EUROPEAN CENTRAL BANK

EUROSYSTEM

2024 update of the ECB's Environmental Statement

GREEN ECB

Contents

Foreword

2023 marked the first full year of operations for the European Central Bank (ECB) without pandemic-related restrictions, following three years of unusual conditions. ECB staff resumed business-related travel and increased their on-site presence. While this was a welcome development, it led to an unavoidable rebound in the ECB's operational carbon footprint.

Despite this, the ECB's unwavering commitment to environmental protection means that we are taking steps to reduce our carbon footprint and mitigate our impact on the environment. In 2023 we achieved reductions in our operational carbon footprint wherever possible. This was largely due to efforts by ECB staff to change their pre-pandemic habits, for example by significantly reducing the number of physical meetings, events and conferences with external participants. This new approach helped cut emissions by 62% compared with 2019.

We are taking action on all fronts to address climate change and nature degradation. Last year colleagues across the ECB worked on our "climate and nature plan 2024-2025". The plan outlines where we are broadening our efforts and identifies three focus areas for our activities in 2024 and 2025: the implications of the green transition, the physical impact of climate change, and the risk that nature loss and degradation pose to the economy. We will also continue to build on our climate-related work in the areas of macroeconomic analysis and monetary policy, banking supervision and financial stability, climate-related data, and banknotes, payments and market infrastructure, as well as our own corporate sustainability. As President Lagarde put it, the plan is "the compass that will guide us on the path to a greener future". By following the actions set out in the plan, we will contribute to our climate objectives.

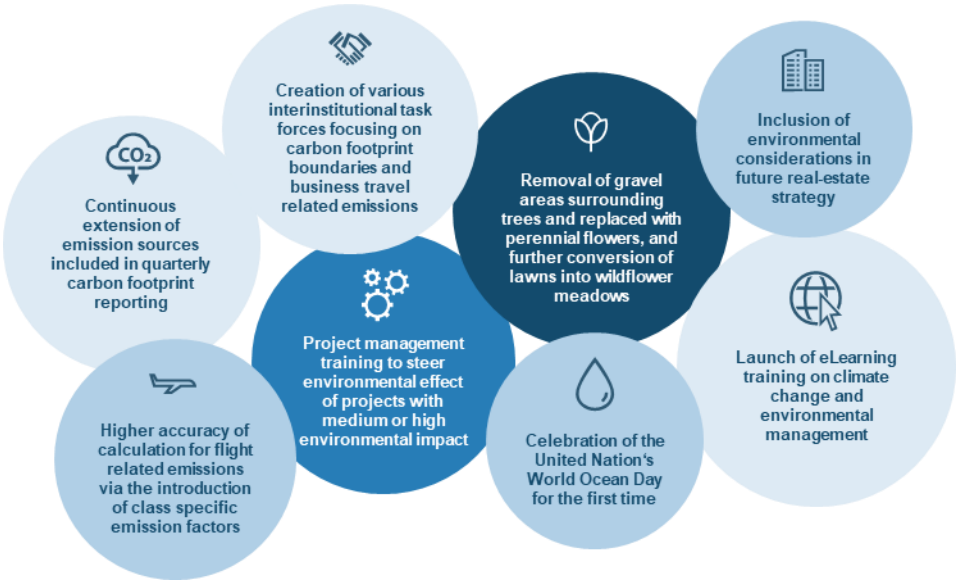
This Environmental Statement highlights our efforts to lessen the environmental footprint of our own operations. The stakes could not be higher. Average temperatures are projected to increase to approximately 3°C above pre-industrial levels by the end of the century.[1] We need to be more determined than ever to combat climate change by preventing the worst and securing a sustainable future. We will rise to the challenge and remain dedicated to achieving our ambitious carbon reduction objectives. We will also stay adaptable and innovative in mitigating our environmental impact across all business areas. By working together, we can have a positive impact and inspire broader action.

Myriam Moufakkir
Chief Services Officer of the European Central Bank

1 IPCC (2023), Climate Change 2023: Synthesis Report.

1 The year in figures

Figure 1
2023 highlights



Source: ECB.

Figure 2
2023 in figures

(2023 figures and percentage changes from 2022 to 2023 and from 2019 to 2023)[2]

	2023	% change vs 2022	% change vs 2019
Energy consumption in premises (electricity, heating and cooling)	47,258 MWh	-6.3%	-23.2%
Electrical energy consumption	29,163 MWh	-3.8%	-17.0%
Heating and cooling energy consumption	18,095 MWh	-10.1%	-31.5%
Total renewable energy	31,106 MWh	+1.4 pp	+63.7 pp
Fresh water consumption	61,166 m³	+3.0%	-46.2%
Waste	558 tonnes	+4.9%	-41.2%
Chemicals for cleaning	21 tonnes	+162.0%	+39.9%

Source: ECB.
Notes: These developments are further described in Chapter 5 – Environmental aspects and impact of the ECB's activities. Details on environmental data by workplace in 2023 are included in Chapter 6 – Technical information.

2 The percentage changes in the chart refer to the percentage changes of the original consumption unit expressed in 2023, except for total renewable energy, which refers to the change in percentage points.

2 Environmental management at the ECB

2.1 Organisational context

2023 was the ECB's first full year of operations without pandemic-related restrictions. From 2020 to 2022 these restrictions had a significant impact as a result of restricted business travel and limited presence of ECB staff at its premises. As expected, in 2023 the ECB's operational carbon footprint increased owing to the rebound in emissions stemming from increased business travel and onsite presence. Business travel emissions rose sharply by 148%, while conference participants' travel emissions increased by 247% compared with the previous year. However, in comparison to the pre-pandemic year 2019, business travel emissions decreased by 32% and conference participants' travel fell by 62% (see Chapter 3.2 – Indirect emissions). The ECB's daily operations in 2023 were also affected by the introduction of the new teleworking regime. The ECB's teleworking regime allows all staff, whose work can be done remotely, to work up to 50% from outside the ECB's premises.

Changes in the organisational environment, including related opportunities and risks, as well as stakeholder expectations, will continue to contribute to the future development of the ECB's environmental management system (EMS).

Beyond the activities of the EMS, the ECB works on climate-related issues as they affect the conduct of the tasks within its mandate. Climate change and nature degradation affect the economy and financial systems, as well as the ECB's own exposure to related risks. An understanding of the implications of climate change as well as the transition needs for the economy and financial sector is essential for the ECB to deliver on its mandate.

The work ongoing across the ECB in 2023 is set out in the ECB's Annual Report and the Annual Report on supervisory activities. In addition, as of 2023 the ECB and the Eurosystem central banks publish climate-related financial disclosures on a yearly basis, covering financial assets in the portfolios held by Eurosystem central banks for monetary policy purposes. Eurosystem central banks also publish disclosures for the non-monetary policy portfolios they manage under their own responsibility. Furthermore, regular publications are made available on the ECB's website throughout the year.

In January 2024 the ECB published its climate and nature plan 2024-2025, which reaffirms its commitment to continue climate action in the following areas: macroeconomic analysis and monetary policy; banking supervision and financial stability; climate-related data; payments, banknotes and market infrastructure; and

environmental performance of our own operations and portfolios.[3] It also identifies three focus areas that will guide the ECB's activities in 2024 and 2025, namely navigating the green transition, assessing the physical impact of climate change and exploring nature-related risks.

2.2 Overview of the environmental management system and relevant changes

The ECB's Environmental Statement 2024 discloses environmental data on the ECB's three premises within the scope of the EMS. This includes the ECB-owned main building, as well as the rented premises in Frankfurt city centre – the Eurotower and the Japan Center. All office space in the three buildings is occupied by the ECB.

Owing to the different ages and structural requirements of the buildings, the data for the main building are reported separately from the aggregated data for the city centre premises.

In line with the three-year reporting cycle of the European Union's Eco-Management and Audit Scheme (EMAS) standard, this year's Environmental Statement is the second update of the ECB Environmental Statement 2022.

The ECB's environmental policy outlines the ECB's commitment to environmental protection and its strategic objectives for continuously improving its environmental performance. Information on the ECB's environmental policy and the governance of its EMS is available on the webpage on environmental protection at the ECB.

In 2023 the EMS achieved its intended objective of continuous improvement, as demonstrated by the reduction in our environmental impact and the implementation of new measures. Overall, environmental performance improved considerably relative to the baseline year 2019.

[3] The strategic objectives and deliverables were published in the ECB climate agenda 2022.

3 The ECB's carbon footprint

Objectives CO_2 emissions

Type of objective/timeline	Objective and status 2023
Long-term: 2030	Reduction of carbon footprint by 46.2% (relative to 2019 levels) by 2030, in line with the Paris Agreement objective (1.5°C) **Status 2023: -40%**
Short-term: 2024	Keep annual business travel-related carbon emissions within 60% of 2019 levels **Status 2023: 69%**
Short-term: 2024	Set a limit of 50% of ECB meetings with external conference and meeting participants to take place in person over a two-year cycle (2023-24) **Status 2023: 25% physical meetings with external participants planned for 2023**

Measures CO_2 emissions

Measure	Status
Include specifications for an electric alternative in the next tender for the shuttle commute between ECB premises	The shuttle service has been discontinued
Reduce emissions resulting from ESCB committees and substructure meetings by limiting the number of physical meetings to a maximum of 50% of the planned meetings each year	In progress Close communication with meeting organisers was established to provide an overview of the status of this objective and facilitate steering. Moreover, a tool to allow organisers and participants to view emissions resulting from their event is being developed and is expected to be rolled out in 2024
Green the ECB car fleet by moving towards hybrid and electric vehicles and extending the vehicles' lifecycle	Completed Hybrid and electric vehicles continued to increase as a share of the ECB's car fleet, with a further extension of the time use of the vehicles
Reduce emissions from conferences, events and technical meetings hosted at the ECB via the implementation of guidelines for event organisers	In progress Sustainable events guideline is available to all staff and promoted within organiser communities across the ECB

Measure	Status
Shorten the food supply chain and increase regional diversity and plant-based options in meals offered in the staff restaurants	In progress Framework agreement in place as of 2024 to increase the amount of organic produce. Seasonality and regionality are important considerations when creating the staff menus
Green the maintenance of the ECB car fleet by digitalising the administrative processes and investigating environmental opportunities for the fleet's maintenance and cleaning supplies	In progress Digital logbooks remained the standard solution, additionally digital invoicing for large fuel providers has been rolled out eliminating the need for paper invoices
Include specifications for greening externally provided transportation services	In progress Environmental considerations were included as part of the tendering procedure, specifying among other requirements the preference for electric vehicle usage. These considerations would also form part of the framework agreements. The service provider will begin operations in 2024
Set up working groups with frequent travellers to reduce business travel emissions	In progress Work with various working groups continued. This will be complemented by a monitoring tool that will allow business areas to more closely monitor emissions stemming from aviation-related emissions. The tool is due to be rolled out in 2024
Include environmental and social impact assessment in the project assessment related to facility management and construction	In progress Environmental assessments are systematically included when developing new ECB projects
Develop further analytical tools to support decision making processes and facilitate the inclusion of environmental considerations in facility management projects	In progress
Consider possibilities of technologies for adjusting building operation to building occupation in response to new work patterns in the future	In progress
Contribute to the hybrid working model by exploring solutions for workplaces, meeting rooms, and videoconferencing tools	Completed Hybrid meeting technologies are continuously being rolled out in terms of quantity and increased functionality. Moreover, tools are being explored to facilitate workplace booking in open-floorplan spaces
Consider integrating sustainability impact considerations into proposals submitted to decision-making bodies	In progress Guidance documentation was drafted and made available to staff together with an online training course to facilitate the inclusion of climate and environmental considerations in project templates. These assessments will be a mandatory element of project documentation as of 2024

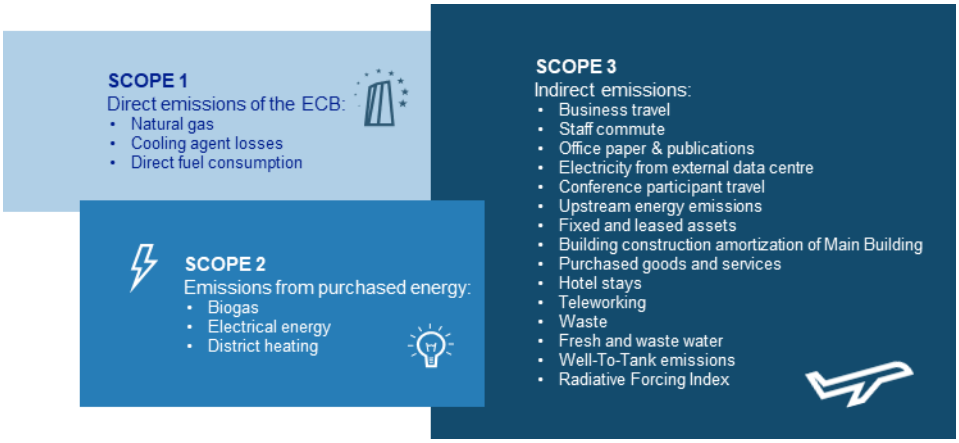
Note: "Completed" = measure completed; "In progress" = measure in progress; "Pending" = measure still to be implemented.

Overview of CO_2 emissions at the ECB

The ECB follows the Greenhouse Gas Protocol framework to account for carbon emissions in scopes 1, 2 and 3. Scope 1 includes direct emissions and scope 2 and 3 indirect emissions. The scope of the 2023 greenhouse gas inventory is unchanged compared with 2022. Figure 3 presents the emission sources reported under the different scopes.

Figure 3

Components of the ECB's carbon footprint



Source: ECB.

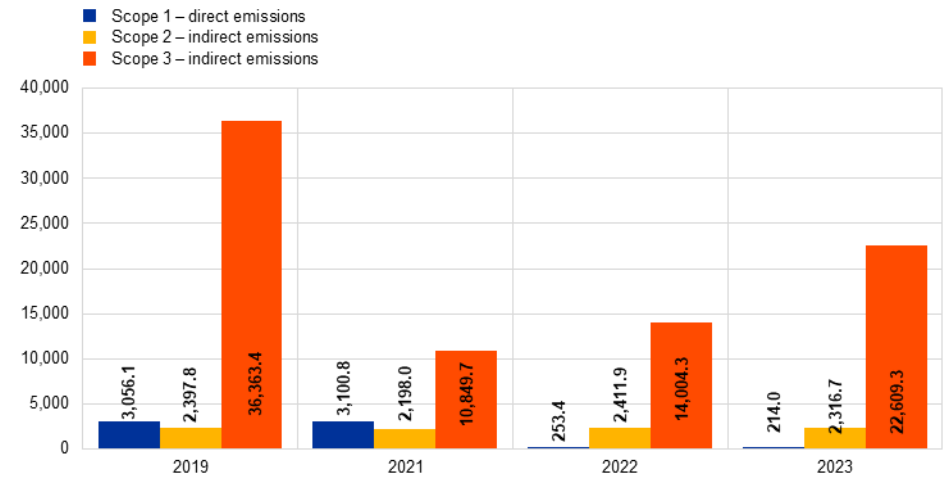
Total emissions increased by 50.8% from 2022 to 2023 (Chart 1), mainly driven by increased travel activities. While scope 1 emissions decreased (-15.5%) and scope 2 emissions declined by a smaller extent (-3.9%), scope 3 emissions increased by 61.4% owing to a strong contribution from emissions from conference participants and business travel.

