, we update the emission factors with the most recently published source data (published no later than September). These emission factors are retrieved from the PCAF database, from PCAF Netherlands for Dutch mortgages, and from other data sources. The correct application of the emission factors is reviewed by the external auditor responsible for the review of the reported emissions in our Annual Report.



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Loans

In this report loans are defined as all loans and advances to customers and banks within Triodos Bank. Short term cash and bank loans are excluded in the PCAF reporting.

Investments

Investments are defined as all types of financial products managed by Triodos Investment Management, Triodos Regenerative Money Centre and Triodos Foundations. This includes equity, loans and bonds, but excludes liquidities and other assets held in the funds. Also included in our reporting scope are the debt and investment securities managed by the Treasury department and the participations of Triodos Bank.

Cash and cash equivalents

Part of our balance sheet consists of assets used for treasury purposes, e.g. cash and cash equivalents, short term cash loans, etc. These short term and on demand assets are not considered in scope of PCAF.

Greenhouse Gases (GHG)

Greenhouse gases are defined as gases in the atmosphere that absorb and emit radiation. This process is the fundamental cause of the greenhouse effect. The GHG Protocol¹ recognises seven greenhouse gases: Carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs),

¹ <http://www.ghgprotocol.org/>

perfluorocarbons (PFCs), sulphur hexafluoride (SF₆) and nitrogen tri-fluoride (NF₃).

In our methodology all emissions are converted to CO₂ equivalents, or CO₂e, using the conversion ratios determined by the Intergovernmental Panel on Climate Change (IPCC). A carbon dioxide equivalent (CO₂e) is a quantity that describes, for a given mixture and amount of greenhouse gas, the amount of CO₂ that would have the same global warming potential (GWP), when measured over a specified timescale (generally, 100 years). The words carbon or emissions are used as shorthand for GHG emissions in our reporting.

Generated emissions

Generated emissions are the GHG emissions as they arise from various economic activities. This refers to any of the seven above mentioned GHG's being emitted into the atmosphere. Generated emissions are measured and reported by the three scopes detailed below and in the section Guiding Principles:

- Scope 1 emissions are direct GHG emissions from sources that a company owns or controls. For Triodos Bank, these are emissions resulting from natural gas consumption for heating our offices and fossil fuel consumption for our lease cars.
- Scope 2 emissions are indirect emissions from purchased electricity. For Triodos Bank, these are emissions from electricity consumption in our offices and for our electric lease cars. In addition, scope 2 emissions can be calculated as location-based or market-based. For location-based emissions, the emission potential of the grid is used, while

for market-based emissions, the emissions are calculated based on the emission potential of the contracted energy supplier.

- Scope 3 emissions are all other indirect emissions as a consequence of the companies' activities, but originating from sources that the company does not own or control.

For our own operations, the following categories are relevant and are reported on: 3.1 Purchased goods and services; 3.5 Waste generated in operations; 3.6 Business travel; 3.6.1 Air Travel; 3.7 Employee commuting; and 3.13 Downstream leased assets.

For Triodos Bank, the most relevant emissions are categorised in scope 3.15 Investments. This covers the financed emissions from all our loans and investments, excluding sovereign bonds. Within category 3.15, we distinguish category 15a: the financed scope 1 and 2 emissions from our loans and investments, and category 15b: the financed scope 3 emissions from our loans and investments (i.e. scope 3 of scope 3). Unless specified, our disclosures on financed emissions are based on the financed scope 1 and 2 emissions (scope 3 category 15a) and exclude sovereign bonds.

The financed generated emissions are reported based on the attribution approach, meaning that the emissions are attributed to our financed share according to the PCAF Standard.

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Sequestered, or removed, emissions

Sequestered, or removed, emissions refers to CO₂ that is removed from the atmosphere while being sequestered, or absorbed, by vegetation and then stored in carbon sinks, such as trees, plants and soils.

The GHG Protocol describes the natural process of carbon sequestration as the actual removal of GHG by plants and trees through the absorption of atmospheric carbon (as CO₂) via photosynthesis and storing it in plant tissue. In this solid form, carbon may reside in one of several "carbon pools". These pools include above ground biomass (e.g. vegetation) in forests and farmland, and other terrestrial environments, below ground biomass (e.g. roots), and biomass-based products (e.g. wood products) while in use or when stored in a landfill. Carbon can stay in these pools for long periods of time until it is either burned or decomposed. This means that an increase in the stock of sequestered carbon that is stored in these pools represent a net removal of carbon from the atmosphere.

Avoided emissions

Avoided emissions are emissions that are avoided outside of a company's scope 1, 2, and 3 inventories and require a project or product accounting methodology. Any estimates of avoided emissions must be reported separately from a company's scope 1, 2, and 3 emissions.

For Triodos Bank, avoided emissions occur mainly when investing in renewable energy, it refers to GHG emissions that are avoided from fossil-fuel power generation due to renewable energy. Avoided

emissions of renewable energy are calculated by combining primary data we collect with established emission factors based on the energy facilities that are pushed out of the grid mix by introducing a new renewable energy facility.

While avoided emissions play a very positive role, they do not remove existing carbon from the atmosphere. It is important to note that our avoided emissions figures will, eventually, start to decline, even as the amount of energy generated by the renewable energy projects we finance increases. This is because the wider energy system is in the process of becoming less carbon-intensive overall. Energy from fossil-fuel sources will continue to decline while energy from renewable sources is increasing, creating a more sustainable energy system.

Emission intensity

Emissions can be presented in an absolute way, meaning they are total emissions or they can be relative to physical or financial figures. If expressed relatively to other figures, this is defined as emission intensity. Examples are emissions relative to outstanding value in a sector, emissions relative to the revenue of the company and emissions relative to square meters of buildings that are financed. By looking at the unit, it is possible to identify what it is relevant to.

Carbon credits

Carbon credits are credits that represent the removal or avoidance of emissions. Carbon credits can either be generated by conducting activities that lead to carbon removal (for example, a restoration project in which carbon is stored in trees) or emission avoidance (for example, a project in which cooking stoves are supplied to replace cooking on open fires, which significantly reduced charcoal burning).

A financial institution can retire or purchase carbon credits itself to compensate for its own emissions, and it can also finance projects that either generate carbon credits or retire credits. In each of these situations, carbon credits must be reported on separately per origin and function, in accordance with the PCAF Standard.

For Triodos Bank carbon credits are used for compensating the environmental impact of our own operations (excluding purchased goods and services).

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In December 2022, PCAF launched the second version of the Global GHG Accounting and Reporting Standard for Financed Emissions. This version is an update of the Financed Emissions Standard published in 2020 and includes a new methodology for sovereign debt, and guidance on how to measure financed emissions related to GHG emission removals¹.

In line with PCAF and GHG Protocol, the methodology per sector is constructed using the following basic accounting principles:

- Completeness
- Consistency
- Transparency
- Prudence
- Balance
- Accuracy

Each element ensures the methodology is robust and pragmatic for use now and for the future.

Completeness

In order to ensure completeness, the scope must be defined to determine the emissions accounted for in the value chain of the Triodos Bank. The GHG Protocol² standardises this by categorising direct and indirect emissions in three scopes (see Box 1 and Figure 1). Activities within the value chain of an organisation are direct or indirect depending on the consolidation approach chosen by an organisation.

We aim to be as complete as possible in our GHG accounting by covering all scopes of the GHG Protocol that are relevant to our GHG inventory. In addition to scope 1 and 2 emissions, we report on emissions from employee commuting, business travel, purchased goods and services, and waste (upstream scope 3) as well as downstream scope 3 emissions from leased assets. However, our primary focus is on our scope 3 category: 15 Investments, which encompass our financed emissions related to our loans and investments.

Box 1. GHG Protocol scopes 1, 2 and 3

- Scope 1: All direct GHG emissions by Triodos Bank (natural gas in offices and fuel use by our car fleet)
- Scope 2: Indirect GHG emissions by Triodos Bank (purchased electricity)
- Scope 3: Other indirect emissions not covered in scope 2; in total 15 categories within scope 3 are defined, such as purchased good and services, business travel, employee commuting, end of life treatment of sold products, or in the case of Triodos Bank mostly emissions associated with loans and investments (i.e. scope 3: category 15)

¹ <https://carbonaccountingfinancials.com/en/newsitem/pcaf-launches-the-2nd-version-of-the-global-ghg-accounting-and-reporting-standard-for-the-financial-industry>

² The Greenhouse Gas (GHG) Protocol, developed by World Resources Institute (WRI) and World Business Council on Sustainable Development (WBCSD), sets the global standard for how to measure, manage, and report greenhouse gas emissions.