Scope 1 and 2 emissions continue to be positively impacted by the energy saving measures implemented as of 1 September 2022 under the German government's short-term energy-saving ordinances.[4] While these measures are no longer required by law the ECB has continued to implement them.

[4] As of 1 September 2022, the German government released its energy conservation ordinance to support the European Commission's Gas Demand Reduction Plan.

Chart 1

Total CO_2e emissions – scopes 1, 2 and 3



Source: ECB.
Notes: Scope 1 emissions for 2022 were revised from 135.8 to 253.4 tonnes CO_2e for 2022. Scope 3 values were revised from 32,078.0 to 36,363.4 tonnes CO_2e for 2019, from 10,795.9 to 10,849.7 tonnes CO_2e for 2021 and from 13,517.7 to 14,004.3.8 tonnes CO_2e in 2022. For more information on changes in the business travel emissions methodology, see Chapter 4.9 – Travel. Results for 2019 are depicted as this is the baseline year for the ECB's long term emission reduction objectives, and for the last three years for which data is available. For results on 2020 performance please see the 2021 update of the ECB's environmental statement.

The ECB focuses on avoidance of emissions, followed by their reduction. As the third and final component of its emission management, since 2018 the ECB has offset unavoidable emissions with credits that finance emission avoidance projects worldwide. The credits purchased to offset 2023 emissions contribute to Gold Standard projects facilitating access to clean energy and water in marginalised communities. In addition, suppliers already compensate for upstream emissions from train travel within Germany[5] and a share of office paper.

For further details on data, see Chapter 6 – Technical Information.

3.1 Emissions related to the operation of the ECB's premises

Emissions from the operation of the ECB's premises resulting from heating, cooling and fuel use are counted as direct emissions in scope 1 and indirect emissions in scope 2. In 2023 scope 1 and 2 emissions accounted for 10.1% of the ECB's total carbon footprint, decreasing in both absolute and relative terms owing to the considerable increase in scope 3 emissions.

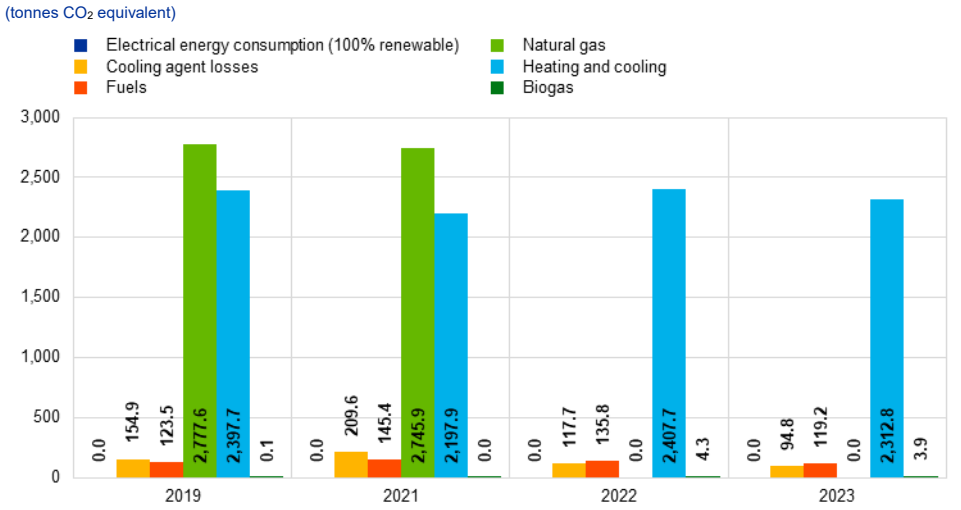
Upstream emissions from the ECB's energy consumption are accounted for under scope 3 (see Chapter 3.2 – Indirect emissions). In this chapter, scope 2 emissions

[5] Under the Deutsche Bahn certificate, direct emissions are covered by the use of renewable energy certificates and therefore counted as zero, while upstream (well-to-tank) emissions are compensated at 100%. Owing to a lack of data on the upstream energy consumption per kilometre and the related emission factors, these emissions are currently not accounted for under scope 3 emissions. Compensated paper is accounted for within scope 3 and additionally reported outside the scopes.

are reported in accordance with the market-based approach, while location-based emissions are reported in Chapter 6 –- Technical Information.

Chart 2

CO_2e emissions – scopes 1 and 2



Source: ECB.
Note: Cooling agent losses in 2022 were revised from 0.0 to 117.7 tonnes CO_2e for 2022 owing to losses reported retrospectively. Results for 2019 are depicted as this is the baseline year for the ECB's long term emission reduction objectives, and for the last three years for which data is available. For results on 2020 performance please see the 2021 update of the ECB's environmental statement.

3.2 Indirect emissions

In 2023 indirect emissions under scope 3 accounted for 89.9% of the ECB's carbon footprint. For more information on underlying developments resulting in changes to scope 3 emissions, see Chapter 4 – Environmental aspects and impacts of the ECB's activities.

Business travel and hotel stays

Pandemic-related business travel restrictions were fully lifted at the end of 2022 and therefore did not affect travel activities in 2023. This resulted in a 148% increase in emissions from hotel stays and business travel compared with 2022. The ECB partly succeeded in limiting the rebound of travel to pre-pandemic levels, reporting 34% fewer kilometres travelled in 2023 compared with 2019. However, this was not sufficient to meet its target to keep annual travel-related CO_2e emissions to a maximum of 60% of 2019 levels until 2024. Although part of the increase in emissions relates to a strong increment in the emission factors, the ECB is committed to adhering to its annual target. Business travel emissions are therefore closely monitored as part of the quarterly internal reporting to senior management.

Business travel emissions include well-to-tank (WTT) emissions[6] for all fossil fuel-based transport. For air travel, the Radiative Forcing Index (RFI)[7] is considered in emission calculations. By including RFI and WTT emissions, the ECB follows a best practice approach to achieve a complete calculation of travel emissions. For more information on business travel emissions, see Chapter 4.9 – Travel activities.

Conference participant travel

The ECB's carbon footprint accounts for the business travel emissions of its own staff and the travel emissions of external participants attending conferences and events held on ECB premises. For the travel emissions of conference participants, the same approach is used as that for business travel emissions, i.e. integration of RFI-factors for plane travel and WTT emissions for fuel-based transport.

Although the ECB has only limited influence on the emissions from conference participants and some delegates' business travel is likely to be double-counted, the ECB has continued to report on conference participant travel since 2021 in order to present as complete a picture as possible on carbon emissions.

Conference participant travel emissions increased by 247% compared with 2022. The ECB acknowledges that the calculations are based on certain assumptions as a result of underlying data quality issues. It actively engages in steering the related emissions by limiting the number of conferences and meetings with external participants held on ECB premises to 50%. For more information on developments in 2023, see Chapter 4.9 – Travel activities.

Staff commute and teleworking

Due to remote work during the pandemic years from 2020 to 2022 and under the teleworking regime which came into effect at the beginning of 2023 allowing staff members to work for up to 110 days per calendar year remotely, a share of the ECB's emissions has shifted to staff homes. Since the data on staff commuting and teleworking are interrelated, the ECB includes these emissions in its carbon footprint boundary under the category "Emissions from staff commuting and teleworking".

The ECB conducts staff surveys every two years to calculate emissions from teleworking and commuting. The most recent survey was conducted in summer 2023. The derived data are complemented with additional information, such as the number of staff on business travel, and specific assumptions, such as sick leave and parental leave rates, to yield more accurate estimates. Emissions from teleworking decreased by 38% in 2023 compared with the previous year, amounting to 394

6 Well-to-tank emissions are upstream emissions, for example stemming from the production and supply of fuels.

7 In relation to air travel, radiative forcing is defined as "[…] the sum of all forcings, including direct emissions (e.g. CO_2, soot) and indirect atmospheric responses (e.g. CH4, O3, sulfate, contrails)". As such, the RFI is "[…] a measure of the importance of aircraft-induced climate change other than that from the release of fossil carbon alone" (see IPCC, "Aviation and the Global Atmosphere".

tonnes CO_2e. By contrast, commuting emissions increased by 15%, amounting to 1,303 tonnes CO_2e in 2023. The ECB acknowledges the limited reliability of the teleworking and commuting emissions data which are based on underlying assumptions and a survey-based approach. For more information on the survey approach, see Chapter 4.9 – Travel activities.

Waste

Emissions resulting from the disposal of waste decreased by 2.6% compared with 2023. Overall, waste emissions remained stable, as the number of employees working on-site has largely levelled off compared with pre-pandemic times. For more information, see Chapter 4.5 – Waste and recycling.

Purchased goods and services

Purchased goods and services comprise emissions from catering and cleaning services, external printing services, information and communications technology (ICT) services, gardening services, office supplies and stationery, paper consumption for office purposes, ECB publications and other paper items, electricity consumption at the external data centre, as well as fresh and waste water consumption.

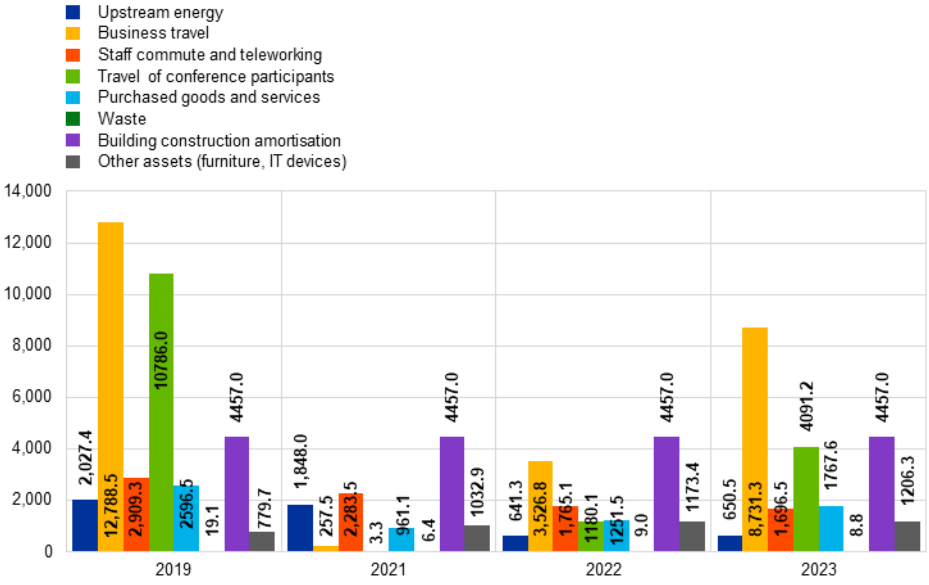
The calculation of catering emissions is conducted at ingredient level, with corresponding emission factors accounting for their lifecycle, including transport. Printing services emissions refer to paper production and electricity consumption of external service providers. Emissions from gardening services account for fuel consumed during gardening work. Office supplies, stationery and cleaning service emissions are calculated by means of value-based emission factors, since consumption activity data are not sufficiently detailed and relevant emission factors are not available. The ECB accounts for emissions from ICT services besides data centre and IT equipment consumption based on the number of minutes spent by ECB staff in videoconferences.

In 2023 emissions from purchased goods and services amounted to 8% of scope 3 emissions and increased by around 41% compared with the previous year. In particular, catering emissions rose by around 73%, reflecting higher demand owing to the increase in on-site work and events. For more information, see Chapter 4.3 – Material efficiency and Chapter 4.4 – Water and waste water.

Chart 3

CO_2e emissions – scope 3

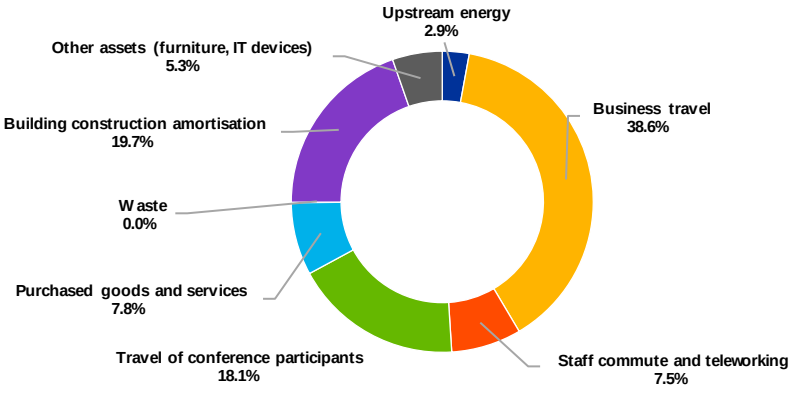
(tonnes CO_2 equivalent)



Source: ECB.
Notes: Business travel includes emissions from business-related trips by bus, train or plane as well as hotel stays. Emissions from business travel were revised from 8,503.1 to 12,788.5 tonnes CO_2e in 2019, from 203.7 to 257.5 tonnes CO_2e in 2022 and from 3,040.4 to 3,526.8 tonnes CO_2e in 2022. Emissions from purchased goods and services were revised from 2,596.0 to 2,596.5 tonnes CO_2e in 2019. In 2022 waste emissions were revised from 8.9 to 9.0 tonnes CO_2e. Results for 2019 are depicted as this is the baseline year for the ECB's long term emission reduction objectives, and for the last three years for which data is available. For results on 2020 performance please see the 2021 update of the ECB's environmental statement.

Chart 4

Scope 3 – shares of CO_2e emissions in 2023



Source: ECB.

In addition to CO_2e emissions, the ECB records and reports on other emissions resulting from its activities. Other emissions comprise quantities of sulphur dioxide (SO_2), nitrogen oxides (NOX), and particulate matter (PM) from the ECB's fuel consumption by the vehicle fleet and emergency power unit test runs. Furthermore, the ECB presents biogenic emissions[8] from biogas consumption falling outside the

[8] Biogenic emissions are CO_2 emissions arising from biomass combustion and are tracked separately from CO_2e emissions from fossil fuels.

scopes in line with the requirements of the Greenhouse Gas Protocol. For more information, see Chapter 6 – Technical Information.