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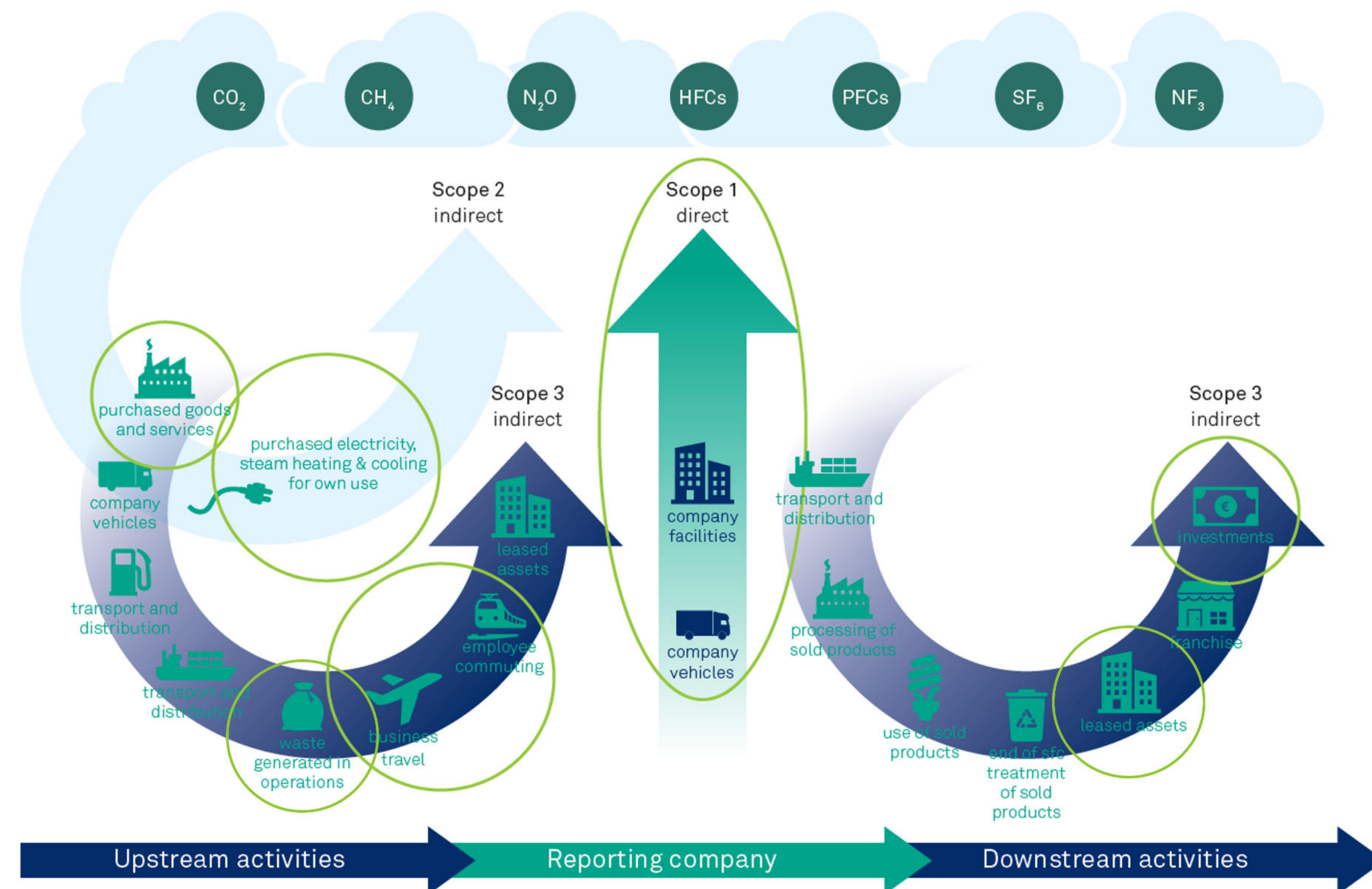


Figure 1. Covered (green) categories and scopes within GHG Protocol scopes

Consistency

The methodology for Triodos Bank is consistent with the PCAF's Global GHG Accounting and Reporting Standard for the Financial Industry (the Standard) and other internationally recognised standards (i.e. GHG Protocol Corporate Value Chain Accounting and Reporting Standard, World Resources Institute, WRI and World Business Council for Sustainable Development, WBCSD; 2004). Furthermore, our

methodology is consistent within the selected sectors, i.e. covering the relevant emissions from our borrowing customer or investee in all cases.

To maintain consistency over time the following restatement policy applies:

Restatement policy

The greenhouse gas (GHG) accounting methodology is still a developing area, which means that our organisation and PCAF are continually working to improve the emission calculation method and the

emission factor databases by including the most current information and insights. In some instances, adopting new developments might require us to restate figures from previous years or even the baseline year. A GHG emission restatement is defined as "the act of revising a previously published GHG emissions figure due to significant changes in methodological approaches or the recognition of inaccuracies." The restatements are subject to review by the external auditor.

When applying restatements, we use the following principles:

- Significant changes in methodologies or data sources require restatements. For example, changing the source of emission factors, which can cause notable differences, or modifying the calculation methodology as outlined in the applied methodology (e.g. PCAF Standard). Changes resulting from improved data quality, as shown by better PCAF data quality scores, will only be considered for restatements if higher quality historical data is available for an entire portfolio or sector.
- We specifically isolate restatements to the relevant group in which they occur, categorised by PCAF category, asset class or sector. Errors affecting individual clients or investees will only be restated if they significantly impact aggregated results. To ensure consistency, we use a threshold of 5% deviation.

Transparency

Being transparent is a core value and principle in everything we do. We aim to reflect this in our GHG accounting too, both through the methodology we use and its results presented in this report, and in our

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commitment to disclose our GHG footprint annually in our annual report.

Prudence

In our GHG accounting we strive to be prudent and use numbers that are conservative. If the methodology has limitations or good data is not available, we select the methodology or data that is most conservative to our knowledge. This means that when this situation occurs, we overestimate the generated emissions associated with our portfolio and underestimate the avoided or sequestered emissions.

To avoid restricting financial institutions in preparing their GHG accounting, the PCAF Standard developed a data quality scoring method per asset class. Depending on the particular type of data source used in the PCAF calculation, a score is applied. Each score represents the level of certainty or uncertainty, with score 1 being the most certain and score 5 being the least certain. It is important to know that even when data is classified as 'certain' (data quality score 1), there remains a degree of uncertainty inherent to the quantification process. Knowing the potential of data quality improvement will enable us to take action to increase data quality and to improve the quality of our overall GHG footprint.

As well as data quality and uncertainty associated with emission data, financial data on the revenue or total balance sheet of our clients also has different levels of quality, however these are not scored as these are already regularly improved due to legislative financial reporting requirements.

Balance

In line with the GHG Protocol and the PCAF Standard, financed emissions are calculated based on the

proportional share of the financing provided. This means that we account for emissions according to our share in the total financing of a project, building or company. The proportional share is known as the attribution factor. Attribution factors to attribute the emissions are defined per customer or project, or based on conservative averages per sector and country. For example, if we are responsible for half of a project’s finance, we report half of the emissions generated or avoided by that project.

The PCAF Standard suggests different calculation methods for attribution factors for private and listed companies, using total balance sheet or EVIC (Enterprise Value Including Cash). Triodos Bank will use total balance sheet when EVIC is not available.

Accuracy

We aim to be as accurate as possible in our GHG accounting. On the one hand, the methodology ensures accuracy by attributing Triodos Bank’s share of the GHG footprint of our clients. On the other, the use of data quality scoring linked to a level of uncertainty enables us to improve data quality and improve the accuracy of our GHG footprint. Results are included in our Annual Report and are subject to audit with limited assurance.

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Emissions from own operations (scope 1, 2, and relevant scope 3 categories)

Scope

In line with the GHG Protocol Corporate Value Chain Accounting and Corporate Sustainability Reporting Directive (CSRD), Triodos Bank follows an operational approach to account for the emissions from our own operations, which means that we account for all relevant emissions from operations in the various countries over which we have operational control. The emissions from all the business units within Triodos Group are included. The relevant scopes and categories are scope 1 (direct), scope 2 (indirect) and scope 3 (indirect) category 1: Purchased goods and services, category 5: Waste generated in operations, category 6: Business travel , with specification for Air travel, category 7: Employee commuting, and category 13: Downstream leased assets.

Accounting approach and emission factors

Triodos Bank partners with Anthesis Climate Neutral Group (CNG) to calculate emissions from our own operations by using the SmartTrackers tool. The tool is used to calculate our scope 1 and 2 emissions and the catogories 5, 6 (excluding air travel) and 7 of scope 3 emissions, for which the methodology is described in 'Climate Neutral Group's methodology on carbon footprinting'¹. Anthesis aligns this methodology to the requirements for CSRD and it updates the emission factors on an annual basis. These emission factors are taken from various sources which are described in the

CNG methodology.
For air travel, emissions are calculated separately by a specialised provider using actual flight data.

Scope 1 - direct emissions:

- The consumption of natural gas is determined per office, based on meter readings or information from landlords.
- Emissions from fossil fuel lease cars is determined by data on litres of fossil fuel consumed or kilometres driven by fossil fuel lease cars.
- We apply the emissions factors from CO2emissiefactoren.nl, year 2025

Scope 2 - indirect emissions from purchased electricity:

- Office electricity consumption is tracked using meter readings or data from landlords.
- Electric lease car electricity consumption is determined from lease company data or kilometres driven.
- Location-based emissions are calculated using the grid's emission factors. Grey electricity is assumed for some rented offices, reflecting landlord contracts, and for all lease cars.
- Emission factors are sourced from CO2emissiefactoren.nl, UK government publications and AIB, all from year 2025.
- Market-based emissions are calculated using the emission factor of the contracted energy supplier. Our own offices and some rented offices use green electricity contracts.

Scope 3 category 1 - purchased goods and services:

- Since 2024, we have captured the complete scope of 3.1 emissions in our reporting.
- The emissions are calculated using a hybrid approach, consisting of partly supplier-based and partly low quality spend-based data. We check for emission data availability of our largerst suppliers and use those for reporting when available, otherwise we fall back to sector estimates and a spend-based approach.
- Supplier-based approach: We report the scope 1, scope 2 and upstream scope 3 emissions of the supplier and attribute that by dividing our spent to the annual gross revenue of the supplier.
- Sector and country average emission factors are sourced from PCAF, based on the EXIOBASE revenue dataset, covering scope 1, scope 2 and upstream scope 3 emissions.

Scope 3, category 5 - waste generated in operations:

- Data on kilogrammes waste per waste category is retrieved from waste disposal companies, measured in a specific period and extrapolated to a year total or is estimated using data from other offices.
- Emissions factors are sourced from life cycle assessment databases from Ecoinvent and from Emissieautoriteit Berekeningsfactoren-afvalstoffen.

¹ [Climate Neutral Group's methodology on carbon footprinting, January 2024](#)

Scope 3, category 6 - business travel and category 7 - employee commuting:

- Emissions for business travel and employee commuting by car, public transport or electric bike are calculated based on overviews from mobility providers, declarations from co-workers and data from co-worker surveys.
- Emissions factors are sourced from CO2emissiefactoren.nl, year 2025.
- Emissions related to 3.6.1 air travel are calculated by a dedicated company based on actual flight data.

The scope 3 category 13 - downstream leased assets:

- Emissions are calculated applying the financed emissions approach based on the PCAF Standard and emission factor tables, utilising property data such as m², energy labels and energy consumption.

Data collection and data management

Scope 1 and 2, and scope 3 categories 5, 6, 7 emission data is collected by Local Environmental Managers in the various countries. They complete all data, including underlying evidence, in SmartTrackers. The Group Environmental Manager checks if the input of all data and evidence has been done correctly. As we use mostly actual and primary data (i.e. km travelled, transport type) to account for these scope 3 emissions, this calculation is performed using high levels of data quality, aiming to be as accurate as possible. If no actual data is available we use estimates. After the completion of this phase, all data is consolidated by the Finance department (using a four eyes principle).

Scope 3 categories 1 and 13 are calculated and reviewed by the Finance and Group Controlling

departments, based on financial records related to purchased goods and services as well as leased buildings.

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General introduction scope 3 category 15

As mentioned before, Triodos Bank has been a member and participator of PCAF since the beginning in 2015. We follow the carbon accounting approach of PCAF as is described in the document "The Global GHG Accounting and Reporting Standard Part A: Financed Emissions. Second Edition", published in 2022¹.

In the following sections we explain how the PCAF Standard is applied on the loans and investments portfolio of Triodos Bank.

Scope

Our reported emissions in scope 3 category 15 cover 100% of our loans and investments. This applies to all Triodos Bank's business units and subsidiairies (Triodos Bank Netherlands, Belgium, Spain, United Kingdom, Germany, Triodos Regenerative Money Centre and Triodos Investment Management) and to loans and investments done from a group perspective. Donations and contribtutions (Triodos Foundation) are not in scope. The financed scope 1 and scope 2 emissions are always reported aggregately, unless mentioned

otherwise. Financed scope 3 emissions are reported seperately.

Accounting approach and emission factors

The following table provides an overview of the GHG accounting approach and the main data sources for emission factors per sector or asset class.

¹ PCAF (2022). The Global GHG Accounting and Reporting Standard Part A: Financed Emissions. Second Edition

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Sequestered carbon from Nature development, Forestry and Organic farming (scope 3 category 15: Investments)

Avoided emissions from Renewable energy (scope 3 category 15: Investments)

Table 1. Overview GHG accounting approach and main data sources for emission factors per sector or asset class

Sector or asset class	PCAF asset class	Accounting approach	Main data sources for emission factors¹
Generated emissions			
Organic farming	Business loans and unlisted equity	PCAF Global GHG Standard	PCAF - FAOstat, 2022
			FAOstat 2021, 2023 & 2025
			MacLeod et al., 2020
			Vincenza Chiriaco et al. 2022²
Sustainable Property and other property-related sectors	Commercial real estate, business loans and unlisted equity	PCAF Global GHG Standard	PCAF - European building emission factor database, 2023
			PCAF - EXIOBASE assets, 2019
Residential mortgages	Mortgages	PCAF Global GHG Standard	PCAF - European building emission factor database, 2023
			PCAF NL - emission factor database, 2022
Listed equity and corporate bonds, including sub-sovereign bonds	Listed equity and corporate bonds	PCAF Global GHG Standard	Emission data received from external data provider, 2025
			PCAF - EXIOBASE assets, 2019
Other loans and investments, including sub-sovereign bonds	Business loans and unlisted equity	PCAF Global GHG Standard	PCAF - European building emission factor database, 2023
	Sub-sovereign bonds	PCAF Global GHG Standard³	PCAF - EXIOBASE assets, 2019
Sovereign bonds	Sovereign bonds	PCAF Global GHG Standard	PCAF - UNFCCC, 2021
			PCAF - OECD, 2020
			PCAF - OWID, 2023
Sequestered emissions			
Organic farming	Business loans and unlisted equity	Methodology developed by Guidehouse	Aguilera, Guzmán & Alonso, 2014 and 2015
			Halberg et al., 2006
Nature development and Forestry	Business loans and unlisted equity	Methodology developed by Guidehouse	USAID AFOLU Carbon Calculator
Avoided emissions			
Renewable energy	Project finance, business loans and unlisted equity	Methodology developed by Guidehouse	IFI dataset, IEA, 2022

1 The year provided represents the year of downloading or receiving the dataset, unless it is scientific paper then it represents the year of publishing.

2 M. Vincenza Chiriaco, et al. 2022 (Determining organic versus conventional food emissions to foster the transition to sustainable food systems and diets: Insights from a systematic review).

3 There is no official methodology for sub-sovereign bonds in the PCAF Standard yet. In the meantime we apply the EXIOBASE assets emission factor approach (data quality score 5).

Data collection and data management

Emission data is received from external sources or data providers, reported by our customers and investees, or estimated using PCAF's emission factors per type of activity data from our customers and investees (such as m2, energy labels, kWh, or EUR financed per sector and country).

The emission calculations are performed using the following sources and tools:

- *Impact metric scorecards:* These scorecards are filled out by the relation and investment managers with primary or public data that relate to our customers and investees. Evidence for the data is stored, this could be for example an audited report, physical activity data of the client published in reports, or email conversations. The characteristics of the financed company, building or project, such as activity, location, and sector, is used as input for the GHG calculations.
- *Data from external sources or data providers:* This is data related to building characteristics, such as m² data and energy performance, and emission data for the listed equities and bonds provided by external data providers.
- *Sector mapping:* Each Triodos sector is mapped and linked to the sectors published in the PCAF emission factor database¹. An overview of this mapping can be found in [Appendix I - Sector mapping](#).
- *Financial data:* We use our portfolio data per year-end and the financial information of the company or project to determine the part of the emissions that

can be attributed to Triodos Bank. This is referred to as the attribution factor.

¹ PCAF (2024). Emission factor database, September 2024

Emissions from Organic farming (scope 3 category 15: Investments)

In this chapter, we present the methodology, scope, accounting approach and data quality scoring for our loans and investments to organic farming businesses.

Scope

The following Organic farming subsectors are categorised in this section:

Triodos Bank Organic farming subsector
Dairy
Horticulture
Meat
Arable
Mixed
Fruit growing/farming
Poultry and egg production
Other organic farming

Accounting approach and emission factors

The generated scope 1, 2 and 3 emissions from our loans and investments in organic farming are assessed by applying the methodology for business loans and unlisted equity as described in the PCAF Standard for Financed Emissions.

The table below provides an overview of the GHG accounting calculation options for the organic farming portfolio with the corresponding data quality scores.

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Emissions from Residential mortgages (scope 3 category 15: Investments)

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Emissions from other loans and investments (scope 3 category 15: Investments)

Emissions from Sovereign bonds (scope 3 category 15: Investments)

Sequestered carbon from Nature development, Forestry and Organic farming (scope 3 category 15: Investments)

Avoided emissions from Renewable energy (scope 3 category 15: Investments)

Table 2. GHG accounting approaches for organic farming. Approaches are sorted on preference. So if multiple data points are available within the same data quality scoring method we select the one with the highest position in this table.

Options	Description				Data quality score
	Financial data		Emission data		Highest (1) to lowest (5)
	Attribution		Emission factor		
a	Outstanding loan and investment amount	Total equity and debt of the client (Balance sheet total)	Verified GHG emissions data from the client in accordance with the GHG Protocol (tCO ₂ e)		Score 1
b			Unverified GHG emissions data from the client in accordance with the GHG Protocol (eg. Cool Farm Tool) (tCO ₂ e)		Score 2
c			Primary data on farm productivity and type of agricultural activity (eg. ton production of wheat in the UK)	Region-specific emission factors per produce, specific for the agricultural type (tCO ₂ e/kg produce/type/region)	Score 3
d			Primary data on farm area and type of agricultural activity (eg. hectares of land with wheat production in the UK)	Region-specific emission factors per area, specific for the agricultural type (tCO ₂ e/hectare/type/region)	
e			Unverified GHG emissions data from the client that is not verified to be in accordance with the GHG Protocol (tCO ₂ e)		
f		N/A	Sector average per region	Average GHG emission factors on EUR assets per sector and region (tCO ₂ e/EUR-assets/sector/region)	Score 5

We combine different emission factors from different sources to report on emissions per land-use type, hectares and yields. See [Table 1](#) for the main data source for emission factors.

After emissions have been calculated per company, these emissions are attributed to Triodos Bank based on the ratio between our outstanding loan or investment and the balance sheet total of the company recorded in our system.

For fruit tree farming (olive, tree-nuts, citrus fruits, etc.) and for grassland we also calculate the carbon sequestration values. For this, we refer to the section on [carbon sequestration](#).

> **Investments**

**Emissions from Organic farming (scope
3 category 15: Investments)**

Formulas

Formulas

The following formulas are applied to calculate the
financed GHG emissions for this category.

The formula for calculating CO₂e based on reported
emissions data (option a, b or e) is as follows:

$$\text{CO}_2\text{e reported} \times \frac{\text{Outstanding Triodos loans \& investments}}{\text{Balance sheet total}} = \text{CO}_2\text{e}$$

The formula for calculating CO₂e based on kilogram data (option c) is as follows:

$$\frac{\text{CO}_2\text{e}}{\text{kg of produce}} \times \text{Total kg of produce} \times \frac{\text{Outstanding Triodos loans \& investments}}{\text{Balance sheet total}} = \text{CO}_2\text{e}$$

The formula for calculating CO₂e based on hectare data (option d) is as follows:

$$\frac{\text{CO}_2\text{e}}{\text{Hectares}} \times \text{Total hectares} \times \frac{\text{Outstanding Triodos loans \& investments}}{\text{Balance sheet total}} = \text{CO}_2\text{e}$$

The formula for calculating CO₂e based on asset value data (option i) is as follows:

$$\frac{\text{CO}_2\text{e}}{\text{€ Asset value}} \times \text{Outstanding Triodos loans \& investments} = \text{CO}_2\text{e}$$

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Emissions from Sovereign bonds (scope 3 category 15: Investments)

Sequestered carbon from Nature development, Forestry and Organic farming (scope 3 category 15: Investments)

Avoided emissions from Renewable energy (scope 3 category 15: Investments)

Specifications and assumptions

- Triodos Bank finances only agricultural business that are organically certified or in transition towards organic certification. For the organic farming sector, we assume different climate footprints than for conventional farming. To account for these differences, we apply farming-specific correction

factors that provide a more accurate estimation for organic farming. These correction factors are derived from the values reported in the scientific article of Vincenza Chiriaco et al. 2022¹. The table below shows the applied correction factors for each farming type.

- We typically base our calculations on the number of hectares, which is standard data we have available. If either the number of hectares or reported

greenhouse gas (GHG) data is missing, we assume no farming activities are taking place. In such cases, we calculate emissions using the emission factor for "Other business services" (p74) with data quality score 5.

- If attribution factors cannot be derived from our banking or investment systems, or when they are not applicable because the client or investee is not an entity, we use portfolio averages based on sector and country.

Table 3. Average correction factors for difference in climate footprint between organic farming and conventional farming

		Difference in CO ₂ e footprint compared to conventional	
Farming type	Specification	Per hectare	Per kilogram produce
Arable		- 44%	- 29%
Fruit growing and horticulture	Open field	- 53%	- 35%
	Greenhouse	- 36%	- 17%
Poultry		- 40%	0%
Livestock farming - Dairy		- 31%	- 29%
Livestock farming - Meat	Swines and pigs	- 5%	+ 73%
	Other	- 31%	- 15%

¹ M. Vincenz Chiriaco, et al. 2022. Determining organic versus conventional food emissions to foster the transition to sustainable food systems and diets: Insights from a systematic review

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Emissions from Sovereign bonds (scope
3 category 15: Investments)

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development, Forestry and Organic
farming (scope 3 category
15: Investments)

Avoided emissions from Renewable
energy (scope 3 category
15: Investments)

Emissions from building-related sectors (scope 3 category 15: Investments)

In this chapter, we present the methodology, scope, accounting approach and data quality scoring for our loans and investments in the property-related sectors.