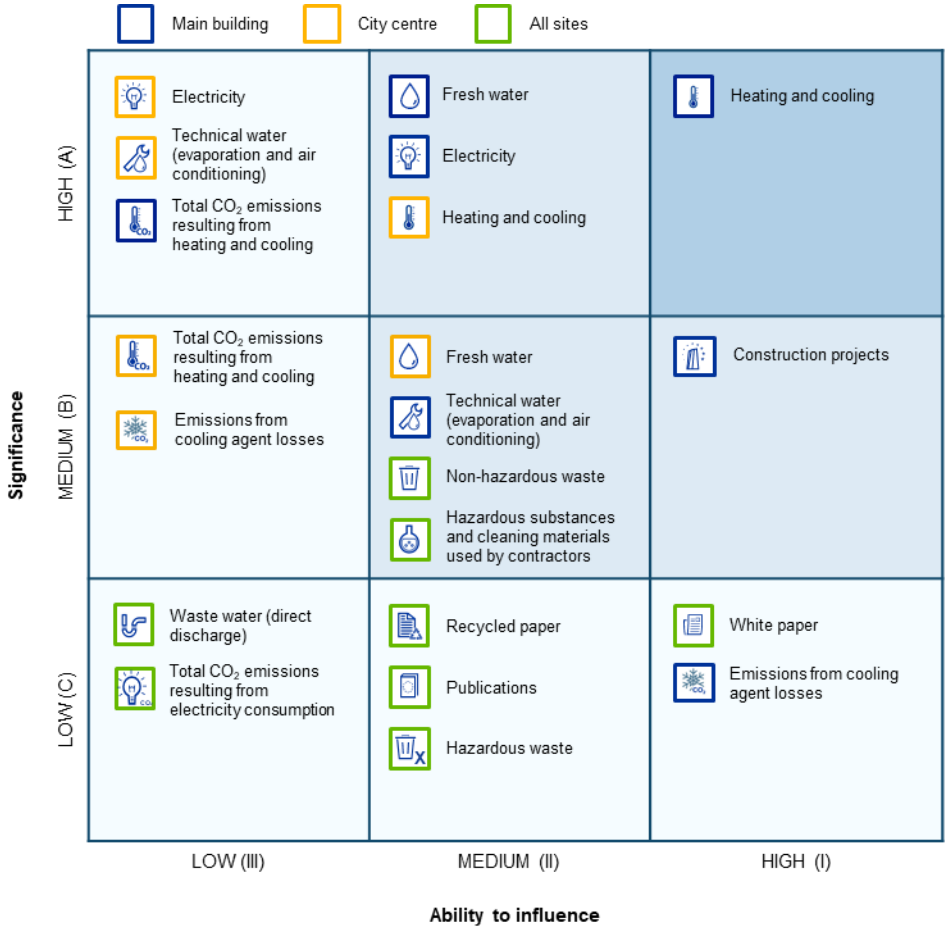
4 Environmental aspects and impact of the ECB's activities

4.1 Update of the environmental aspects assessment

Direct and indirect environmental aspects of the ECB's activities are reassessed on an annual basis, taking into account the ECB's ability to influence each aspect and its magnitude in terms of environmental performance.

Compared with the environmental aspects assessment of 2022, the ratings for 2023 remained stable, with the exception of business travel by plane, which saw an increase in significance level. Furthermore, construction projects were added as a direct environmental aspect to reflect the impact of construction and relocation projects on biodiversity, resource efficiency, energy and emissions.

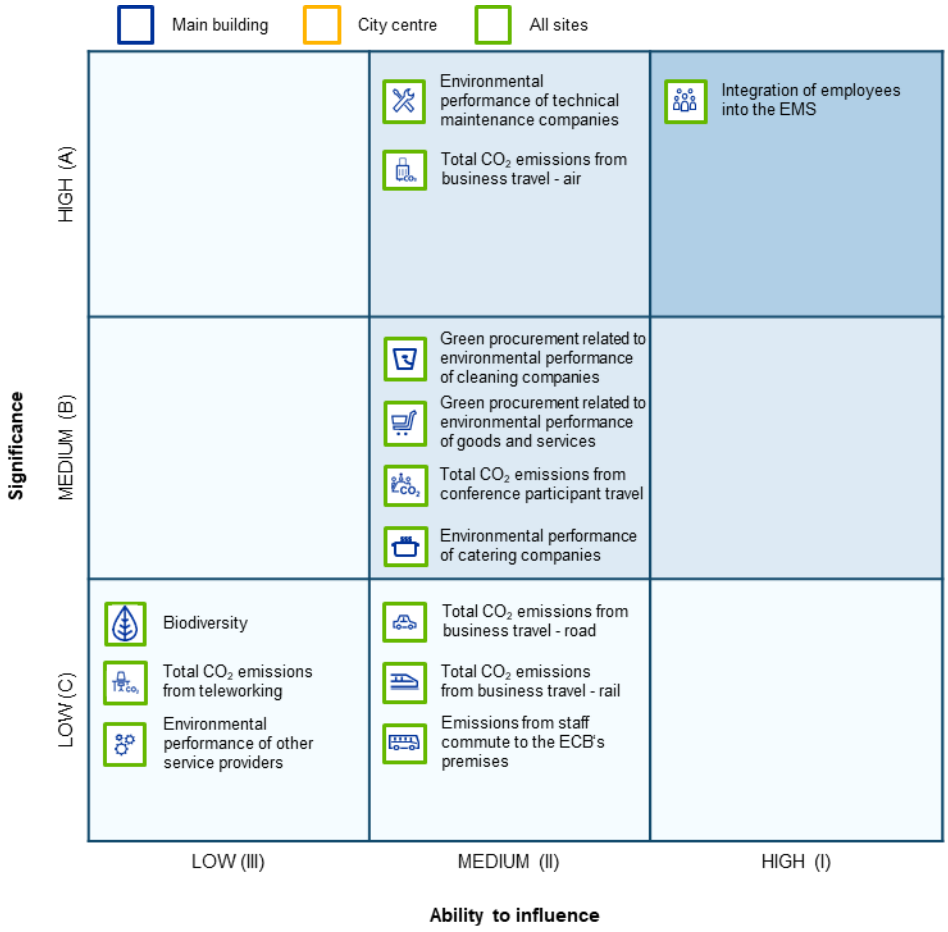
Figure 4
Assessment of the ECB's direct environmental aspects



Source: ECB.
Note: Construction projects were added as a new direct environmental aspect to reflect corresponding environmental effects in the main building.

Figure 5

Assessment of the ECB's indirect environmental aspects



Source: ECB.
Note: Total CO_2e emissions from business travel – air travel more than doubled compared with 2022, which is why the significance increased from medium to high.

4.2 Energy efficiency

Objectives Energy efficiency

Type of objective/timeline	Objective and status in 2022
Short-term: 2023	Reduce electricity consumption at the main building by 3% (baseline 2018) **Status 2023: -17.0%**

Type of objective/timeline	Objective and status in 2022
Long-term: 2030	Optimise energy consumption of ECB premises: reduce total energy consumption per workplace by 20% (baseline 2018) **Status 2023: -29.4%**
Ongoing	Maintain 100% renewable electricity in all owned and rented premises and in the external data centre **Status 2023: 100%**

Note: The 2022 status is influenced by energy-saving measures implemented to contribute to Germany's energy-saving efforts.

Measures Energy efficiency

Measure	Status
Evaluate adherence to the European Code of Conduct on Data Centre Energy Efficiency (ECA[9] recommendation)	In progress The ECB's assessment against and adherence to the European Code of Conduct on Data Centre Energy Efficiency will be evaluated as part of the work programme 2022-24 of the ECB's Directorate General Information Systems
Conduct lighting assessments to evaluate lighting needs and technical setup	In progress A lighting assessment is continuously conducted to identify lighting fixtures that should be replaced based on technical feasibility and lifecycle assessments. Lights identified as in need of replacement are replaced by LEDs
Gradually replace lights with LEDs in the main building	In progress LED replacement is embedded in continual lighting assessments
Further expand and optimise data collection and analysis of energy consumption from the data centres at the main building	In progress Previous analytical work has been further expanded. It includes real-time weather-adjusted energy consumption data, which are also used to establish the effectiveness of energy saving measures implemented
Offer a training video for staff on safe e-vehicle charging	Completed Following feedback from the provider and internal discussions with stakeholders, this was deemed unnecessary given the inherent safety of charging electrical vehicles for users
Evaluate the ability to measure the environmental impact of cloud services from different providers and explore market best practices	In progress Work with service providers was continued based on preliminary data received. Additional monitoring tools based on consumption are being discussed and rolled out
Permanent decommissioning of non-essential technical installations in the main building beyond the pandemic	Completed The unused water feature has been permanently decommissioned
Test and roll out improvements to temperature control processes in the high-rise sections of the main building	In progress Energy efficiency measures were introduced widely across the ECB buildings in response to the European and German guidelines and regulations on energy efficiency. Long-term energy saving measures are being monitored, and a decision on permanent implementation is being assessed. The effectiveness of energy saving measures continues to be closely monitored, and new measures for heating and cooling periods are being assessed and trialled for long-term implementation

9 European Court of Auditors

Measure	Status
Support the ECB Unified Communication and Collaboration (EUCC) project in rolling out new telephone systems and developing environmentally efficient policies	Completed Removal of centralised traditional desk phones was completed in 2023 and replaced with a software-based solution. Rented devices were returned to the service provider

Note: “Completed” = measure completed; “In progress” = measure in progress; “Pending” = measure still to be implemented.

Overview of Energy efficiency at the ECB

The ECB’s overall energy consumption decreased by 6.3% compared with the previous year and 23.2% compared with 2019. This was achieved, among other things, through energy saving measures implemented to bring the ECB into compliance with the energy saving regulation of the German federal government in 2022. Although no longer required by law, the ECB continued to apply these measures throughout 2023. This development was remarkable, as it was achieved despite the return of staff to the ECB’s premises. The ECB is aware of the interdependency of energy consumption on-site and energy consumption outsourced to employees’ home offices, which also contributes to the development of energy consumption.

To achieve further reductions in energy consumption on-site, the ECB is constantly working on identifying and implementing energy efficiency measures. In 2023 it implemented higher internal office temperatures in the summer and reduced air humidity levels to a minimum of 30%. Furthermore, the ECB participates in a local energy efficiency network and exchanges information on energy saving measures at Eurosystem level, both of which provide new input on measures that could be implemented on ECB sites.

In 2023 the ECB consumed 5.5% less electrical energy and 12% less energy for heating and cooling than in the previous year. Following the return of more staff on-site, the amount of biogas used for cooking in the main building’s kitchen increased by 136% compared with 2022. After the re-introduction of a pick-and-weigh system in the canteen aimed at reducing food waste, it is no longer possible to report the number of meals served.

The energy consumption dashboard presents weather-adjusted, real-time energy consumption for the main building including a forecasting feature which allows energy use to be steered. The tool has been further refined in the past year, giving a

clearer overview and more accurate picture of when implemented energy saving measures are having a positive effect on energy consumption.

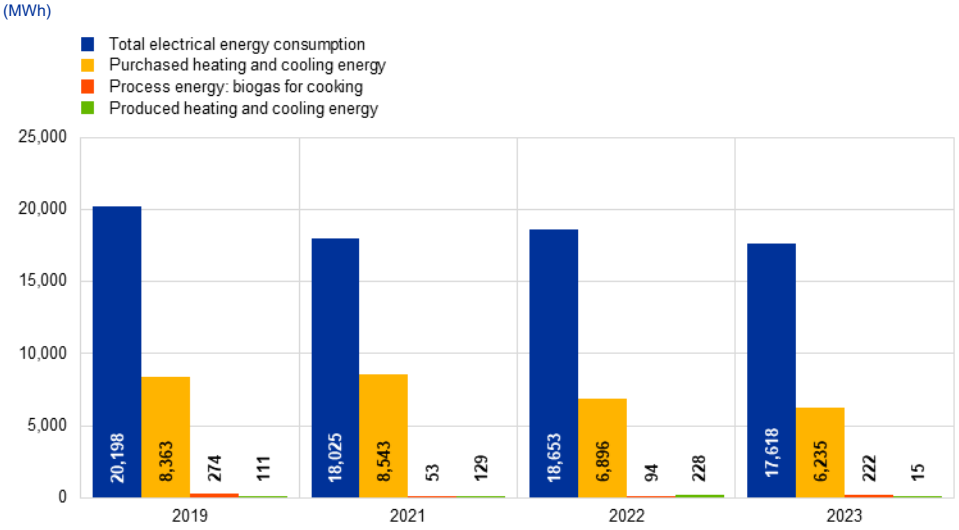
Electrical energy consumption at the city centre premises decreased by 1.1%, while heating and cooling energy consumption decreased by 8.8% compared with 2022.

Procured energy in the Eurotower is supplemented by two cogeneration plants powered with biogas. The plants contribute to supplying the building with heat and electrical energy. Biogas consumption in the Eurotower decreased by 14.6%, reflecting the effects of the energy saving measures, while electricity consumption from the grid was further reduced by 4.8% compared with the previous year.

In the Japan Center, heating is provided through district heating. Consumption increased by 7.6% relative to 2022. By contrast electricity consumption was reduced by 14%.

Chart 5

Energy consumption – main building[10]

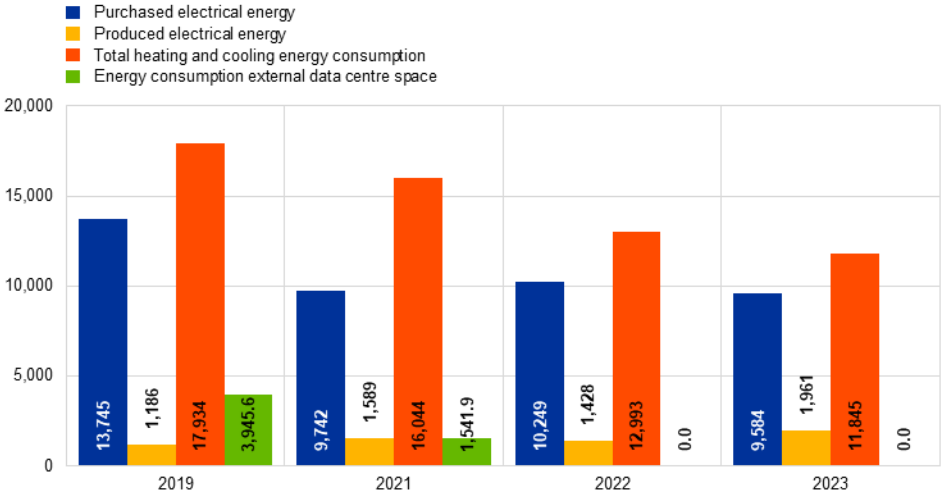


Source: ECB.
Notes: Results for 2019 are depicted as this is the baseline year for the ECB's long term emission reduction objectives, and for the last three years for which data is available. For results on 2020 performance please see the 2021 update of the ECB's environmental statement.

[10] For geothermal energy, it is necessary to keep the source (namely the ground) in balance taking into account a full annual cycle (summer = cooling energy/heating up the source; winter = heating energy/cooling down the source). In 2022 the heating energy saving activities lead to a significant imbalance of the source. The Frankfurt city authority (Environmental Office) decided that the system should remain out of operation in 2023 to allow for thermal regeneration of the source.

Chart 6

Energy consumption – city centre buildings



Source: ECB. For more information on greenhouse gas emissions associated with energy consumption, see Chapter 4.1 – Emissions related to the operation of ECB premises.
Notes: Results for 2019 are depicted as this is the baseline year for the ECB's long term emission reduction objectives, and for the last three years for which data is available. For results on 2020 performance please see the 2021 update of the ECB's environmental statement.

4.3 Material efficiency

Objectives
Material efficiency

Type of objective/timeline	Objective and status 2023
Short-term: 2023	Increase eco-friendly stationery to 42% of all stationery (baseline: 2018) **Status 2023: 38%**
Short-term: 2024	Phase-out all disposable plastic items in catering outlets and kitchen operations **Status 2023: in progress**

Measures
Material efficiency

Measures	Status
Continue digital contract management beyond the pandemic	Completed All processes at the ECB relating to contract management and recruitment will remain fully digital and paperless
Continue paper-free training beyond the pandemic	Completed Paper-free training remains the standard practice at the ECB
Include environmental criteria relating to the re-use/recycling of furniture in the next furniture tender	Pending No new tender was launched in 2023 and the current contract scope was changed to maintenance and furniture enhancement
Launch campaign for voluntary return of unused IT equipment	Completed Further calls were made for staff to return unused equipment in 2023. An article was also published targeting staff explaining how devices are refurbished or recycled after they are handed back to encourage further awareness and engagement
Whenever feasible, prioritise the repair and reuse of equipment in the context of facility management projects, maintenance and refurbishment, subject to cost consolidations and urgency	In progress For refurbishment, the re-use of existing stock is the current priority, and will also be taken into consideration for future relocation activities

Note: “Completed” = measure completed; “In progress” = measure in progress; “Pending” = measure still to be implemented.

The ECB has set itself the goal of eliminating single-use plastic items in customer-facing outlets and kitchen operations by 2024. Together with external service providers, the ECB is exploring ways of reducing packaging waste in the canteens and cafeterias. This includes, for example, actively encouraging the use of reusable packaging for take-away items whenever possible and seeking sustainable packaging alternatives for single-use items.

In the following section, resource consumption from publications, office paper, cleaning agents, office supplies, and chemicals for water treatment and cooling are described. Details on the CO_2e emissions are presented in the subsection on purchased goods and services in Chapter 3.2 – Indirect emissions.

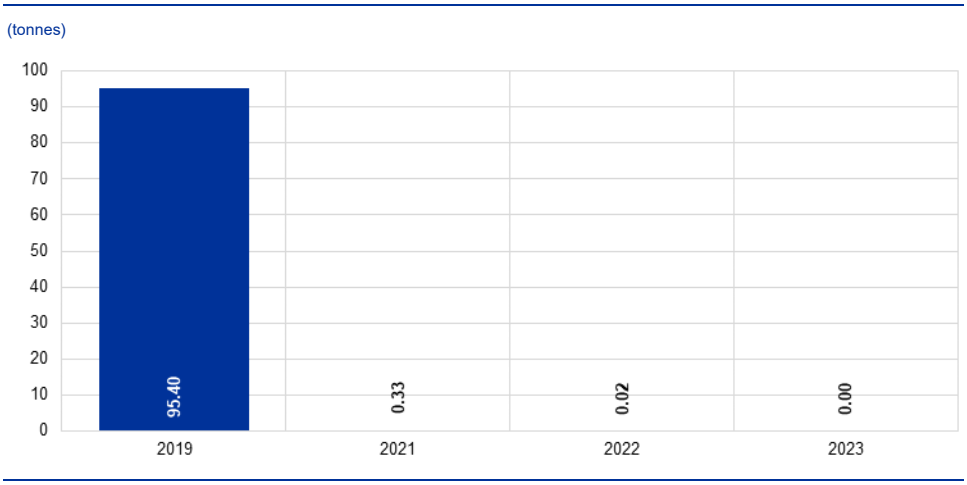
4.3.1 Publications

In 2023 the ECB’s official publications were fully digital. Although the amount of paper consumption for publications measured in tonnes varies significantly from year

to year, the trend is towards phasing out paper consumption in favour of digital publications.

Chart 7

Paper consumption for official publications



Source: ECB.

4.3.2 Office paper

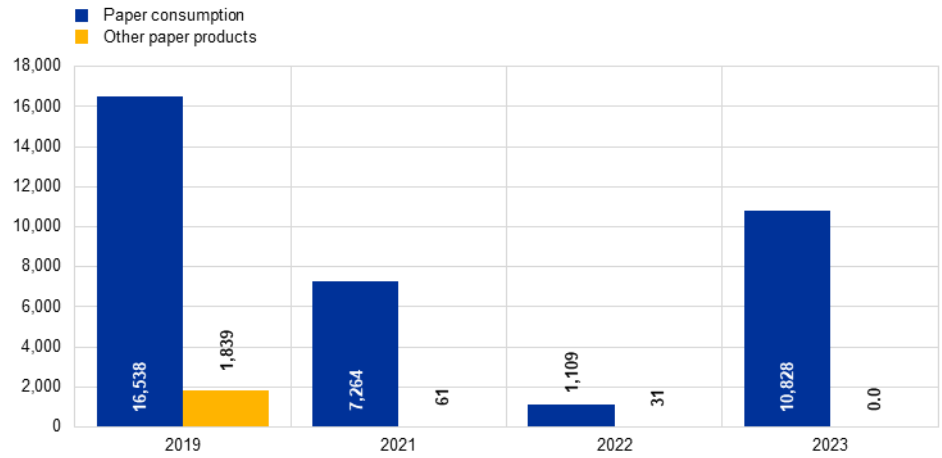
Office paper consumption increased almost tenfold compared with 2022. Given that no office paper was ordered in 2022, the high consumption in 2023 stemmed from the need to top up stock and ensure a stable supply for coming years. As a result of this purchase, the share of recycled paper amounted to 98.4%.

In 2023 ECB calendars were printed on-site on paper purchased in previous years. As such, they do not appear in the paper consumption figures for 2023.

Chart 8

Office paper consumption

(thousands of sheets of A4 equivalent)

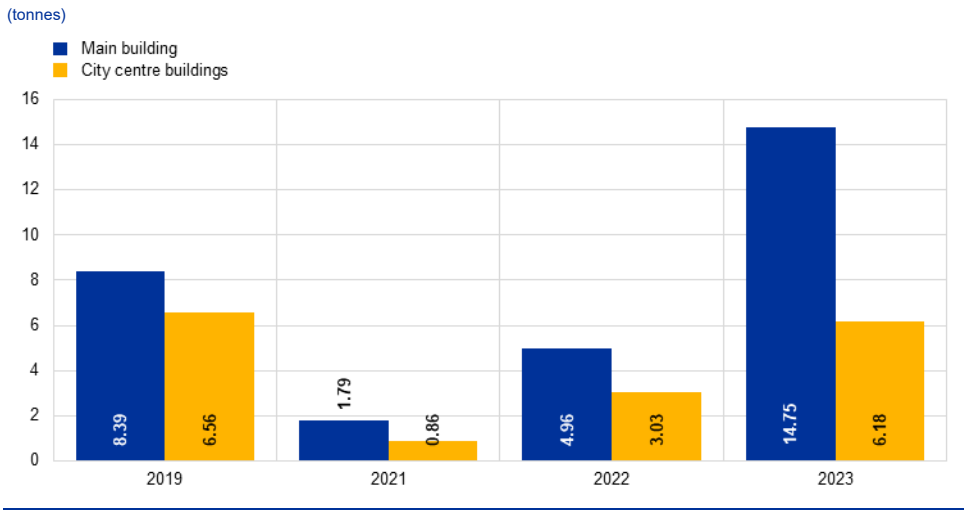


Source: ECB.
Notes: Results for 2019 are depicted as this is the baseline year for the ECB's long term emission reduction objectives, and for the last three years for which data is available. For results on 2020 performance please see the 2021 update of the ECB's environmental statement.

4.3.3 Cleaning agents

In 2023 the ECB ceased using aqueous ozone, as pandemic-related disinfection requirements no longer applied, and re-introduced microbiological cleaning agents. Consumption of cleaning agents increased significantly compared with 2022, by 197% in the main building and 104% in the city centre buildings, owing to increased occupancy and several large-scale events and conferences. Some of the cleaning agents included in Chart 9 were not consumed in 2023 but were bought as stock mainly for use in 2024.

Chart 9
Cleaning agent consumption



Source: ECB.
Notes: Results for 2019 are depicted as this is the baseline year for the ECB's long term emission reduction objectives, and for the last three years for which data is available. For results on 2020 performance please see the 2021 update of the ECB's environmental statement.

4.3.4 Office supplies

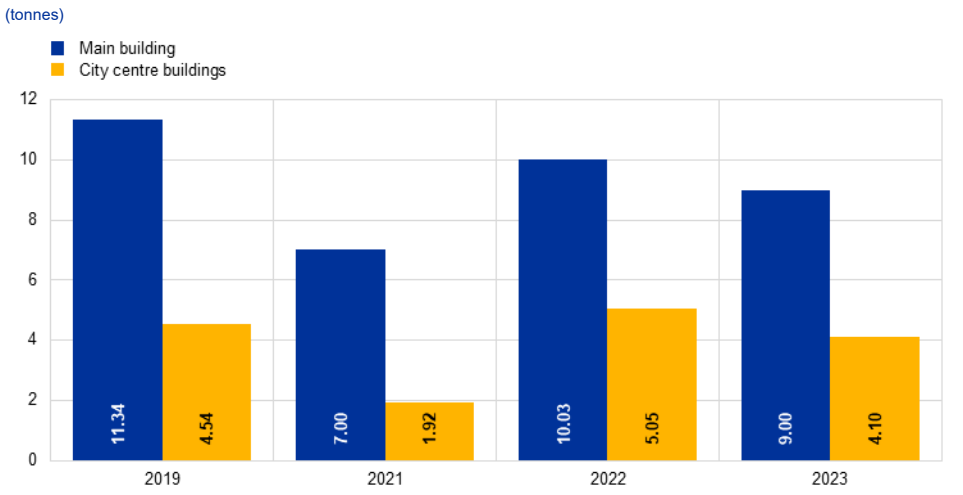
In the ECB's stationery catalogue, eco-labels are displayed to promote environmentally friendly stationary, encouraging staff to choose these items over unlabelled ones. In 2023, 38% of the stationery items in the catalogue were labelled eco-friendly. The ECB is investigating ways of further increasing this share. Employees are urged to return unused stationery and other office materials to the logistics storeroom to enable reuse by other staff.

4.3.5 Chemicals for water treatment and cooling agents

Chemicals used for water treatment decreased by 18.81% in 2023 in the city centre buildings and 10.03% in the main building owing to a reduction in technical water consumption. In the city centre buildings, no cooling agent losses were reported. In the Japan Centre, several cooling machines were replaced, reducing the risk of future leakages. In the main building, cooling agent losses increased by 56.7% compared with 2022 as a result of accidental leakages.

Chart 10

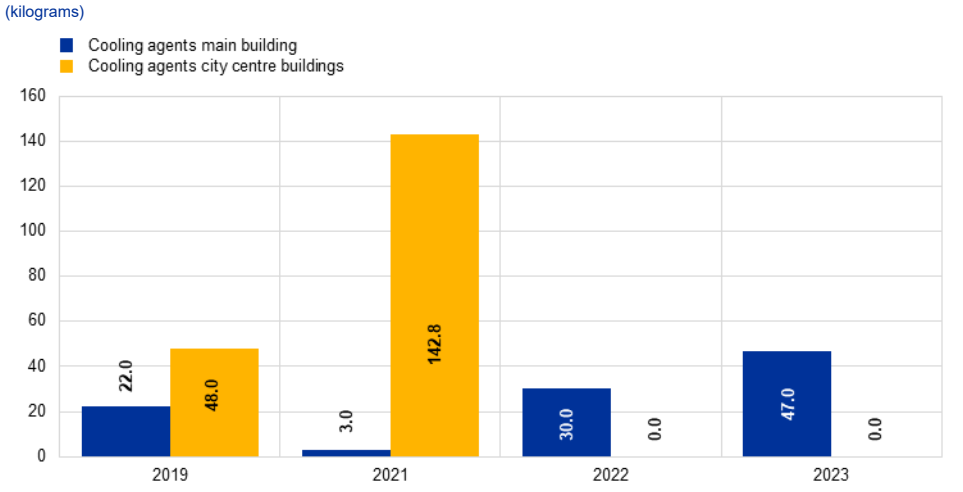
Chemicals used for water treatment



Source: ECB.

Chart 11

Cooling agent losses



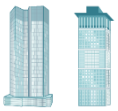
Source: ECB.
Note: Cooling agent losses in the main building were revised from 0.0 kg to 30.0 kg for 2022 owing to losses in 2022 reported retrospectively. Results for 2019 are depicted as this is the baseline year for the ECB's long term emission reduction objectives, and for the last three years for which data is available. For results on 2020 performance please see the 2021 update of the ECB's environmental statement.

4.4 Water and waste water

The ECB monitors technical and non-technical water consumption on its premises. Technical water consumption covers water used for temperature control in the buildings. Non-technical water consumption includes the amount of water used for

processes in kitchenettes, canteens and sanitary facilities. Additionally, water used for the irrigation of trees on the site of the main building is reported as non-technical water. This needs to be kept in mind when comparing the non-technical water consumption of the main building with that of the city centre premises.

At the main building, fresh water consumption decreased by 15% and technical water consumption by 53% compared with 2022. Non-technical water consumption increased slightly by 5%, partly resulting from the maintenance of green areas. Fresh water consumption tended to level off and decreased significantly by around 65% compared with 2019 thanks to water saving measures such as irrigation bags for trees and not watering green areas during hot summer months.