Scope

The Triodos sectors that follow the GHG calculation approach described in this chapters are Sustainable property, Care for the elderly, Social housing, and all other property-related sectors. It includes financed emissions from both business loans and private equity and debt. For a complete sector overview see [Appendix I](#).

Accounting approach and emission factors

The generated scope 1, 2 and 3 emissions from our loans and investments in these building-related

sectors are assessed by applying the methodology for Commercial Real Estate as described in the PCAF Standard for Financed Emissions.

The table below provides an overview of the GHG accounting calculation options for the property-related sectors in our portfolio, with the corresponding data quality scores.

We use the PCAF European Building emission factor database when primary activity data is reported (option b, d, e or g). It is important to note that the emission factors in this database refer to the use-phase of the building only and includes scope 1 and 2 combined. The buildings construction or demolish phase and its emissions are not covered.

When no emission or primary activity data is reported, we apply option i from Table 4 by using the Exiobase

emission factors per sector and country from the PCAF emission factor database.

After emissions have been calculated per building or company, these emissions are attributed to Triodos Bank based on the ratio between our outstanding loan and investment, and the balance sheet total of the client recorded in our system.

Formulas

The following formulas are applied to calculate the financed GHG emissions for this category.

The formula for calculating CO₂e based on reported emissions data (option a, c or f) is as follows:

$$\text{CO}_2\text{e reported} \times \frac{\text{Outstanding Triodos loans \& investments}}{\text{Balance sheet total}} = \text{CO}_2\text{e}$$

The formula for calculating CO₂e based on actual energy consumption (option b or d) is as follows:

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Emissions from Sovereign bonds (scope
3 category 15: Investments)

Sequestered carbon from Nature
development, Forestry and Organic
farming (scope 3 category
15: Investments)

Avoided emissions from Renewable
energy (scope 3 category
15: Investments)

Table 4. GHG accounting approaches for property-related sectors. Approaches are sorted on preference. So if multiple data points are available within the same data quality scoring method we select the one with the highest position in this table.

Options	Description			Data quality score
	Financial data		Emission data	
	Attribution		Emission factor	Highest (1) to lowest (5)
a	Outstanding loan and investment amount	Total equity and debt of the client (Balance sheet total)	Verified GHG emissions data of the property in accordance with the GHG Protocol (tCO ₂ e)	Score 1
b			Primary data on actual building energy consumption with known energy source (eg. kWh electricity or m ³ gas consumption)	
c			Unverified GHG emissions data of the property in accordance with the GHG Protocol (tCO ₂ e)	Score 2
d			Primary data on actual building energy consumption with unknown energy source (eg. kWh electricity or m ³ gas consumption)	
e			Primary data on floor area, building type and energy label/EPC (eg. m ² office building label A+ in the Netherlands)	Score 3
f			Unverified GHG emissions data of the property that is not verified to be in accordance with the GHG Protocol (tCO ₂ e)	
g			Primary data on floor area and building type (eg. m ² office building in the Netherlands)	Score 4
h			Average energy consumption statistics per building type and region	Score 5
i		N/A	Sector average per region	

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3 category 15: Investments)

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Avoided emissions from Renewable
energy (scope 3 category
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$$\frac{\text{CO}_2\text{e}}{\text{kWh/gas}} \times \text{kWh/gas consumed} \times \frac{\text{Outstanding Triodos loans \& investments}}{\text{Balance sheet total}} = \text{CO}_2\text{e}$$

The physical activity-based emission factors provided (tCO₂e/m²) can be extracted per energy label (Energy Performance Certificate; EPC). Generated emissions calculated based on floor area are specified per country- and building type-specific emission factor. The formula for calculating CO₂e based on m² (option c, d or e), where in the formula *b* is building type, *c* is country and *e* is EPC label, is as follows:

$$\frac{\text{CO}_2\text{e}}{\text{m}^2} \text{ }_{b,c,e} \times \text{m}^2 \text{ of building} \times \frac{\text{Outstanding Triodos loans \& investments}}{\text{Balance sheet total}} = \text{CO}_2\text{e}$$

In some cases the Energy Performance Certificate is expressed in a an EPC energy intensity rate (kWh/m2/year). In that case the general emission factor per floor area is multiplied by the EPC energy intensity rate, as expressed in the following formula:

$$\text{EPC emission intensity [per m2]} = \text{Emission intensity [per m}^2\text{]} \times \text{EPC energy inensity [per m}^2\text{]}$$

The formula for calculating CO₂e based on asset value data (option i) is as follows:

$$\frac{\text{CO}_2\text{e}}{\text{€ Asset value}} \times \text{Outstanding Triodos loans \& investments} = \text{CO}_2\text{e}$$

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Emissions from building-related sectors (scope 3 category 15: Investments)

Specifications and assumptions

A more detailed description of how country-specific EPC-ratings are defined can be found

Table 5. Real estate building types by the PCAF EU building emission factor database and the PCAF NL residential real estate emission factor lookup table.

Group	Building type	Description
Non-residential	Retail - High street	Retail properties located on the high street, such as terraced properties located in the city centre or other high-traffic pedestrian zones.
	Retail - Shopping centre	Enclosed centres for retail purposes consisting of multiple retail stores connected with internal walkways.
	Retail - Strip Mall	Unenclosed retail space, such as strip centre or strip mall, where buildings are usually stand-alone and situated side-by-side with their entrance facing a main street or car park.
	Office	Office properties including free-standing offices, office terraces, unattributed office buildings and office parks.
	Industrial distribution warehouse	Unenclosed industrial properties, such as large halls in the outskirts, used for the purpose of storing, processing, and distribution of goods.
	Hotel	Accommodation properties including hotels, motels, youth hostels, lodging, and resorts.
	Healthcare	Properties used for primary healthcare, such as hospitals, clinics, physical therapy centres, mental health centres, rehabilitation or restorative care centres.
Residential buildings	Leisure and sport facilities	Properties used for leisure and sports, such as sports club houses, gyms, sports stadia, indoor sports arenas, halls, swimming pools, theatre and auditoria.
	Non-residential total	Non-residential total does not distinguish between building types but takes the country average of all non-residential buildings. This type is only available for the average energy label (baseline).
	Single-family house	Residential properties occupied by one household or family.
	Multi-family house	Larger residential properties occupied by more than one household or family. Elderly care homes are also categorised in this building type
	Apartment	Smaller individual residential properties that are usually located in a apartment complex.

We make the following significant assumptions in our calculations:

Sustainable property sector:

- Triodos Bank has defined high sustainability standards for the properties financed in the sustainable property sector. Therefore, if no energy label is reported in this sector, we assume an average baseline of energy label A,

in the PCAF Building emission factor database methodology document¹.

corresponding with the Dutch energy labelling standard for properties.

- When residential properties are reported without corresponding m² data, we use the average m² for single-family homes per country, as provided by PCAF.
- We finance commercial real estate buildings that lease facilities to third parties to which the lessor does not have financial or operational control. These financed scope 3 emissions tied to leased properties, which could not be individually delineated, are

Following the emission factors of the PCAF European building database, we distinguish the following building types:

included in the reporting of the financed scope 1 and 2 emissions.

Social housing:

- The financed emissions for the social housing sector are calculated based on the reported number of houses. We assume an average size per social house² and multiply this with the applicable emission factor for single-family homes. Number of houses not reported are estimated based on average market price per house and loan-to-value ratio.

¹ PCAF (2022) PCAF European Building Emission Factor Database Methodology, September 2022

² Based on official publication from Dutch government 'Aanhangsel van de Handelingen 2199, 2017-2018'

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Emissions from Sovereign bonds (scope 3 category 15: Investments)

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Avoided emissions from Renewable energy (scope 3 category 15: Investments)

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- A significant share of the emissions reported under scope 1 and 2 in the Social housing sectors are related to leased properties to which the lessor does not have financial or operational control. These financed scope 3 emissions tied to leased properties, which could not be individually delineated, are included in the reporting of the financed scope 1 and 2 emissions.

Care for the elderly:

- When the emissions or m² data of the care homes financed is not reported, we calculate the financed emissions by using the data on number of residents that is reported in our banking system and apply an average floor area per person to calculate the emissions.¹

If attribution factors cannot be derived from our banking or investment systems, or when they are not applicable because the client or investee is not an entity, we use portfolio averages based on sector and country.

Average baseline for avoided emissions

An average baseline from the PCAF European building emission factor database is added to the emission factor analysis. These baseline emission factors are a weighted average and are calculated based on EPC label distribution (%) per building type and country and the corresponding emission factor of those EPC labels. The average baseline is used to compare the impact in terms of 'avoided' emissions for our sustainable property portfolio. The avoided emissions from buildings will only be used to disclose as a separate Key Performance Indicator for buildings in our

Green Bond impact report and is not included in our Annual Report.

¹ Based on Dutch study 'Handreiking Kengetallen Benchmark Zorgvastgoed Bouwkostennota 2017'

Emissions from Residential mortgages (scope 3 category 15: Investments)

In this chapter, we present the developed methodology, including the scope, accounting approach and data quality scores, for the GHG accounting of the residential mortgages sector.

Scope

All outstanding residential mortgages that are recorded in our system are within scope.

Accounting approach and emission factors

The generated scope 1, 2 and 3 emissions from our residential mortgage portfolio are calculated following the approach of the PCAF Standard, section 'Mortgages'.²

The table below provides an overview of the GHG accounting calculation options for residential mortgages, with the corresponding data quality scores.

² PCAF (2022). The Global GHG Accounting and Reporting Standard Part A: Financed Emissions. Second Edition.

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Emissions from Sovereign bonds (scope
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Avoided emissions from Renewable
energy (scope 3 category
15: Investments)

Table 7. GHG accounting approaches for the sector residential mortgages. Approaches are sorted on preference. So if multiple data points are available within the same data quality scoring method we select the one with the highest position in this table.