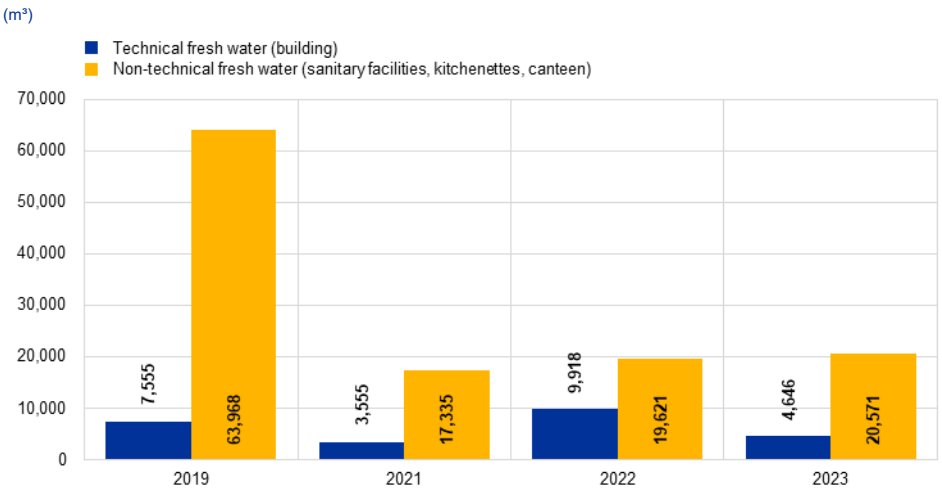


At the city centre premises, fresh water consumption and non-technical water consumption increased by 20.4% and 31.5% respectively compared with the previous year, while technical water consumption decreased by 8.3%. Overall, fresh water consumption increased, reflecting the rise in non-technical water consumption stemming from greater use of staff restaurants in both buildings following the return of staff on-site. This was counterbalanced by the slight decrease in technical water consumption. Non-technical water consumption was 6.3% lower than in 2019 and close to pre-pandemic levels owing to higher occupancy rates.

Details on CO_2e emissions related to water and wastewater are described in the subsection on purchased goods and services in Chapter 3.2 – Indirect emissions.

Chart 12

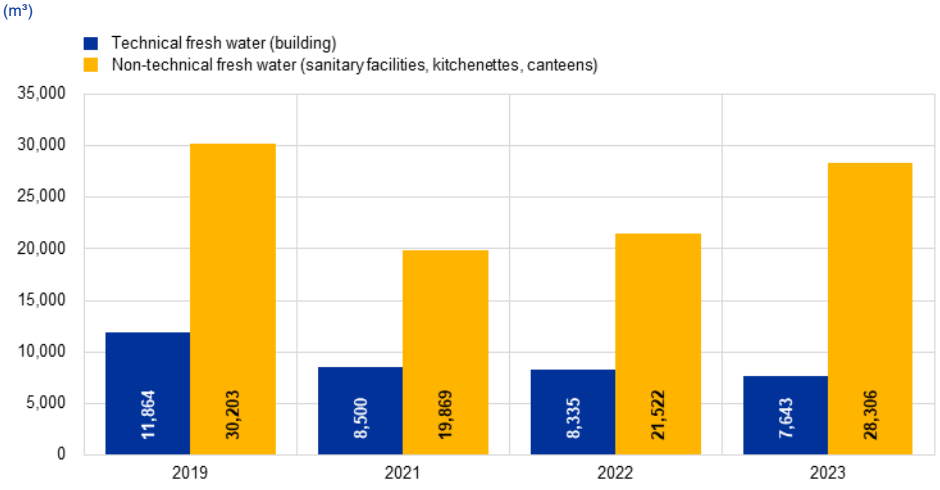
Water consumption – main building



Source: ECB.
Notes: Results for 2019 are depicted as this is the baseline year for the ECB's long term emission reduction objectives, and for the last three years for which data is available. For results on 2020 performance please see the 2021 update of the ECB's environmental statement.

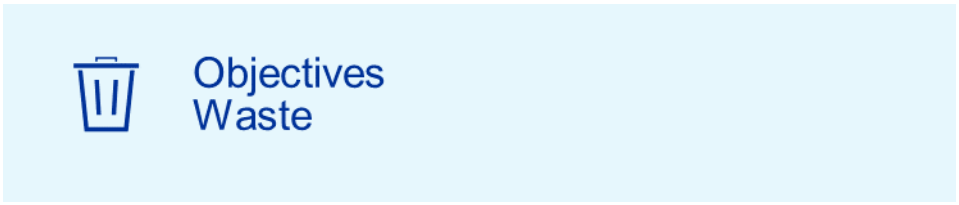
Chart 13

Water consumption – city centre buildings

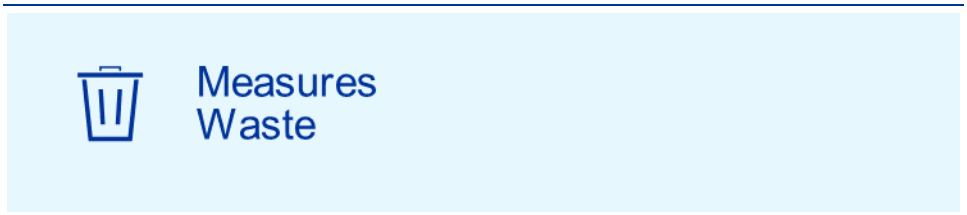


Source: ECB.Note: For more information on greenhouse gas emissions associated with water and waste water, see the section on purchased goods and services in Chapter 4.2 – Indirect emissions. Results for 2019 are depicted as this is the baseline year for the ECB's long term emission reduction objectives, and for the last three years for which data is available. For results on 2020 performance please see the 2021 update of the ECB's environmental statement.

4.5 Waste and recycling



Type of objective/timeline	Objective and status 2023
Short-term: 2023	Reduce the amount of residual waste per workplace by 5% relative to 2018 **Status 2023: -65%**



Measure	Status
Assess possibilities to further harmonise the separate collection of recyclable office waste across buildings	In progress Framework agreements are in place, although implementation is still pending decisions relating to ECB planned relocations
Assess opportunities to centralise the collection of the various types of office waste	In progress The office waste collection set-up in the main building and waste collection in the Japan Center have been optimised. Further improvements to waste collection in the Eurotower are planned. Framework agreements are in place, although implementation is still pending decisions relating to planned ECB relocations
Expand the separate collection of waste to include dedicated arrangements for used coffee grounds	In progress A separate collection of coffee grounds is already available in the main building and the Japan Center, and implementation is being explored for the Eurotower
Replace portioned coffee with coffee beans in the city centre premises and thus avoid unnecessary packaging waste	In progress Implementation in the Eurotower is being explored. Framework agreements are in place although implementation is still pending decisions relating to ECB planned relocation
Reduce packaging waste from stationery	In progress External suppliers bundle orders from the ECB to reduce excess shipping waste; moreover, internally, staff are encouraged to bundle stationary orders for more efficient delivery
Introduce guidelines for waste disposal in contracts with external service providers	In progress Internal working groups have started to develop and implement standard processes which will be included as part of the contract management frameworks for external service providers
Rethink positioning and quantity of shared workplace bins	In progress

Measure	Status
	Reduction of office bins has been proposed and is being assessed. For the time being staff wishing to voluntarily have their bin removed may submit a request.
Inform staff about waste management at the ECB and about waste sorting and zero-waste concepts at the home office	In progress Dedicated and updated information on waste separation at the ECB and in Germany is provided to all newcomers, suppliers and staff. More communication activities are planned for the European Week for Waste Reduction 2023

Note: “Completed” = measure completed; “In progress” = measure in progress; “Pending” = measure still to be implemented.

Overview
Waste and recycling at the ECB

In order to achieve the target of a 5% reduction in residual waste per workplace relative to 2018, measures encouraging waste avoidance and reduction were in place, including awareness raising activities. The ECB significantly outperformed its target with a reduction of 65%, thanks to these measures in combination with increased teleworking and therefore a reduced staff presence on-site compared with 2018.

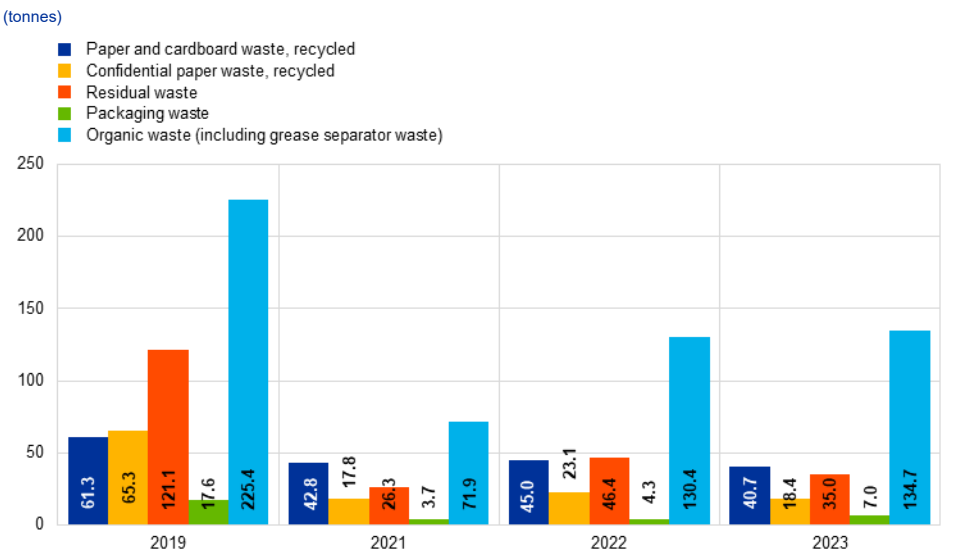
Total waste amounted to 558 tonnes in 2023, a slight increase of 5% compared with 2022. This increase was largely expected given the presence of more staff on-site in 2023 relative to 2022. 97% or 541 tonnes of waste was non-hazardous. This included plastic packaging, organic waste, residual waste, confidential paper waste as well as paper and cardboard. The remaining 3% or 16.7 tonnes of waste was hazardous and included electronic waste (13.9 tonnes) and other hazardous waste (2.8 tonnes), which consisted of waste from construction works and batteries. The ECB donates some IT equipment, allowing old devices to be reused, which contributes to reducing IT waste streams.

Total waste generated at the main building decreased by 17% relative to the previous year. The waste fractions of packaging and organic matter including grease separator waste increased by 62.4% and 3.3% respectively compared with 2022, owing to increased use of the canteens. The waste fractions of paper and cardboard, confidential paper, and residual waste were reduced by 9.5%, 20.5% and 24.5% respectively. Compared with 2019 (pre-pandemic), the ECB has managed to keep the total amount of waste at the main building consistently low, achieving a decrease of 51.4%.

Total waste generated by the city centre premises increased by 40.1% compared with 2022. The rise was driven by increases in residual waste (+76.7%), packaging waste (+57.8%) and organic waste including grease separator waste (+39.1%). This trend was offset by reductions in paper and cardboard waste (-2.7%) and confidential paper waste (-11.9%). Relative to 2019, the ECB reduced total waste at its city centre premises by around 26.4%.

Chart 14

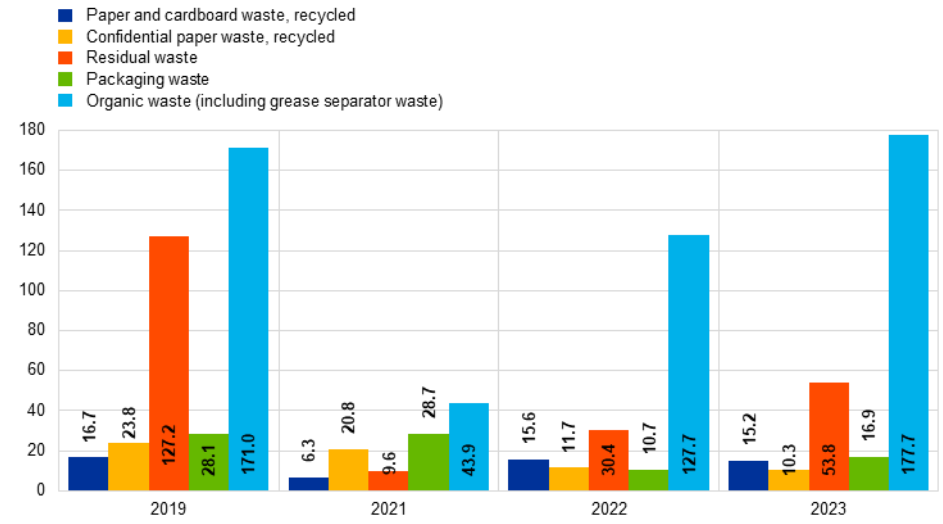
Waste and recycling – main building



Source: ECB.
Note: In the "2023 update of the ECB's Environmental Statement" the chart showing the main building waste fractions was accidentally reported under the city centre waste fractions heading and vice versa. Results for 2019 are depicted as this is the baseline year for the ECB's long term emission reduction objectives, and for the last three years for which data is available. For results on 2020 performance please see the 2021 update of the ECB's environmental statement.

Chart 15

Waste and recycling – city centre buildings



Source: ECB.
Note: For more information on greenhouse gas emissions associated with waste, see Chapter 4.2 – Indirect emissions. Results for 2019 are depicted as this is the baseline year for the ECB's long term emission reduction objectives, and for the last three years for which data is available. For results on 2020 performance please see the 2021 update of the ECB's environmental statement.

Table 1

Breakdown of waste types in accordance with the German Commercial Waste Ordinance

	Commercial waste	Waste amounts in 2023 (tonnes)
ECB total	Organic waste	137.59
	Residual waste	88.81
	Paper waste	84.6
	Packaging waste	16.93
	Glass waste	11.34
	Bulky waste	1.63
	Packaging waste (wood)	9.36
Total waste as per Commercial Waste Ordinance	**Total commercial waste**	**350.26**

Notes: Waste amounts displayed in Table 1 partly differ from the amounts displayed in Charts 14 and 15 owing to the different categorisation of waste under the Commercial Waste Ordinance: organic waste does not include grease separator waste; packaging waste does not include packaging waste disposed of via the German dual system "Der Grüne Punkt"; and paper waste includes both paper and cardboard waste as well as confidential paper waste.

In 2023 total waste as defined by the German Commercial Waste Ordinance amounted to 350.26 tonnes. As part of this, separately collected commercial waste (excluding residual waste) amounted to 261.5 tonnes, which represents 75% of total waste in 2023 according to the Commercial Waste Ordinance. Residual waste is pre-sorted and disposed of at a certified treatment plant.