Options	Description				Data quality score
	Financial data		Emission data		Highest (1) to lowest (5)
	Attribution		Emission factor		
a	Outstanding loan amount	Property value at origination	Primary data on actual building energy consumption with known energy source (eg. kWh electricity or m ³ gas consumption)	Supplier-specific emission factors for the consumed energy (tCO ₂ e/energy-unit/market-based)	Score 1
b			Primary data on actual building energy consumption with unknown energy source (eg. kWh electricity or m ³ gas consumption)	Region-specific emission factors for the consumed energy (tCO ₂ e/energy-unit/location-based)	Score 2
c			Primary data on floor area, building type and energy label/EPC (eg. m ² single-family house label B in Spain).	Region-specific emission factors for the floor area, specific for the building type and energy label/EPC (tCO ₂ e/m ² /type/EPC)	Score 3
d			Primary data on floor area and building type (eg. m ² single-family house in Belgium).	Region-specific emission factors for the floor area, specific for the building type (tCO ₂ e/m ² /type)	Score 4
e			Average energy consumption statistics per building type and region	Region-specific emission factors per building and building type (tCO ₂ e/building/type)	Score 5

The total emissions from our residential mortgage portfolio are calculated by multiplying the EPC emission intensity per building type with the number of houses (option c or d).

> **Investments**

Emission factors are taken from the PCAF European building database¹ which is based on CRREM Global Pathways and last updated in 2023. For the residential real estate in The Netherlands we have applied the GHG emission lookup table developed by PCAF-NL working group which is based on 2021 information from Statistics Netherlands (CBS) and last updated in 2023.

To attribute the emissions to Triodos Bank, an attribution factor is applied based on the ratio outstanding mortgage loan on property value ('loan-to-value').

Formulas

The formula for calculating CO₂e based on actual energy consumption (option a, b) is as follows:

The following formulas are applied to calculate the financed GHG emissions for this category.

$$\frac{\text{CO}_2\text{e}}{\text{kWh/gas}} \times \text{kWh/gas consumed} \times \frac{\text{Outstanding Triodos loans \& investments}}{\text{Balance sheet total}} = \text{CO}_2\text{e}$$

The physical activity-based emission factors provided (tCO₂e/m²) can be extracted per energy label (Energy Performance Certificate; EPC). Generated emissions calculated based on floor area are specified per country- and building type-specific emission factor. The formula for calculating CO₂e based on m² (option c, d or e), where in the formula *b* is building type, *c* is country and *e* is EPC label, is as follows:

$$\frac{\text{CO}_2\text{e}}{\text{m}^2} \times \text{m}^2 \text{ of building }_{b,c,e} \times \frac{\text{Outstanding Triodos loans \& investments}}{\text{Balance sheet total}} = \text{CO}_2\text{e}$$

In some cases the Energy Performance Certificate is expressed in a an EPC energy intensity rate (kWh/m2/year). In that case the general emission factor per floor area is multiplied by the EPC energy intensity rate, as expressed in the following formula:

$$\text{EPC emission intensity [per m2]} = \text{Emission intensity [per m}^2\text{]} \times \text{EPC energy inensity [per m}^2\text{]}$$

¹ PCAF European building emission factor database, August 2023

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Emissions from Sovereign bonds (scope
3 category 15: Investments)

Sequestered carbon from Nature
development, Forestry and Organic
farming (scope 3 category
15: Investments)

Avoided emissions from Renewable
energy (scope 3 category
15: Investments)

Specifications and assumptions

Following the emission factors of the PCAF European building database and the PCAF NL working group, we distinguish the following building types:

Building type	Description
Single-family house (SFH)	Residential properties occupied by one household or family.
Multi-family house (MFH)	Larger residential properties occupied by more than one household or family.
Apartments	Smaller individual residential properties that are usually located in a apartment complex.

Table 6. Residential building types by the PCAF EU building emission factor database and the PCAF NL residential real estate emission factor lookup table.

- We account for the use phase of of each house or apartment and include the scope 1 and 2 emissions combined (i.e. the fossil fuel use to heat the house and purchased electricity and/or heat by the owner/ user of the house = total energy consumption of the house). The construction or demolishment phase and its emissions are not covered. Tenant activities related to electricity, heating and cooling is also included in these factors.
- When m² data is not available, we use the average m² data per type of home and per country provided by PCAF, categorised into single-family homes, multifamily homes, and apartments.
- For missing energy labels, we apply the median as provided by PCAF, also categorised into single-family homes, multi-family homes, and apartments.

Average baseline for avoided emissions

An average baseline from the PCAF Building emission factor database and the PCAF NL lookup table is added to the emission factor analysis. These baseline emission factors are a weighted average and are calculated based on EPC label distribution (%) per building type and country, and the corresponding emission factor of those EPC labels. The average baseline will be used to compare the impact in terms of 'avoided' emissions for our residential mortgages. The avoided emissions from residential buildings will only be used to disclose as a separate KPI in our Green Bond impact report and is not used in our Annual Report.

Emissions from Listed equity and corporate bonds (scope 3 category 15: Investments)

Triodos Investment Management operates several Impact Equities and Bonds funds (IEB). These funds contain equity and bond holdings in listed companies and (sub-)sovereigns. In this chapter we present the methodology that has been applied to calculate the emissions from the equity and the corporate and sub-sovereign bond holdings in our funds.

Scope

All listed equities, corporate bonds and sub-sovereign bonds in the IEB funds are within scope.

Consistent with PCAF, cash and cash equivalents in the funds are excluded from the PCAF scope determination.

Accounting approach and emission factors

In line with PCAF, Triodos Bank accounts for scope 1, 2 and 3 emissions of the listed equity and bond holdings.

The table below provides an overview of the GHG accounting calculation options with the corresponding data quality scores.

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Avoided emissions from Renewable
energy (scope 3 category
15: Investments)

Table 8. GHG accounting approaches for Listed equity and Corporate bonds. Approaches are sorted on preference. So if multiple data points are available within the same data quality scoring method we select the one with the highest position in this table.

Options	Description			Data quality score		
	Financial data		Emission data	Highest (1) to lowest (5)		
	Attribution		Emission factor			
a	Market value of equity and debt investment	Enterprise value (EVIC)	Verified GHG emissions data of the company in accordance with the GHG Protocol (tCO ₂ e)		Score 1	
b			Primary data on actual energy consumption with known energy source (eg. kWh electricity or m ³ gas consumption)	Supplier-specific emission factors for the consumed energy (tCO ₂ e/energy-unit/market-based)		
c			Unverified GHG emissions data of the company in accordance with the GHG Protocol (tCO ₂ e)		Score 2	
d			Primary data on actual energy consumption with unknown energy source (eg. kWh electricity or m ³ gas consumption)	Region-specific emission factors for the consumed energy (tCO ₂ e/energy-unit/location-based)		
e			Primary physical activity data on the companies products and product type	Region-specific emission factors specific for the activity and product type (tCO ₂ e/product-unit/type/region)		Score 3
f			Unverified GHG emissions data of the company that is not verified to be in accordance with the GHG Protocol (tCO ₂ e)			
g		N/A	Sector average per region	Average GHG emission factors on EUR revenue per sector and region (tCO ₂ e/EUR-revenue/sector/region)	Score 4	
h				Average GHG emission factors on EUR assets per sector and region (tCO ₂ e/EUR-assets/sector/region)	Score 5	

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> **Investments**

Introduction scope 3 category 15: Investments

Emissions from Organic farming (scope 3 category 15: Investments)

Emissions from building-related sectors (scope 3 category 15: Investments)

Emissions from Residential mortgages (scope 3 category 15: Investments)

Emissions from Listed equity and corporate bonds (scope 3 category 15: Investments)

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Emissions from other loans and investments (scope 3 category 15: Investments)

Emissions from Sovereign bonds (scope 3 category 15: Investments)

Sequestered carbon from Nature development, Forestry and Organic farming (scope 3 category 15: Investments)

Avoided emissions from Renewable energy (scope 3 category 15: Investments)

Emissions of a given company can be sourced from their reports, if available, to obtain reported emissions according to option a, c or d. For large portfolios external data providers are often used such as CDP, Bloomberg Terminal, MSCI, Trucost and ISS-ESG. For 2025 annual reporting Triodos Bank has received the data from Sustainalytics.

The emissions of a company or sub-sovereign in our fund are attributed to Triodos Bank based on the market value of our equity and debt divided by the enterprise value including cash (EVIC). This EVIC data has also been provided by Sustainalytics.

For the part of the equity and bond portfolio that is not covered by the data received from Sustainalytics, we apply the PCAF data quality score 5 approach using the Exiobase emission factors per sector and country from the PCAF emission factor database.

Sub-sovereigns are not explicitly mentioned in the PCAF Standard. If no emission data has been reported, Triodos Bank treats these as corporate bonds and uses the Exiobase emission factors to calculate the emissions.

Formulas

The following formulas are applied to calculate GHG emissions for this category.

The formula for calculating CO₂e based on reported emissions data (option a, c or f) in which is as follows:

$$\text{CO}_2\text{e reported} \times \frac{\text{Outstanding Triodos loans \& investments}}{\text{Balance sheet total or EVIC}} = \text{CO}_2\text{e}$$

The formula for calculating CO₂e based on actual energy consumption (option b d) is as follows:

$$\frac{\text{CO}_2\text{e}}{\text{kWh/gas}} \times \text{kWh/gas consumed} \times \frac{\text{Outstanding Triodos loans \& investments}}{\text{Balance sheet total or EVIC}} = \text{CO}_2\text{e}$$

The formula for calculating CO₂e based on asset value data (option g and h) is as follows:

$$\frac{\text{CO}_2\text{e}}{\text{€ Asset value}} \times \text{Outstanding Triodos loans \& investments} = \text{CO}_2\text{e}$$

> **Investments**

Introduction scope 3 category
15: Investments

Emissions from Organic farming (scope
3 category 15: Investments)

Emissions from building-related sectors
(scope 3 category 15: Investments)

Emissions from Residential mortgages
(scope 3 category 15: Investments)

**Emissions from Listed equity and
corporate bonds (scope 3 category
15: Investments)**

Scope

Accounting approach and
emission factors

Formulas

Specifications and assumptions

Emissions from other loans and
investments (scope 3 category
15: Investments)

Emissions from Sovereign bonds (scope
3 category 15: Investments)

Sequestered carbon from Nature
development, Forestry and Organic
farming (scope 3 category
15: Investments)

Avoided emissions from Renewable
energy (scope 3 category
15: Investments)

Specifications and assumptions

We applied a mapping from GICS sector classification to Exiobase as proposed by PCAF. However, we

made some adjustments that better reflect the actual activities of the companies we finance in certain sectors. These are as described in the following table:

GICS sector name	Mapping to Exiobase proposed by PCAF	Mapping to Exiobase as done by Triodos Bank	Argumentation
Multi-utilities	Electricity, gas & water	Transmission services of electricity	In this sector Triodos Bank exclusively finances companies that are developers of the electricity grid.
Renewable electricity	Electricity, gas & water	Electricity by solar photovoltaic	Triodos Bank limits its finance to renewable energy, so including gas companies is not representative.
Air Freight & Logistics	Air transport services (62)	Other land transportation services	Triodos Bank does not finance companies with a predominant focus on air freight, the logitics companies have more focus on land transportation.