4.6 Biodiversity

Overview
Biodiversity at the ECB

Over the course of 2023 the ECB further expanded its concept of biodiversity, which guides landscaping activities on ECB premises. At the heart of this concept are: preserving and fostering biodiversity, species conservation and a sustainable approach to the management of green areas. In practice, the approach is to let the green areas evolve in a natural way and only intervene minimally. For example, mowing of the green areas has been significantly reduced, from 16 times a year to once a year. When mowing was necessary alternating strips were cut, with two-week breaks in-between to preserve habitats for insects. Moreover, wilted flowers are being left in place long enough to allow their seeds to spread naturally and any larvae they may contain to develop. Nature-oriented areas on ECB premises have been expanded by replacing gravel areas around trees with native perennial flowers. These flowers have been specifically selected to be insect-friendly, as well as heatwave and drought-resistant. The constant efforts in this vein by the ECB staff responsible for landscaping and green care, supported by landscape architects and biodiversity experts, have helped the ECB grounds to become a haven for various insect species and wild bees.

In 2021 the City of Frankfurt's environmental office published plans for the city's species and biotope conservation scheme, revealing that the area around the main building is listed as a dry biotope. Looking to the future, efforts to maintain and develop our landscaping concept and approach will be tailored towards preserving this environment in its natural state.

Several biodiversity measures introduced in previous years on the ECB grounds were continued in 2023. Fallen leaves from trees are piled up and left on the ground to provide shelter, building materials and food for various species. To reduce water consumption, the roof of the Grossmarkthalle collects rainwater for sanitary use and the roofs of the former dog kennels also collect rainwater, which is used to water the raised beds. Additionally, to protect trees during the dry summer months, special water-retaining bags are placed around them. This also helps reduce the amount of water needed to sustain them. While the biodiversity objective was achieved in 2023, these efforts will continue in 2024 and new objectives and supportive measures will be developed for the upcoming Environmental Management Programme (EMP) for 2025-27.

Awareness raising remained an important element of biodiversity-related activities in 2023. Work is under way to set up a dedicated nature trail, including information boards in various areas of interest around the ECB's garden. They will provide

information on measures to enhance species protection and biodiversity on the ECB grounds. Guided tours of the garden also continued in 2023. This offered over 100 colleagues, including members of the Executive Board, the possibility to learn more about the garden's concept, history and role as a haven for various species of wildlife. Additionally, the ECB held a week-long awareness raising event for staff, focusing on the importance of biodiversity and how to foster it both in the office setting and at home. For more information on this and other communication and awareness raising activities please refer to Chapter 4.10 – Communication, engagement and awareness raising.

4.7 Banknotes

As part of the Eurosystem's cash strategy, the ECB endeavours to improve the safety and sustainability of euro banknotes throughout the cash cycle.

The ECB and the national central banks (NCBs) of the Eurosystem have the exclusive right to issue banknotes within the euro area. At the end of 2023 there were 29.8 billion euro banknotes in circulation.

The ECB coordinates, monitors and regulates the design, production and circulation of euro banknotes. The ECB promotes good environmental management and seeks to avoid any risk to the health and safety of the general public, as well as to the workers involved in the production and circulation of euro banknotes. All manufacturers producing euro banknotes and the main raw materials must provide the ECB with copies of their ISO 9001, ISO 14001, ISO 45001 certificates and specific declarations showing that they conform to the applicable standards for quality, environmental, health and safety management, and ethical conduct of business. The ECB also monitors and assesses the environmental impact of the production processes.

The ECB assesses the environmental impact of the Eurosystem banknote supply using a broad scope methodology, the Product Environmental Footprint, while the ECB's operational footprint is calculated using the Greenhouse Gas Protocol framework. The environmental footprint of euro banknotes as payment instrument is very low, i.e. equivalent to 0.01% of the total environmental impact of a citizen. Emissions from banknotes are not included in the ECB's operational carbon footprint, as banknotes are a joint responsibility of the Eurosystem as a whole.

The ECB and Eurosystem NCBs are implementing policies to further reduce the environmental impact of euro banknotes. For example, in 2023 the 3,500 tonnes of cotton fibres used to produce euro banknote paper came from environmentally and socially sustainable sources.

The ECB is engaging with all stakeholders to identify further ways to improve the environmental sustainability of euro banknotes throughout the cash cycle, including the eco-design of future banknotes. In this vein, a series of research and development projects are under way. They aim at improving the environmental sustainability of current and future euro banknotes by (i) increasing their circulation lifetime, (ii) using raw materials with less environmental impact, and (iii) developing more sustainable solutions for their end-of-life treatment.

Detailed information on the environmental impact of euro banknotes is available on the ECB's website in the section on "The euro".

4.8 Green public procurement

Objectives
Green procurement

Timeline	Objective and status 2023
Medium-term – by 2024	Increase the number of green procurement procedures to at least 22.5% of total ECB procurement procedures as an average over the period 2022-24 Status 2023: 22.3%
Medium-term – by 2024	Increase the value of green procurement procedures to at least 25% of the total value of the above-mentioned procurement procedures as an average over the period 2022-24 Status 2023: 21.5%

Notes: The 2023 status only reflects figures for 2023 itself, rather than the three-year average. "Green procurement procedures" means procurement procedures that include environmental considerations (i) in the contract subject matter, (ii) in the technical specifications and requirements, (iii) through environmental selection and award criteria, (iv) by means of contract performance clauses, or (v) through a combination of (i) to (iv). "ECB procurement procedures" means public tender procedures, three/five-quote procedures and direct awards on the basis of Articles 2 and 6 of the ECB's rules on procurement.

Measures
Green procurement

Measure	Status
Regular revision of the sustainable procurement guidelines to include references to products and services covered by updates to the EU Green Public Procurement (GPP) Handbook and relevant criteria	In progress Work on the update started in 2022 and is scheduled to be completed and formally approved in mid-2024
Include environmental requirements in the tender procedure for catering and implement related key performance indicators to monitor and steer suppliers' performance over time	Completed Environmental considerations were included in the tender procedure for the new catering supplier concluded in the fourth quarter of 2023 Relevant key performance indicators included monitoring and steering performance over time as part of the service level agreement
Organise a sustainable procurement open day to raise general awareness on sustainable procurement features, challenges and opportunities	Completed Event took place as planned on 22 November 2023
Review and, if need be, update the ECB's procurement handbook, as well as procurement templates, in order to facilitate wider use of sustainable procurement practices across most procurement categories	In progress The procurement templates are to be revised by mid-2024
Review and adapt procurement training products in order to place additional focus on empowering ECB staff to apply and strengthen sustainable procurement practices (i.e. green/social technical specifications, selection and award criteria, contract performance clauses, etc.)	Completed A dedicated classroom training module on sustainable procurement was launched in 2023, with two training sessions held in September 2023 and two more planned for 9 July 2024 and October 2024
Improve environmental and social aspects of temporary residences for ECB staff	Completed Framework agreements including improvements in environmental and social aspects have been finalised and apply as of May 2024

Note: "Completed" = measure completed; "In progress" = measure in progress; "Pending" = measure still to be implemented.

Overview
Green procurement at the ECB

In line with its environmental commitment, the ECB continues to use green public procurement as a tool to mitigate the environmental impact of its operational activities. It embeds environmental considerations in ECB procurement procedures and contracts, particularly in areas with substantial environmental impact, such as cleaning, catering and facility management services. This approach extends beyond mere compliance, encompassing efforts to influence the entire lifecycle of procured goods and services, including production, delivery and performance. Furthermore, the ECB recognises the pivotal role of procurement in advancing its broader approach to environmental management activities: leveraging its purchasing power to drive sustainability across its value chain while encouraging best practices within its operations.

In 2023 the ECB conducted 233 new procurement procedures, of which 52, or 22.3%, are considered "green procurement procedures" that include environmental considerations. This represents a 4.3% increase since 2022. At the same time, the total value of new green procurement procedures is 21.5% of the total value of all

new procurement procedures in 2023, which represents a 5.5% decrease from 27% in 2022.

The full implementation of electronic procurement and contract management processes led to significant improvements in their environmental impact. It brought about a significant reduction in the consumption of paper, printing consumables and packaging materials, as well as emissions from business travel and the shipping of documentation. In 2023 all 79 three/five-quote procedures and 51 public tender procedures were conducted fully electronically using the ECB's e-tendering platform, supported by other electronic means of communication and document submission. This also extended to fully digitising contract documentation, as electronic signatures have become the standard approach; contracts are now made and archived in electronic format only. In 2023 most purchase orders and outcome letters were also signed digitally by the ECB and its suppliers. Moreover, a significant number of contracts, in particular for diverse consultancy services, allow for the full or partial remote/virtual performance of the deliverables by the contractors. The ECB also continues to hold contract and vendor management meetings in a virtual format. These means of contract performance and management considerably reduce emissions from related business travel.

Including environmental considerations in procurement procedures, conducting them in an environmentally conscious way, and implementing training courses and awareness raising on green procurement all formed an integral part of the ECB's holistic approach to green public procurement. In 2023 a green procurement awareness day took place and all ECB staff were invited to discuss the relevance of environmental criteria for procurement procedures and to learn about the tools at their disposal. The event was attended either physically or virtually by 50 ECB procurement practitioners. The Central Procurement Office plans to hold similar events again in the coming years.

In addition, the ECB engages with other European institutions on a joint Green Public Procurement Helpdesk (GPP Helpdesk). This Helpdesk enables institutions to further develop their green procurement approach by providing a platform for exchanging relevant information on best practices and market knowledge.

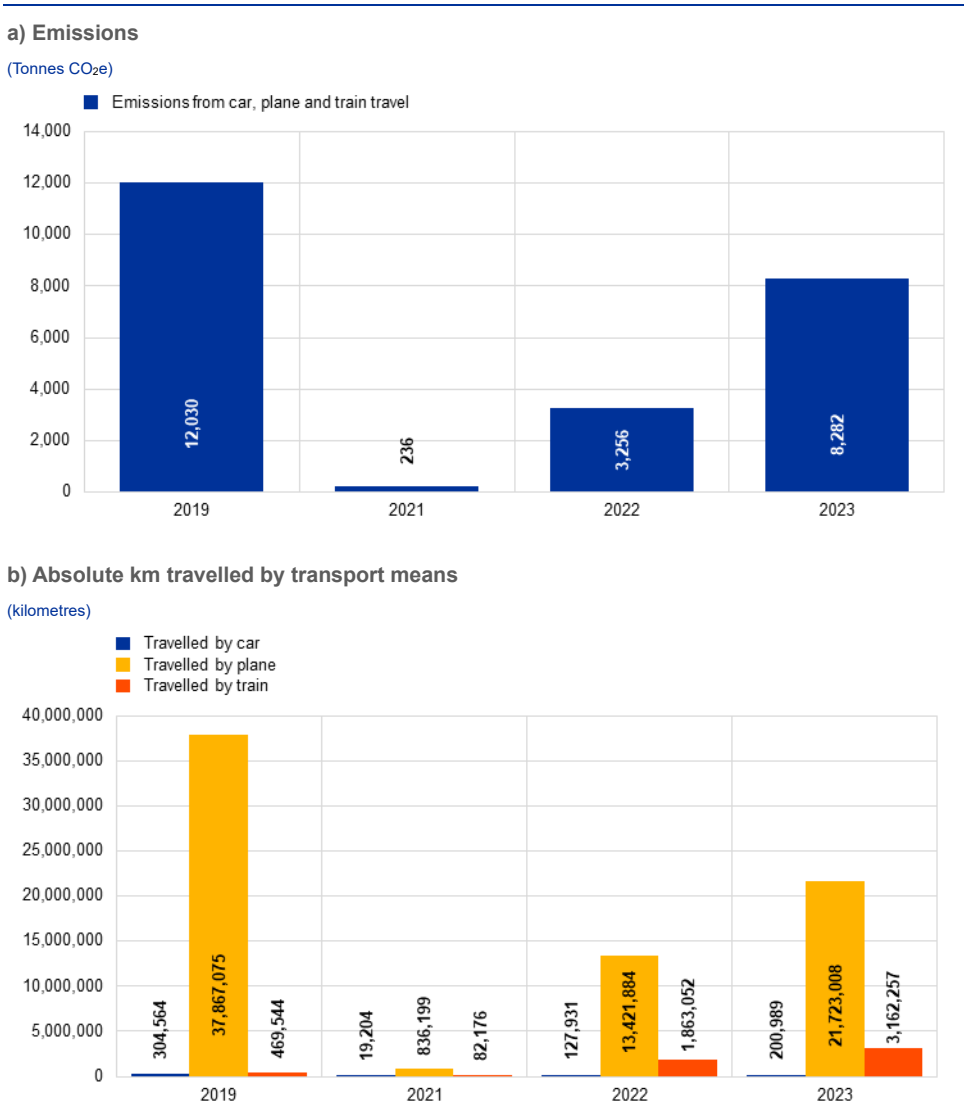
4.9 Travel

Travel activities, including business travel and other travel-related services, increased significantly in 2023 compared with the past three years. Notably, this was the first full year without any travel restrictions following the pandemic. In 2023 ECB staff travelled a total distance of 26,365,753 kilometres for work. This represented a 65% increase relative to 2022 but is still 34% lower than the level in 2019. In terms of carbon emissions, travel-related emissions also remained below their 2019 levels,

accounting for 8,281 tonnes CO_2e[11]. While this represents an almost threefold increase in emissions relative to 2022, it remains 31% lower than in 2019. As in previous years, air travel is the largest emission source, contributing 98% of total business travel-related emissions in 2023.

Chart 16

Emissions from business travel by car, plane and train and absolute number of kilometres travelled



Source: ECB.
Note: Results for 2019 are depicted as this is the baseline year for the ECB's long term emission reduction objectives, and for the last three years for which data is available. For results on 2020 performance please see the 2021 update of the ECB's environmental statement

The changes in carbon emissions in 2023 have also been exacerbated by significant increases in travel-related emission factors published by DEFRA.[12] On average these increased by 30% in 2023 relative to 2022, considering all flight classes. This implies that, while the objective for travel-related emissions was not met for 2023,

11 Including radiative forcing for aviation and well-to-tank emissions for air and motor vehicle travel.

12 Department for Environment, Food and Rural Affairs.

the measures put in place to reduce overall travel have proven effective to a certain extent. The number of kilometres travelled in 2023 is only 66% of the 2019 level.

The observed increases in travel in 2023 had been largely expected since 2022, owing to the lifting of pandemic-related restrictions. Aiming to mitigate the emissions stemming from this rebound effect, the ECB introduced targeted objectives and measures as part of its EMP. They included the revision of internal travel rules to make train travel the default option both within Germany and for certain international destinations.

Thanks to more accurate travel agency data, the ECB retrospectively adapted its business travel emissions and is now able to evaluate its plane travel in more detail. Specifically, information on the flight class for each trip became available. This enabled the use of flight class-specific emission factors, resulting in a more accurate calculation of the environmental impact stemming from plane travel. This enhancement of the methodology is in line with the continual improvement mindset which guides the ECB's approach to environmental management. Emissions were therefore recalculated using the flight-specific emission factors for the years 2021 to 2023. However, this improvement created a comparability issue, given that this level of detail was not available for 2019 and 2020. Therefore, revised figures for 2019 and 2020 emissions were computed using data for 2021-23. First the difference was calculated between emissions based on the previous emission factors and according to the new flight class-specific emission factors for each flight category (domestic, long-haul, etc.). Subsequently, each flight category was assigned a weight based on its CO_2e contribution to total aviation-related emissions for each year. This allowed the computation of a weighted average of the emissions increase, which was applied in order to adjust the 2019 baseline and the 2020 emissions for the new emission factors.[13]

Much like the resumption of travel by ECB staff, the number of conferences at the ECB continued on the upward trend observed in 2022. This accounted for 4,091 tonnes CO_2e in 2023, representing a more than two-fold increase from 2022, but a 62% reduction relative to 2019. This drastic reduction in conference-related emissions meets the objective of limiting physical meetings and conferences with external participants to 50% of planned meetings over a two-year period (2023-24). The availability of advanced hybrid technology in meeting rooms at the ECB has greatly facilitated progress in this area, together with business areas' commitment to complying with the new rules. Moreover, to mitigate the impact of the physical conferences that do take place, an internal sustainable events guideline is available to all staff. For further details on the progress towards travel-related objectives and measures, see Chapter 3 – The ECB's carbon footprint.

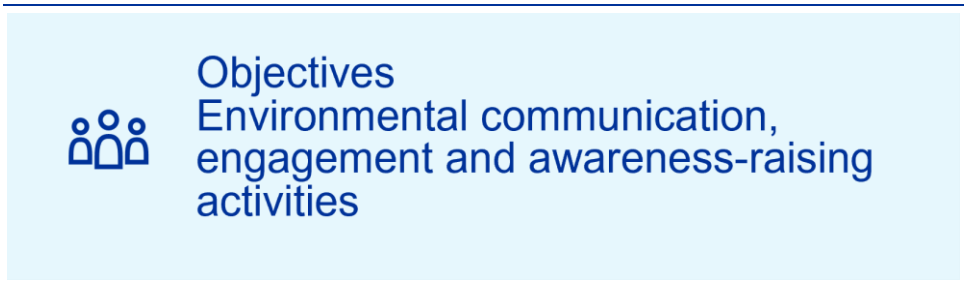
Staff commuting and teleworking emissions[14] are based on a survey conducted every two years. It was last launched in summer 2023, after the new teleworking regime came into effect allowing teleworking for up to 110 days per calendar year

[13] Based on this calculation 53% was retrospectively added to aviation-related emissions for 2019, with the aim of aligning past data with the more accurate methodology.

[14] The teleworking emissions are calculated as incremental energy use whenever teleworking takes place.

(around 50% of working time).[15] Given the inherent disadvantages of survey-based approaches, this emission source is subject to a higher degree of uncertainty and as such should be interpreted cautiously. For the latest iteration of the survey and ensuing calculations, several enhancements were introduced to improve the accuracy of these calculations. They included factoring in the aggregate number of staff away on business travel. In 2023 emissions stemming from staff commuting to ECB premises increased by 15% relative to 2022. Despite that increase, emissions from staff commuting and teleworking decreased by 42% overall compared with 2019. This was due to emissions from teleworking decreasing by 38% in 2023 relative to 2022, accounting for 393 tonnes CO_2e. As in previous years the largest share of teleworking-related emissions stemmed from heating consumption, which accounted for 72% of this emission source. These developments are explained by the increased on-site presence after the lifting of pandemic-related restrictions and the introduction of the new teleworking regime. Greenhouse gas emissions from staff commuting and teleworking are outlined in Chapter 3.2 – Indirect emissions.

4.10 Communication, engagement and awareness raising



Timeline	Objective and status 2023
Medium-term – by 2024 (new)	Foster interinstitutional collaboration by holding at least two virtual meetings a year of the Environmental Network of Central Banks (ENCB) (Replaces previous objective: "Gaining commitment of all ESCB national central banks (NCBs) to participate in interinstitutional collaboration on environmental management by 2020") **Status 2023: Completed (two virtual ENCB meetings took place in 2023)**

Note: "Completed" = measure completed; "In progress" = measure in progress; "Pending" = measure still to be implemented; "New" = measure was introduced with the new EMP.

15 From May to December 2022 a transition phase was in place during which staff gradually returned to the office. A minimum on-site presence of eight days per month was required.

Measures
Environmental communication, engagement and awareness raising activities

Measure	Status
Assess possibilities and implement changes to improve internal communication with Environmental Representatives	Completed Based on feedback from the Environmental Representatives, a dedicated MS Teams channel was rolled out, allowing the network to engage in a more informal manner and facilitating cooperation and communication.
Introduce climate change training for all staff	Completed Training was made available to all ECB staff in the second quarter of 2023 and was made mandatory for all newcomers as of the fourth quarter of 2023

Note: “Completed” = measure completed; “In progress” = measure in progress; “Pending” = measure still to be implemented; “New” = measure was introduced with the new EMP.

2023 was a very successful and active year in terms of the ECB’s environment-related communication and awareness raising activities. Numerous events for staff were held both virtually and physically. In contrast to previous years 2023 provided more opportunities for staff to attend physically on account of the lifting of pandemic-related restrictions.

In March 2023 the ECB showed its support for Earth Hour for the 12th consecutive year. During this hour all non-essential lights were switched off across all three main ECB premises, in addition to the regular evening switch-off schedule. This event raises awareness of the challenges posed by climate change and encourages individuals to take time to reflect on what they can do to live a more sustainable lifestyle. For the occasion, the ECB’s caterers provided climate-friendly recipes for staff to prepare at home.

Further consolidating the ECB staff’s knowledge of climate change and the associated impacts and risks was a vital objective of the communication and awareness raising activities in 2023. For this reason, a self-paced e-learning course was rolled out to ECB staff in April 2023. This course sets out what climate change is and highlights the importance of the ECB’s role in tackling it. Moreover, the course introduces staff to the ECB’s EMS and how they can help make the ECB a more environmentally sustainable institution. It was made mandatory for all newcomers.

Additionally, in May 2023 the ECB held its second Biodiversity week. This had first been celebrated in 2021. The event was created to raise awareness about the importance of biodiversity, highlight current threats and issues and promote environmentally-friendly behaviour among ECB staff to support the ECB’s biodiversity related objectives. This week-long event included various activities. A

photo competition encouraged staff to submit images highlighting the beauty and importance of biodiversity, while an expert talk discussed the path towards a nature-based economy. Moreover, an online biodiversity trivia quiz was created to test ECB staff's knowledge of biodiversity measures at the ECB and provide them with relevant information. As a highlight of the week, various guided tours of the garden at the main building were offered to staff so they could learn more about the biodiversity measures implemented on ECB premises. Lastly the ECB's urban gardening section gave a presentation focusing on how staff could transform their balconies or gardens into a space to support the local ecosystem.

In early June 2023, shortly after the Biodiversity week, the ECB celebrated the United Nations' World Ocean Day for the very first time. This was intended to raise awareness of the importance of the oceans and the need to protect them. For this event, various resources were compiled to help staff inform themselves about concrete measures they could take in their daily lives to help keep the oceans clean.

In the last quarter of 2023 communication and awareness raising activities focused on events organised by other European institutions. European Mobility Week was celebrated in September, followed by the European Week for Waste Reduction in early November. These events, organised by the European Commission, help highlight the "collective action" mentality necessary to effectively fight climate change and reduce environmental degradation. During these events, relevant information was provided to staff on the importance of sustainable mobility options and the need to reduce the amount of packaging and waste generated. Additionally, staff were made aware of other resources available to them to facilitate progress on these issues.

As the last major communication and awareness raising event of the year, the ECB participated in the organisation of the Interinstitutional EMAS Days, which took place in late November. During this three-day event, numerous EMAS-registered EU institutions came together to organise a series of thematic panel discussions. These covered a wide range of topics, such as climate neutrality strategies and the energy efficiency of EU buildings. For this event, the ECB, the European Commission's Joint Research Centre and the General Secretariat of the Council of the EU held a joint session on introducing energy saving measures for their premises. During this session, lessons learned since introducing energy saving measures in autumn 2022 were shared with the audience, together with a general overview of the ECB's future plans in this context. In addition, the session focused on providing tools and tips on how best to communicate such measures to stakeholders.

As highlighted by the Interinstitutional EMAS days, collaboration with other European institutions and central banks from the Eurosystem plays a key role in the development of the ECB's EMS. These interactions focus on the exchange of best practices and expertise on environmental management. In 2023 the ECB again made such exchanges a priority, given the fruitful outcomes to date. Interinstitutional collaboration is primarily fostered through two networks. First, the Environmental Network of Central Banks (ENCB) provides a platform for collaboration between teams working on environmental management topics across central banks in Europe. Second, the Interinstitutional Group for Environmental Management (GIME)

fosters collaboration among EMAS-registered European institutions. Additionally, the ECB exchanges information with peer institutions on an ad hoc basis, further increasing its capacity to expand its knowledge and implement best practices.

Activities on the maintenance and development of the EMS are also facilitated by the network of Environmental Representatives. They play a fundamental role in raising awareness on environmentally relevant topics within their business areas, given their function as ambassadors of the EMS. As such, they act as the principal point of contact between their respective business areas and the environmental management team, consisting of the Green ECB team and the ECB's Environmental Coordinator. In 2023 Environmental Representatives organised individual communication and awareness raising activities for their own business areas. These events combined teambuilding with topics of environmental relevance, for example through visits to zero-waste shops or community clean-ups.

5 Technical information

The previous chapters describe objectives, measures and developments concerning the environmental aspects the ECB has identified as most significant. This chapter presents additional information in line with the requirements of the EMAS Regulation[16].

Workplace overview

Number of workplaces	2021	2022	2023
Main building	2,982	2,993	3,064
City centre buildings	2,332	2,356	2,443

Source: ECB.
Notes: Workplace indicators are reported as a requirement for EMAS. It should be noted that a slight bias exists compared with pre-pandemic years owing to the updated teleworking policies. Not all workplaces are occupied on a day-to-day basis. Thus, workplace indicators do not fully represent actual developments.

5.1 Updates to conversion factors

The following table shows percentual differences in CO_2e emission conversion factors used for the calculation of 2022 and 2023 emissions. Further information can be found in Chapter 4. The ECB integrates available updates on emission factors into its reporting on an annual basis. The following only presents year-on-year differences in factors where the most recent figure has changed more than 5% compared with the previous year. The table makes underlying changes in emission factors transparent, which helps improve measurement of the carbon footprint.

[16] Regulation (EC) No 1221/2009 of the European Parliament and of the Council of 25 November 2009 on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS) (OJ L 342, 22.12.2009, p. 1).

Conversion factor updated	Source	Change 2022-23
Cooling agents – Emissions scope 1		
R134a	2023 Guidelines – DEFRA/Department of Energy and Climate (DECC) Greenhouse Gas Conversion Factors for Company Reporting	-9.1%
R407c		-8.5%
R410a		-7.9%
Energy – Emissions scope 3		
Biogas	2023 Guidelines – DEFRA/DECC's Greenhouse Gas Conversion Factors for Company Reporting	12.4%
Business travel – Emissions scope 3		
Medium car (battery electric vehicle)	2023 Guidelines – DEFRA/DECC's Greenhouse Gas Conversion Factors for Company Reporting	8.0%
Public transport	TREMOD 6.51 Umweltbundesamt 01/2024	-21.3%
Rail travel – short distance		-37.6%
Rail travel – long distance		-32.6%
Air travel – domestic	2023 Guidelines – DEFRA/DECC's Greenhouse Gas Conversion Factors for Company Reporting	23.8%
Air travel – continental – business and economy class		35.2%
Air travel – international – economy, premium economy, business and first class		6.9%
Air travel – intercontinental – economy, premium economy, business and first class		51.1%
Business travel – WTT emissions		
WTT medium car (battery electric vehicle)	2023 Guidelines – DEFRA/DECC's Greenhouse Gas Conversion Factors for Company Reporting	-14.7%
WTT medium car (petrol)		-6.0%
WTT small car (petrol)		-6.7%
WTT medium motorbike		-5.7%
WTT air travel – domestic		24.5%
WTT air travel – continental – business and economy class		36.0%
WTT air travel – international – economy, premium economy, business and first class		7.5%
WTT air travel – intercontinental – economy, premium economy, business and first class		52.0%

Location-based emissions

Conversion factor updated	Source	Change 2022-23	CO_2e emissions 2023 ECB's premises (tonnes)
Electricity mix Germany (including upstream emissions)	GEMIS database, version 5.1.0	6.9%	10.769,1
District heating mix Germany	GEMIS database, version 5.1.0	n/a	2,014.1

5.2 Workplace-based environmental performance indicators 2021-23

Energy consumption	Performance indicators per workplace (kWh/workplace/year)	2021	2022	2023
ECB total	Electrical energy per workplace	5,524	5,670	5.296
	Heating and cooling energy per workplace	4,651	3,761	3,286
	Total energy premises per workplace	10,175	9,431	8.581
Main building	Electrical energy per workplace	6,045	6,232	5.750,0
	Heating and cooling energy per workplace	2,908	2,380	2,040
	Process energy per workplace	18	31.4	72,4
City centre buildings	Electrical energy per workplace	4,859	4,956	4,726
	Heating and cooling energy per workplace	6,880	5,515	4,848

Office paper consumption	Performance indicators per workplace (sheets of A4 equivalent/workplace/year)	2021	2022	2023
ECB total	Office paper per workplace	1,378	213	1,966

Note: Consumption of other paper products such as letterheads, calendars and notepads, is included.