Emissions from other loans and investments (scope 3 category 15: Investments)

In this chapter we present the methodology, scope, accounting approach and data quality scoring for other loans and investments.

Scope

This chapter outlines the GHG accounting approach for debt and investment securities managed by the Treasury department, as well as for participations of Triodos Bank.

The asset classes are debt securities including (sub-)sovereign bonds, corporate bonds, loans and advances to banks, and investment securities such as participating interests. For sovereign bonds we refer to [the following chapter](#).

Consistent with PCAF, cash and cash equivalents and short term loans are excluded from the scope determination.

Accounting approach and emission factors

Triodos Bank accounts for scope 1, 2 and 3 emissions of its positions.

The table below provides an overview of the GHG accounting calculation options with the corresponding data quality scores.

> **Investments**

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15: Investments

Emissions from Organic farming (scope
3 category 15: Investments)

Emissions from building-related sectors
(scope 3 category 15: Investments)

Emissions from Residential mortgages
(scope 3 category 15: Investments)

Emissions from Listed equity and
corporate bonds (scope 3 category
15: Investments)

**Emissions from other loans and
investments (scope 3 category
15: Investments)**

Scope

Accounting approach and
emission factors

Formulas

Specifications and assumptions

Emissions from Sovereign bonds (scope
3 category 15: Investments)

Sequestered carbon from Nature
development, Forestry and Organic
farming (scope 3 category
15: Investments)

Avoided emissions from Renewable
energy (scope 3 category
15: Investments)

Table 9. GHG accounting approaches for other loans and investments. Approaches are sorted on preference. So if multiple data points are available within the same data quality scoring method we select the one with the highest position in this table.

Options	Description				Data quality score
	Financial data		Emission data		Highest (1) to lowest (5)
	Attribution		Emission factor		
a	Outstanding loan and investment amount	Total equity and debt of the company (Balance sheet total) or EVIC	Verified received GHG emissions data in accordance with the GHG Protocol (tCO ₂ e)		Score 1
b			Primary data on actual energy consumption with known energy source (eg. kWh electricity or m ³ gas consumption)	Supplier-specific emission factors for the consumed energy (tCO ₂ e/energy-unit/market-based)	
c			Unverified received GHG emissions data in accordance with the GHG Protocol (tCO ₂ e)		Score 2
d			Primary data on actual energy consumption with unknown energy source (eg. kWh electricity or m ³ gas consumption)	Region-specific emission factors for the consumed energy (tCO ₂ e/energy-unit/location-based)	
e			Primary physical activity data on the companies products and product type	Region-specific emission factors specific for the activity and product type (tCO ₂ e/product-unit/type/region)	
f			Unverified received GHG emissions data that is not verified to be in accordance with the GHG Protocol (tCO ₂ e)		
g		N/A	Sector average per region	Average GHG emission factors on EUR revenue per sector and region (tCO ₂ e/EUR-revenue/sector/region)	Score 4
h				Average GHG emission factors on EUR assets per sector and region (tCO ₂ e/EUR-assets/sector/region)	Score 5

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> **Investments**

Introduction scope 3 category 15: Investments

Emissions from Organic farming (scope 3 category 15: Investments)

Emissions from building-related sectors (scope 3 category 15: Investments)

Emissions from Residential mortgages (scope 3 category 15: Investments)

Emissions from Listed equity and corporate bonds (scope 3 category 15: Investments)

Emissions from other loans and investments (scope 3 category 15: Investments)

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Emissions from Sovereign bonds (scope 3 category 15: Investments)

Sequestered carbon from Nature development, Forestry and Organic farming (scope 3 category 15: Investments)

Avoided emissions from Renewable energy (scope 3 category 15: Investments)

Only option a, c and h from Table 9 are currently applied for this approach. When option h is applied we use the Exiobase Asset value emission factors per sector and country from the PCAF emission factor database.

Emissions of a given company or organisation can be sourced from their reports, if available, to obtain reported emissions according to option a, or c.

The emissions of a company or sub-sovereign are attributed to Triodos Bank based on the balance sheet total or the total enterprise value of each. The enterprise value (EVIC) is applicable for loans and investments in listed companies, but can be proxied by using the balance sheet total of the company.

Formulas

The following formulas are applied to calculate the financed GHG emissions for this category.

The formula for calculating CO₂e based on reported emissions data (option a, c or f) is as follows:

$$\text{CO}_2\text{e reported} \times \frac{\text{Outstanding Triodos loans \& investments}}{\text{Balance sheet total or EVIC}} = \text{CO}_2\text{e}$$

The formula for calculating CO₂e based on actual energy consumption (option b d) is as follows:

$$\frac{\text{CO}_2\text{e}}{\text{kWh/gas}} \times \text{kWh/gas consumed} \times \frac{\text{Outstanding Triodos loans \& investments}}{\text{Balance sheet total or EVIC}} = \text{CO}_2\text{e}$$

The formula for calculating CO₂e based on asset value data (option g and h) is as follows:

$$\frac{\text{CO}_2\text{e}}{\text{€ Asset value}} \times \text{Outstanding Triodos loans \& investments} = \text{CO}_2\text{e}$$

Specifications and assumptions

Sub-sovereigns are not explicitly mentioned in the PCAF Standard. Triodos Bank treats these as corporate bonds and uses the Exiobase emission factors.

Emissions from Sovereign bonds (scope 3 category 15: Investments)

In this chapter we present the methodology, scope, accounting approach and data quality scoring for Sovereign bonds.

Scope

In this approach we only include sovereign bonds. Sovereign bonds are included in the Impact Equities and Bonds funds from Triodos Investment Management, as well as in the Treasury portfolio of Triodos Bank.

Sub-sovereign bonds are treated as 'other loans and investments' and outlined in [the previous chapter](#).

Accounting approach and emission factors

Triodos Bank reports sovereign borrowers absolute scope 1, 2 and 3 emissions.

In December 2022, PCAF launched a Standard for reporting on sovereign bonds. Under this approach, a sovereign is seen primarily as a national territory, and its direct (scope 1) GHG emissions are attributable to emissions generated within its boundaries. The scope 1 emissions for sovereign bonds include both CO₂e emissions inclusive land use, land-use change, and

forestry (LULUCF) and exclusive land use, land-use change, and forestry (excl. LULUCF). The scope 2 emissions are seen as emissions attributable to the import of electricity, steam, heat and cooling from outside the country territory.

Due to the distinct approach compared to the other asset classes, we report the financed emissions from sovereign bonds separately in our Annual Report.

The table below provides an overview of the GHG accounting calculation options for Sovereign bonds with the corresponding data quality scores.

> **Investments**

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Emissions from Organic farming (scope
3 category 15: Investments)

Emissions from building-related sectors
(scope 3 category 15: Investments)

Emissions from Residential mortgages
(scope 3 category 15: Investments)

Emissions from Listed equity and
corporate bonds (scope 3 category
15: Investments)

Emissions from other loans and
investments (scope 3 category
15: Investments)

**Emissions from Sovereign bonds
(scope 3 category 15: Investments)**

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emission factors

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Sequestered carbon from Nature
development, Forestry and Organic
farming (scope 3 category
15: Investments)

Avoided emissions from Renewable
energy (scope 3 category
15: Investments)

Table 10. GHG accounting approaches for Sovereign bonds. Approaches are sorted on preference. So if multiple data points are available within the same data quality scoring method we select the one with the highest position in this table.

Options	Description				Data quality score
	Financial data		Emission data		Highest (1) to lowest (5)
	Attribution		Emission factor		
a	Outstanding loan and investment amount to the sovereign	ppp adjusted	Verified GHG emissions data of the country, reported by the country to UNFCCC (tCO ₂ e)		Score 1
b		Gross	Unverified GHG emissions data of the country (tCO ₂ e)		Score 2
c		Domestic Product (GDP)	Primary data on actual energy consumption per energy source (eg. kWh electricity or m ³ gas consumption) plus any process emissions	Country-specific emission factors for the consumed energy (tCO ₂ e/energy-unit/location-based)	Score 3
d		N/A	Sector average per country	Average GHG emission factors on EUR revenue per sector and country (tCO ₂ e/EUR-revenue/sector/country)	Score 4
e				Average GHG emission factors on EUR PPP-adjusted GDP per country (tCO ₂ e/EUR-assets/country)	Score 5

Formulas

The following formulas are applied to calculate the financed GHG emissions for this category.

The formula for calculating CO₂e based on reported emissions data (option a, c or f) in which is as follows:

> **Investments**

Introduction scope 3 category
15: Investments

Emissions from Organic farming (scope
3 category 15: Investments)

Emissions from building-related sectors
(scope 3 category 15: Investments)

Emissions from Residential mortgages
(scope 3 category 15: Investments)

Emissions from Listed equity and
corporate bonds (scope 3 category
15: Investments)

Emissions from other loans and
investments (scope 3 category
15: Investments)

**Emissions from Sovereign bonds
(scope 3 category 15: Investments)**

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emission factors

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Sequestered carbon from Nature
development, Forestry and Organic
farming (scope 3 category
15: Investments)

Avoided emissions from Renewable
energy (scope 3 category
15: Investments)

$$\text{CO}_2\text{e reported} \times \frac{\text{Outstanding Triodos loans \& investments}}{\text{Balance sheet total or EVIC}} = \text{CO}_2\text{e}$$

The formula for calculating CO₂e based on actual energy consumption (option b d) is as follows:

$$\frac{\text{CO}_2\text{e}}{\text{kWh/gas}} \times \text{kWh/gas consumed} \times \frac{\text{Outstanding Triodos loans \& investments}}{\text{Balance sheet total or EVIC}} = \text{CO}_2\text{e}$$

The formula for calculating CO₂e based on asset value data (option g and h) is as follows:

$$\frac{\text{CO}_2\text{e}}{\text{€ Asset value}} \times \text{Outstanding Triodos loans \& investments} = \text{CO}_2\text{e}$$

Sequestered carbon from Nature development, Forestry and Organic farming (scope 3 category 15: Investments)

In this chapter we present our methodology to account for the sequestered carbon from our loans and investments in the nature development and forestry sector.

Scope

The Triodos Bank sector Nature development and Forestry is within the scope of sequestered carbon.

Additionally we also calculate sequestered carbon for tree fruit production (olives, tree-nuts, citrus fruits, etc.) and for grassland.

Accounting approach and emission factors

The PCAF standard does not provide a methodology for calculating sequestered carbon; therefore, Triodos

Bank consulted Guidehouse to develop a methodology, which is presented here. As carbon sequestration follows a different accounting approach, we will account for and report it separately.

The table below provides an overview of the carbon sequestration accounting options with the corresponding data quality scores.

> **Investments**

- Introduction scope 3 category 15: Investments
- Emissions from Organic farming (scope 3 category 15: Investments)
- Emissions from building-related sectors (scope 3 category 15: Investments)
- Emissions from Residential mortgages (scope 3 category 15: Investments)
- Emissions from Listed equity and corporate bonds (scope 3 category 15: Investments)
- Emissions from other loans and investments (scope 3 category 15: Investments)
- Emissions from Sovereign bonds (scope 3 category 15: Investments)
- Sequestered carbon from Nature development, Forestry and Organic farming (scope 3 category 15: Investments)**
 - Scope
 - Accounting approach and emission factors
 - Formulas
 - Specifications and assumptions
 - Avoided emissions from Renewable energy (scope 3 category 15: Investments)

Table 11. Carbon sequestration accounting approaches for nature and forestry land. Approaches are sorted on preference. So if multiple data points are available within the same data quality scoring method we select the one with the highest position in this table.

Options	Description				Data quality score
	Financial data		Emission data		Highest (1) to lowest (5)
	Attribution		Emission factor		
a	Outstanding loan and investment amount	Total equity and debt of the client (Balance sheet total)	Verified carbon sequestration data from the client or project in accordance with the GHG Protocol (eg. verified by third party or certified carbon credit) (tC)		Score 1
b			Unverified carbon sequestration data from the client or project in accordance with the GHG Protocol or based on actual incremental growth (tC)		Score 2
c			Primary data on nature or forestry area and species of land/trees (eg. hectares of pine trees in Belgium)	Region-specific carbon sequestration factors per area, specific for species of land/trees (tC/hectare/species/region)	Score 3
d			Unverified carbon sequestration data from the client or project not known to be calculated in accordance to GHG Protocol (tC)		
e			Primary data on nature or forestry area (eg. hectares of nature development in Belgium)	Region-specific carbon sequestration factors per area for unknown species of land/trees (tC/hectare/region)	Score 4
f		N/A	Sector average per region	Average carbon sequestration factors on EUR assets per sector and region (tC/EUR-assets/sector/region)	Score 5

For option c and e, the sequestered carbon for forestry is calculated using data in the AFOLU USAID Carbon Calculator on sequestration per hectares of different species and stages of forestry development, including harvesting, thinning, and fertilizer usage. For nature development the sequestered carbon is calculated

based on the same data source by taking a sample mix of species found in cooler temperate climates. All rotational period emissions per hectare are averaged per species over a period of 30 years. Then, an average of these emission factors is calculated to

approximate the mixed varieties of species found in nature development.

For organic farming, we calculate carbon sequestration for tree crops, fruit production, horticulture, and sheep grazing systems. For tree crops, fruit production,

> **Investments**

Introduction scope 3 category 15: Investments

Emissions from Organic farming (scope 3 category 15: Investments)

Emissions from building-related sectors (scope 3 category 15: Investments)

Emissions from Residential mortgages (scope 3 category 15: Investments)

Emissions from Listed equity and corporate bonds (scope 3 category 15: Investments)

Emissions from other loans and investments (scope 3 category 15: Investments)

Emissions from Sovereign bonds (scope 3 category 15: Investments)

Sequestered carbon from Nature development, Forestry and Organic farming (scope 3 category 15: Investments)

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Avoided emissions from Renewable energy (scope 3 category 15: Investments)

and horticulture, sequestration factors are sourced from peer-reviewed scientific literature.¹ For sheep grazing systems we apply the sequestration factors for grasslands from AFOLU USAID Carbon Calculator.

The attribution factor (our financed share) is then multiplied by this figure in order to attribute the carbon emissions to Triodos Bank’s activity.

$$\text{Average } \frac{\text{CO}_2\text{e}}{\text{Hectare (ha)}}_{\text{per species of tree}} \times \text{Total hectares (ha)} \times \frac{\text{Outstanding Triodos loans \& investments}}{\text{Project Equity + Debt}} = \text{CO}_2\text{e}_{\text{sequestered}}$$

Sequestered carbon of grassland (incl. heathland) are also calculated using AFOLU USAID data and using a similar calculation:

$$\text{Average } \frac{\text{CO}_2\text{e}}{\text{Hectare (ha)}} \times \text{Total hectares (ha)} \times \frac{\text{Outstanding Triodos loans \& investments}}{\text{Project Equity + Debt}} = \text{CO}_2\text{e}_{\text{sequestered}}$$

Specifications and assumptions

- We assume that nature and forestry land sequester carbon and do not generate emissions. Nature development and forestry projects without land are treated as building-related business loans and private equity.
- If attribution factors cannot be derived from our banking or investment systems, or when they are not applicable because the client or investee is not an entity, we use portfolio averages based on sector and country.

Formulas

The following formula is applied to calculate the financed GHG emissions for this category:

¹ Aguilera, Guzmán & Alonso (2015): Greenhouse gas emissions from conventional and organic cropping systems in Spain: I. Herbaceous crops and II. Fruit tree orchards

Avoided emissions from Renewable energy (scope 3 category 15: Investments)

In this chapter we present our methodology to assess the avoided emissions of our loans and investments in the renewable energy sector.

Scope

All subsectors categorised under renewable energy are within scope. These include:

Triodos Bank subsector
Wind
Solar
Hydro energy
Biomass
Heat and cold storage
Other renewable energy and energy efficiency

which compares to a baseline. According to the GHG Protocol, avoided emissions are not part of financed scope 3 but should be reported separately.

The table below provides an overview of the GHG avoided emissions accounting options, with the corresponding data quality scores.

Accounting approach and emission factors

In contrast to the other chapters, avoided emissions are calculated based on a different methodology

> **Investments**

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Emissions from Organic farming (scope
3 category 15: Investments)

Emissions from building-related sectors
(scope 3 category 15: Investments)

Emissions from Residential mortgages
(scope 3 category 15: Investments)

Emissions from Listed equity and
corporate bonds (scope 3 category
15: Investments)

Emissions from other loans and
investments (scope 3 category
15: Investments)

Emissions from Sovereign bonds (scope
3 category 15: Investments)

Sequestered carbon from Nature
development, Forestry and Organic
farming (scope 3 category
15: Investments)

**Avoided emissions from Renewable
energy (scope 3 category
15: Investments)**

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Accounting approach and
emission factors

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Specifications and assumptions

Table 12. GHG avoided emission approaches for Renewable energy. Approaches are sorted on preference. So if multiple data points are available within the same data quality scoring method we select the one with the highest position in this table.

Description				Data quality score		
Options	Financial data		Emission data	Highest (1) to lowest (5)		
	Attribution		Emission factor			
a.	Outstanding loan and investment amount	Total equity and debt of project (Balance sheet total)	Verified GHG emissions avoidance data of the project in accordance with the GHG Protocol and/or UNFCC or another credible certification scheme (tCO ₂ e-	Score 1		
b.			Primary data on actual renewable energy production (eg. kWh, MJ, kWhth)		Region-speciic avoided emission factors for the produced renewable energy (tCO ₂ e-avoided/energy-unit/location-based)	
c.			Primary data on electricity production from wind projects, estimated by a third party based on P50/P90 assessment and adjusted with the actual NL Windex factor			
d.			Primary data on renewable energy production based on older reporting year(s) (eg. kWh, MJ, kWhth)		Region-speciic avoided emission factors for the produced renewable energy (tCO ₂ e-avoided/energy-unit/location-based)	
e.		Primary data on renewable energy production estimated by a third party based on P50/P90 assessment				
f.		Unverified GHG emissions avoidance data of the project that is not verified to be in accordance with the GHG Protocol and/or UNFCC or another credible certification scheme (tCO ₂ e-avoided)	Score 3			
g.				Primary data on renewable energy production estimated based on capacity of the project (MW) combined with average load factors per region	Region-speciic avoided emission factors for the produced renewable energy (tCO ₂ e-avoided/energy-unit/location-based)	Score 4
h.				N/A	Technology average per region	Average avoided emission factors on EUR assets per technology and region (tCO ₂ e/EUR-assets/technology/region)

For biomass, heat and cold storage, and other renewable energy subsectors, Triodos Bank has collected CO₂e or energy savings calculations from the project. These calculations are used in accounting approach option a or f.

For wind, solar, and hydro energy subsectors, the avoided emissions are calculated using the options b - e and g.

> **Investments**

Introduction scope 3 category
15: Investments

Emissions from Organic farming (scope
3 category 15: Investments)

Emissions from building-related sectors
(scope 3 category 15: Investments)

Emissions from Residential mortgages
(scope 3 category 15: Investments)

Emissions from Listed equity and
corporate bonds (scope 3 category
15: Investments)

Emissions from other loans and
investments (scope 3 category
15: Investments)

Emissions from Sovereign bonds (scope
3 category 15: Investments)

Sequestered carbon from Nature
development, Forestry and Organic
farming (scope 3 category
15: Investments)

**Avoided emissions from Renewable
energy (scope 3 category
15: Investments)**

Scope

Accounting approach and
emission factors

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Specifications and assumptions

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Avoided emissions of renewable energy are calculated by combining primary data collected by Triodos Bank

Specifications and assumptions

- **Primary data:**
As suggested by PCAF, for renewable energy projects, it is customary to have outside experts calculate predictions on production by percentiles based on historic data. This may include wind measurements or hydraulic flows. The P50 value serves as a prediction of when production may exceed a probability of 50% in a given year; for P90 it is 90%¹. In line with PCAF, emission calculations based on P50 are preferred to P90, if no figures on the actual electricity production are available. Otherwise, avoided emission calculations on a project basis, or other, factors such as capacity or a monetary sum, will support assumptions for the emission calculation.
- **Emission factors:**
The emission factors (gram CO₂e/kWh, MJ or m3 energy produced) are derived from the operating margin emission factor of the International Financial Institutions (IFI) dataset². The operating margin is based on country specific emission factors from the power plants with the highest variable operating

with established emission factors based on the energy facilities that are pushed out of the grid mix by introducing a new renewable energy facility.