Water consumption	Performance indicators per workplace (m^3/workplace/year)	2021	2022	2023
ECB total	Total fresh water per workplace	9.3	11.1	11.1
Main building	Non-technical fresh water per workplace (sanitary facilities, kitchenettes, canteen)	5.8	6.6	6.7
	Total fresh water per workplace	7.0	9.9	8.2
City centre buildings	Non-technical fresh water per workplace (sanitary facilities, kitchenettes, canteen)	8.5	9.1	11.6
	Total fresh water per workplace	12.2	12.7	14.7

Waste generation	Performance indicators per workplace [kg/workplace/year]	2021	2022	2023
ECB total	Non-hazardous waste per workplace	53.8	88.6	98.2
	Hazardous waste per workplace	11.97	10.76*	3.03
Main building	Paper and cardboard waste per workplace	14.3	15.0	13.3
	Confidential paper waste per workplace	6.0	7.7	6.0
	Residual waste per workplace	8.8	15.5	11.4
	Packaging waste per workplace	1.2	1.4	2.3
	Organic waste (including grease separator waste) per workplace	24.1	43.6	44.0
City centre buildings	Paper and cardboard waste per workplace	2.7	6.6	6.2
	Confidential paper waste per workplace	8.9	5.0	4.2
	Residual waste per workplace	4.1	12.9	22.0
	Packaging waste per workplace	12.3	4.6	6.9
	Organic waste (including grease separator waste) per workplace	18.8	54.2	72.7

Notes: *The performance indicators for hazardous waste per workplace for 2022 were adjusted on the basis of an improvement in the monitoring and reporting process. The hazardous waste indicator for 2022 changed from 9.53 kg to 10.76 kg.

Emissions of CO_2 equivalents	Performance indicators per workplace [kgCO_2 equivalent/workplace/year]	2021	2022	2023
Direct emissions – scope 1	Direct emissions – scope 1	583.5	47.4*	38.9
	Fuels	27.4	25.4	21.6
	Natural gas	516.7	0	0
	Cooling agent losses at ECB premises	39.4	22.0*	17.2
Indirect emissions – scope 2	Indirect emissions – scope 2	413.6	450.9	420.7
	Electrical energy consumption at ECB premises	n/a	n/a	n/a
	Heating and cooling of ECB premises	413.6	450.1	420.0
	Biogas	0.004	0.796	0.717
Indirect emissions – scope 3	Indirect emissions – scope 3	2,041.7*	2,618.1*	4,105.8
	Business travel	48.5*	659.3*	1,585.5
	Staff commuting and teleworking	429.7	330.0	308.1
	Building construction amortisation	838.7	833.2	809.3
	Upstream energy	347.8	119.9	118,1
	Conference participants travel	0.6	220.6	742.9
	Waste	1.2	1.7	1.6
	Purchased goods and services	180.9	234.0	321.0
	Other assets (furniture, IT devices)	194.4	219.4	219.1
Total CO_2e emissions per workplace	**Total CO_2e emissions per workplace**	**3,039***	**3,116***	**4.565**
Outside of scope emissions	**Biogas**	**2.0**	**414.3**	**375.5**

Notes: *Total scope 1 emissions per workplace in 2022 changed from 25.4 kg to 47.4 kg CO_2e emissions due to retrospectively reported cooling agent losses (adjusted from to 0 to 22.0 kg). Total scope 3 emissions changed from 2,031.6 kg to 2,041.7 kg CO_2e emissions in 2021 and from 2,527.2 kg to 2,618.1 kg in 2022 due to more granular data used for the calculation of business travel emissions. Business travel emissions were adjusted from 38.3 kg to 48.5 kg CO_2e emissions in 2021 and from 568.4 kg to 659.3 kg in 2022. This resulted in changes in total CO_2e emissions per workplace in 2021 and 2022.

Air emissions	Performance indicators per workplace (kg/workplace/year)	2021	2022	2023
Air emissions	SO_2 per workplace	0.004	0.003	0.003
	NOx per workplace	0.146	0.131	0.123
	PM per workplace	0.015	0.013	0.012

Air emissions	Total air emissions (tonnes)	2021	2022	2023
Air emissions	SO_2	0.02	0.02	0.02
	NOx	0.77	0.70	0.68
	PM	0.08	0.07	0.07

Biodiversity	Land use (ha)	2021	2022	2023
Land use main building	Total land use	11.9	11.9	11.9
	Sealed area	4.6	4.6	4.6
	Unsealed area	7.3	7.3	7.3
	Nature-oriented area	6.5	6.5	6.5
Land use city centre buildings	Total land use	0.7	0.7	0.7
	Sealed area	0.5	0.5	0.5
	Nature-oriented area	0.2	0.2	0.2

5.3 Uncertainty assessment of the ECB's carbon footprint 2023

Category	Scope		Details	Certainty ranking	Comments
Energy	1, 3		Car fleet	Very good	data: very good (internal reports); factor: very good (GEMIS[1])
	1, 3		Emergency unit	Good	data: good (amount of refill); factor: very good (GEMIS)
	2, 3		Biogas	Very good	data: very good (meter readings/invoice, certificate); factor: very good (DEFRA[2])
	2, 3		District heating	Very good	data: very good (meter readings/invoice); factor: very good (Mainova)
	2, 3		Electricity from renewable – wind	Very good	data: very good (meter readings/invoice, certificate); factor: very good (GEMIS)
	2, 3		Electricity from renewable – hydropower	Very good	data: very good (meter readings/invoice, certificate); factor: very good (GEMIS)
Business travel	3		Airplane with RFI and WTT	Good	data: good (travel agency); factor: very good (DEFRA)
	3		Train	Good	data: fair (travel agency and estimates, rail service provider); factor: very good (TREMOD[3])
	3		Car personal	Good	data: good (internal reports); factor: very good (DEFRA)
	3		Hotel stays	Good	data: good (travel agency, no data available concerning the hotel category); factor: good (DEFRA; averages based on DEFRA)
Staff commute	3		Teleworking	Fair	data: fair (survey and extrapolation); factor: fair (general factors from GEMIS, UBA[4])
	3		Staff commuting	Fair	data: fair (survey and extrapolation); factors: good (general factors from DEFRA, TREMOD)
Conference participants	3		Travel of conference participants	Fair	data: fair (internal reports, estimates); factor: very good (DEFRA, TREMOD)
Building construction amortisation	3		Fixed assets – building construction	Fair	data: good (square metres), factor: fair (ADEME[5], not specific)

1) Global Emission Model for Integrated Systems (GEMIS).
2) Department of Environment, Food and Rural Affairs (DEFRA).
3) Transport Emission Model (TREMOD).
4) German Federal Environment Agency (UBA).
5) French Environmental and Energy Management Agency (ADEME).

Category	Scope	Details	Certainty ranking	Comments
Waste	3	Waste	Fair	data: fair (internal reports/invoices, estimates); factor: good (DEFRA, extrapolation based on DEFRA)
Purchased goods and services	3	Catering services	Good	data: good (catering agencies – uncertainties cannot be excluded); factor: good (IFEU17: Klimatarier)
	3	Gardening	Good	data: good (amount of diesel used); factor: very good (GEMIS)
	3	Fresh and waste water	Good	data: good (meter readings and calculations); factor: very good (GEMIS)
	3	Office supplies and stationery	Fair	data: fair (costs); factor: fair (ADEME, value-based)
	3	Cleaning services	Fair	data: fair (costs), factor: fair (ADEME, value-based)
	3	Office paper, paper for publication, and other paper products	Fair	data: good (weight or service provider, minor data gaps cannot be excluded); factor: fair (not specific, IFEU)
	3	Electricity external printing centre	Fair	data: fair (reports and estimates); factor: good (general factor from GEMIS)
	3	ICT Services – videoconferences	Fair	data: good (reports from service providers); factor: fair (Ökoinstitut)
	3	Electricity from data centre	Very good	data: very good (meter reading, certificate); factor: very good (GEMIS)
Other assets (furniture, IT devices)	3	Furniture	Fair	data: good (internal reports, general furniture categories); factor: fair (ADEME, factors not specific to the furniture type)
	3	IT devices	Fair	data: good (internal reports, general IT device categories); factor: fair (ADEME, UBA, factors not specific to all devices)

Note: Changes to the previous certainty ranking are marked in bold.

The following ranking was applied to estimate the uncertainty of the activity data and the emission factors.

17 German Institute for Energy and Environmental Research (IFEU).

Certainty ranking	Uncertainty of activity data	Uncertainty of emission factor
Poor	Activity data are rough estimates, e.g. based on studies or comparable baseline situations.	Emission factors have been determined in a first step, but are still very general, e.g. the emission factor is extrapolated from another factor for a similar process.
Fair	Activity data are available, but incomplete, for example activity data are not available for the whole assessment period and are extrapolated. Evidence for the activity data is incomplete and/or not reliable. Only the costs of the data can be provided.	Emission factors are available, but they are not yet specific and robust. Emission factor is value-based, e.g. kg CO_2e /euro.
Good	Activity data are complete and plausible, evidence is available. Minor uncertainties/data gaps cannot be excluded/avoided but do not have a significant negative impact on the result. The share of assumptions, estimates and calculations is reduced to a minimum, they are comprehensible and plausible and have no significant negative impact on the result.	Emission factors are specific and robust. Final, minor uncertainties cannot be excluded/avoided. Use of averages or calculations based on ADEME, DEFRA, UBA or GEMIS or other non-German databases.
Very Good	Data are complete and plausible, evidence is available, e.g. meter readings or accurate measurements. Uncertainties/data gaps can be excluded. No assumptions or estimations are made.	All emission factors are specific and reliable, e.g. use of provider-specific emission factors or widely known/recognised databases such as ADEME, DEFRA, UBA, GEMIS or other German databases.

5.4 Compliance obligations

The environmental laws the ECB must adhere to are defined by German regulations at both the municipal and the national level. These regulations are consolidated into a register which is maintained by legal professionals at the ECB and subject to regular reviews and updates. Changes and the measures required are closely monitored to ensure full compliance. Most of these legal requirements are centred around the operation and maintenance of the ECB buildings as well as contracted services such as cleaning and catering. Internal environmental audits, conducted annually, serve as comprehensive evaluations of the ECB's adherence to these regulations. The latest assessments found no instances of non-compliance.

Table 2

Relevant areas of environmental legislation and related facilities/activities

Most relevant area of environmental legislation	Relevant facilities/activities
Water regulations	Storage of diesel, storage of cleaning agents, use of oil traps, cooling, waste water discharge into sewerage system
Regulations on climate protection and refrigerants	Cooling installations containing coolants characterised by more than 5 tonnes of global warming potential expressed in tonnes of CO_2 equivalent
Regulations on energy efficiency of buildings	Energy certification, building insulation, energy-efficient technologies
Energy efficiency regulations	Energy audit requirements fulfilled by EMAS
Regulations on health and safety and hazardous materials	Risk assessment, fire prevention, requirements for use of hazardous substances (e.g. acids, lye)
Waste regulations	Separation/recycling/disposal of various types of waste

In addition to its legal obligations concerning the environment, the ECB has other environmental commitments. These concern the Sustainable Procurement Guidelines and the objectives outlined in the EMP. Furthermore, each year numerous communication events are held to raise awareness among staff on environmental issues.

As of 2022 the ECB decided to adopt an internal framework supporting the integration of the objectives of the European Climate Law into the ECB's policies, projects, and activities and also to report on these measures in the ECB's Annual Report. In 2023 this framework was further developed, particularly regarding the inclusion of environmental considerations in the ECB's internal projects.

More information on the ECB's activities connected to climate change within its mandate is available on the ECB website.

For questions on the information presented in this publication, please visit the ECB's contacts page.

6 Environmental verifier’s declaration

The environmental verifier named below confirms that the European Central Bank (ECB) premises at Sonnemannstrasse 20, 60314 Frankfurt am Main, Germany (main building); Taunustor 2, 60311 Frankfurt am Main, Germany (Japan Center); and Kaiserstrasse 29, 60311 Frankfurt am Main, Germany (Eurotower), as described in this Environmental Statement by the ECB with the registration number D-125-00045, meet all the requirements of Regulation (EC) No 1221/2009 of the European Parliament and of the Council of 25 November 2009, as amended by Commission Regulation (EU) 2017/1505 of 28 August 2017 and Commission Regulation (EU) No 2018/2026 19 December 2018, on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS).

Name of the environmental verifiers	Registration number	Approved for NACE sector(s)
Prof. Dr.-Ing. Jan Uwe Lieback	DE-V-0026	64.11 Central banking
Brane Papler	DE-V-0425	

By signing this declaration, it is confirmed that:

- the assessment and validation have been carried out in full compliance with the requirements of Regulation (EC) No 1221/2009 as amended by Commission Regulation (EU) 2017/1505 and (EU) 2018/2026;
- the result of the assessment and validation confirms that there is no evidence of non-compliance with applicable environmental legislation;
- the data and information in this Environmental Statement provide a reliable, credible and accurate picture of all the organisation's activities.

This declaration cannot be equated with EMAS registration. EMAS registration can only be carried out by a competent body in accordance with Regulation (EC) No 1221/2009. This declaration may not be used as a stand-alone piece of public communication.

Frankfurt am Main, 15.07.2024

Prof. Dr.-Ing. Jan Uwe Lieback
Environmental verifier – DE-V-0026

GUT Certifizierungsgesellschaft
für Managementsysteme mbH
Umweltgutachter DE-V-0213
Eichenstraße 3b
D-12435 Berlin

Tel: +49 30 233 2021-0
Fax: +49 30 233 2021-39
Email: info@gut-cert.de

Brane Papler
Environmental verifier – DE-V-0425

GUT Certifizierungsgesellschaft
für Managementsysteme mbH
Umweltgutachter DE-V-0213
Eichenstraße 3b
D-12435 Berlin

Tel: +49 30 233 2021-0
Fax: +49 30 233 2021-39
Email: info@gut-cert.de

Disclaimer

This ECB Environmental Statement provides information to the general public and other interested parties about the environmental performance and activities of the European Central Bank (ECB) in 2022. It can be found on the ECB's website (see the page entitled "Environmental protection at the ECB").

The ECB was first validated under the EU Eco-Management and Audit Scheme (EMAS) in 2010. This Environmental Statement, which is the 15th to be produced within the EMAS validation cycle, is a follow-up to the consolidated Environmental Statement for 2022. It is only complete when read together with this publication and contains updated data for the year 2023.

This Environmental Statement was drafted in line with EMAS standards in accordance with Regulation (EC) No 1221/2009 and the updated annexes of the EMAS Regulation in accordance with Regulation (EC) No 2017/1505

Postal address 60640 Frankfurt am Main, Germany
Telephone +49 69 1344 0
Website www.ecb.europa.eu

For specific terminology please refer to the ECB glossary (available in English only).

PDF ISBN 978-92-899-6813-3, ISSN 2811-695X, doi:10.2866/364262, QB-CY-24-001-EN-N
HTML ISBN 978-92-899-6812-6, ISSN 2811-695X, doi:10.2866/4897, QB-CY-24-001-EN-Q