The formula for calculating the financed avoided emissions is as follows:

$$\frac{\text{CO}_2\text{e}}{\text{kWh (production)}} \times \text{Total production (kWh) of project} \times \frac{\text{Outstanding Triodos loan \& investments}}{\text{Project Equity + Debt}} = \text{CO}_2\text{e}_{\text{avoided}}$$

costs. These are the power plants that will be replaced first when utilising new renewable power sources. Hence, this factor provides a more realistic insight in the contribution of new renewable power sources compared to non-sustainable power plants, and is consistent with PCAF and aligns with the Science Based Targets initiative (SBTi).

following the emission factors of the Joint Research Centre 'GHG emission factors for local energy use'³.

- **Attribution factors:**
After the avoided emissions have been calculated per project, these are attributed to Triodos Bank based on the ratio between our outstanding loans and investments and the total project equity and debt or total balance sheet of the company. If no data is available on the current total project equity and debt, the attribution factor is based on the project administration at the time of loan or investment origination. If attribution factors cannot be derived from our banking or investment systems, or when they are not applicable because the client or investee is not an entity, we use portfolio averages based on sector and country.
- **Generated emissions:**
We assume that there are no generated emissions scope 1 and 2 by renewable energy production,

¹ See PCAF (2017) report.
² <https://unfccc.int/climate-action/sectoral-engagement/ifis-harmonization-of-standards-for-ghg-accounting>
³ Joint Research Centre Data Catalogue - GHG Emission Factors for Local Energy Use - European Commission

Introduction

Own operations, upstream
and downstream

Investments

> **Appendices**

Appendix I - Sector mapping

Appendix II - Glossary

Appendices

Appendix I - Sector mapping

Table Appendix I. Sector mapping

Triodos Bank sector	Triodos Bank sector code	Triodos Bank subsector	Exiobase sector code	Exiobase sector
Organic farming	A0	Other	p74	Other business services (74)
	A1	Dairy	p74	Other business services (74)
	A2	Meat	p74	Other business services (74)
	A3	Poultry and egg production	p74	Other business services (74)
	A4	Forestry	n.a.	n.a.
	A5	Arable	p74	Other business services (74)
	A6	Horticulture	p74	Other business services (74)
	A7	Mixed	p74	Other business services (74)
	A8	Fruit growing / farming	p74	Other business services (74)
Organic food	B0	Other	p52	Retail trade services, except of motor vehicles and motorcycles; repair services of personal and household goods (52)
	B1	Organic / Natural / Health food shops	p52	Retail trade services, except of motor vehicles and motorcycles; repair services of personal and household goods (52)
	B2	Organic butchery	p15.d	Meat products nec
	B3	Food processing companies	p15.i	Food products nec
	B4	Restaurants / Cafes	p55	Hotel and restaurant services (55)
	B5	Wholesale	p51	Wholesale trade and commission trade services, except of motor vehicles and motorcycles (51)
Renewable energy and energy efficiency ¹	C0	Other	p40.11.l	Electricity nec
	C1	Wind	p40.11.e	Electricity by wind
	C2	Solar	p40.11.h	Electricity by solar photovoltaic
	C3	Hydro energy	p40.11.d	Electricity by hydro
	C4	Biomass	p40.11.g	Electricity by biomass and waste
	C5	H&C storage	p40.12	Transmission services of electricity
	C7	Energy efficiency	p40.11.l	Electricity nec
	C8	Battery storage	p40.11.l	Electricity nec

1 Only used for scope 3 and not for scope 1 or scope 2.

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Sustainable property	D0	Other	p45	Construction work (45)
	D1	Private	p45	Construction work (45)
	D2	Shared workspace / Offices	p74	Other business services (74)
	D3	Property Investment Finance	p70	Real estate services (70)
	D4	Nature development	p02	Products of forestry, logging and related services (02)
Environmental technology	E0	Other	p32/p36-37/p50-p55	Secondary raw materials
	E1	Recycling	p25/p60.2	MIXED SECTOR - client specific
	E2	Transport	p31/p50-55/p60-p63	MIXED SECTOR - client specific
Retail non-food	F0	Other	p52	Retail trade services, except of motor vehicles and motorcycles; repair services of personal and household goods (52)
	F1	Toy Stores	p52	Retail trade services, except of motor vehicles and motorcycles; repair services of personal and household goods (52)
	F2	Book Stores	p52	Retail trade services, except of motor vehicles and motorcycles; repair services of personal and household goods (52)
	F3	Clothing Stores	p52	Retail trade services, except of motor vehicles and motorcycles; repair services of personal and household goods (52)
Production	G0	Other	p22	Printed matter and recorded media (22)
	G1	Printers	p30	Office machinery and computers (30)
	G2	Publishers	p22	Printed matter and recorded media (22)
	G3	Artisans / Handicrafts	p36	Furniture; other manufactured goods n.e.c. (36)
Professional services	H0	Other	p74	Other business services (74)
	H1	Consultancy	p74	Other business services (74)
	H2	Research	p73	Research and development services (73)
	H3	Funeral contractors / Undertakers	p91	Membership organisation services n.e.c. (91)

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Professional services continued	H4	Architects / Building contractors	p70	Real estate services (70)
	H5	Personal services	p74	Other business services (74)
Recreation	I0	Other	p92	Recreational, cultural and sporting services (92)
	I1	Parks	p92	Recreational, cultural and sporting services (92)
	I2	Camping sites	p92	Recreational, cultural and sporting services (92)
	I3	Eco-Tourism	p55	Hotel and restaurant services (55)
Social housing	J0	Other	p70	Real estate services (70)
	J1	Housing associations	p70	Real estate services (70)
Education	K0	Other	p80	Education services (80)
	K1	Schools	p80	Education services (80)
	K2	Training & Conference centres	p80	Education services (80)
	K3	Day-care centres	p80	Education services (80)
Child care	L0	Other	p80	Education services (80)
	L1	Kindergartens	p80	Education services (80)
Health care	M0	Other	p85	Health and social work services (85)
	M1	Sole practitioners	p85	Health and social work services (85)
	M2	Medical centres	p85	Health and social work services (85)
	M3	Therapeutic farms	p85	Health and social work services (85)
	M4	Special Needs	p85	Health and social work services (85)
	M5	Care for the elderly	p85	Health and social work services (85)
	M6	Hospices	p85	Health and social work services (85)
	M7	Medicine / Wholesome food	p85	Health and social work services (85)

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Arts and culture	N0	Other	p92	Recreational, cultural and sporting services (92)
	N1	Performing arts	p92	Recreational, cultural and sporting services (92)
	N2	Arts	p92	Recreational, cultural and sporting services (92)
	N3	Cultural centres	p92	Recreational, cultural and sporting services (92)
	N4	Workshop spaces	p92	Recreational, cultural and sporting services (92)
	N5	Film & Media	p92	Recreational, cultural and sporting services (92)
Philosophy of life	O0	Other	p92	Recreational, cultural and sporting services (92)
	O1	Meditation centres	p92	Recreational, cultural and sporting services (92)
	O2	Religious and spiritual groups	p92	Recreational, cultural and sporting services (92)
	O3	Buildings	p92	Recreational, cultural and sporting services (92)
Social projects	P0	Other	p92	Recreational, cultural and sporting services (92)
	P1	Social services	p92	Recreational, cultural and sporting services (92)
	P2	(Re) employment programmes	p80	Education services (80)
	P3	Migrant integration	p80	Education services (80)
	P4	Youth help centres	p92	Recreational, cultural and sporting services (92)
	P5	Community centres	p92	Recreational, cultural and sporting services (92)
Fair trade	Q0	Other	p52	Retail trade services, except of motor vehicles and motorcycles; repair services of personal and household goods (52)
	Q1	Fair trade shops	p52	Retail trade services, except of motor vehicles and motorcycles; repair services of personal and household goods (52)
	Q2	Wholesale / Import	p52	Retail trade services, except of motor vehicles and motorcycles; repair services of personal and household goods (52)

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Development cooperation and Inclusive finance	R0	Other	p67	Services auxiliary to financial intermediation (67)
	R1	Microfinance	p67	Services auxiliary to financial intermediation (67)
	R2	Certified FLO producers	p65	Financial intermediation services, except insurance and pension funding services (65)
	R3	Certified organic producers	p65	Financial intermediation services, except insurance and pension funding services (65)
	R4	SME finance	p65	Financial intermediation services, except insurance and pension funding services (65)
	R5	Leasing	p65	Financial intermediation services, except insurance and pension funding services (65)
	R6	Housing finance	p65	Financial intermediation services, except insurance and pension funding services (65)
	R7	Education finance	p65	Financial intermediation services, except insurance and pension funding services (65)
	R8	Agricultural finance	p65	Financial intermediation services, except insurance and pension funding services (65)
	R9	Fintech / Embedded Finance	p65	Financial intermediation services, except insurance and pension funding services (65)
Other	S0	Other	p93	Other services (93)
Banks	T1	Banks	p65	Financial intermediation services, except insurance and pension funding services (65)
Other investments	U1	Investments	p65	Financial intermediation services, except insurance and pension funding services (65)
Regions	Z0	Regions	p65	Financial intermediation services, except insurance and pension funding services (65)

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AFD Agence Française du Développement	SBTi Science Based Targets initiative
CNG Anthesis Climate Neutral Group	WBCSD World Business Council for Sustainable Development
CO ₂ e Carbon dioxide equivalent	WRI World Resources Institute
GRESB Global Real Estate Sustainability Benchmark	
CRREM Carbon Risk Real Estate Monitor	
EEIO Extended Environmental Input Output	
EF Emission factor	
EPC Energy Performance Certificate	
FAO Food and Agriculture Organisation of the United Nations	
GHG Greenhouse gas	
IEA International Energy Agency	
IEB Triodos Impact Equities and Bonds funds	
IFI International Financial Institutions	
IFC-CEET IFC Carbon Emissions Estimation Tool	
LEM Local Environmental Managers	
LSU Live Stock Unit	
LTV Loan-to-Value ratio	
PCAF Partnership for Carbon Accounting Financials	

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Triodos Bank Greenhouse Gas accounting methodology

Date: March 2026

