Europäisches Patentamt
European Patent Office
Office européen des brevets

Environmental Report 2024

Annex to the Annual Review

epo.org

Executive summary

The EPO is shaping its future around sustainability. Our Strategic Plan 2028 (SP2028) pursues the overarching goal of long-term sustainability from environmental, social, governance and financial perspectives.

With respect to our environmental impact, emissions from operations, reported according to the Greenhouse Gas (GHG) Protocol, fell to 3 032 tCO_2e in 2024 (-29% compared with 2023), bringing us closer to our top-level KPI of becoming a carbon-neutral organisation by 2030.

Thanks to the efficient and responsible management of our buildings, their energy consumption decreased by 14% compared with 2023. Leakages of cooling agents were minimal (4 tCO_2e, a historic low).

In November, the Vienna project was completed as planned. Our renovated building in Vienna is designed to provide 50 years of service and be carbon neutral over its entire lifecycle. The related emissions are reported under scope 3 category "Capital goods".

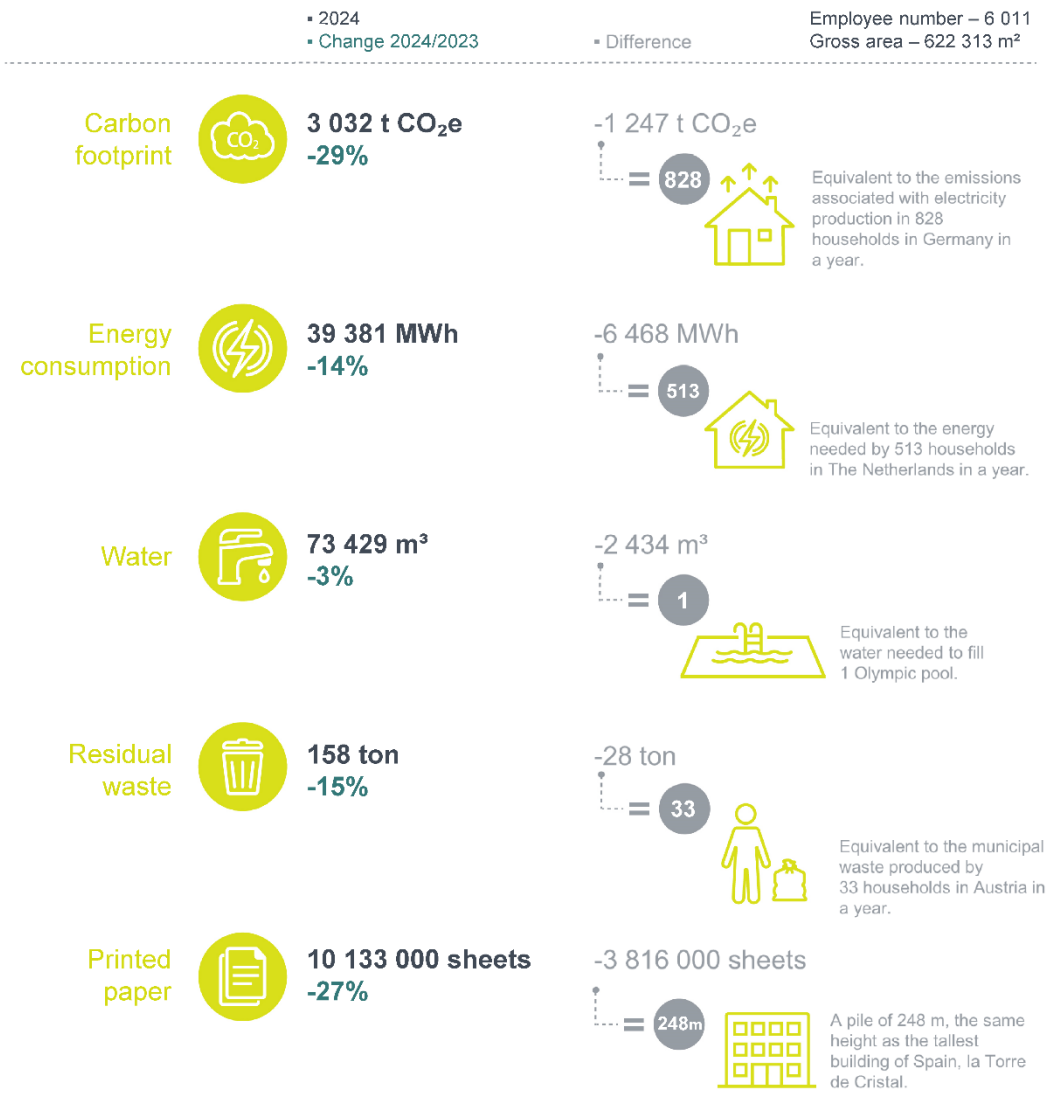
The digital transformation of the patent granting process from paper-based to paperless continues to deliver benefits. In 2024, we printed 10.1 million sheets (-27% compared with 2023).

Green procurement is another pillar of our sustainability efforts. The EPO's new policy on sustainable procurement entered into force in January, supplemented by comprehensive guidelines for its implementation. We also collect data on emissions related to the scope 3 category "Purchased goods and services", in line with our commitment to include all significant emission sources and obtain a complete picture of the climate impact of our operations.

In 2024, we continued to highlight the EPO's efforts to promote innovation in climate change technologies, supporting innovators in their efforts to solve global challenges and contributing to the UN Sustainable Development Goals (SDGs) for a more sustainable world. We focused on SDG 6 "Clean water and sanitation", SDG 7 "Affordable and Clean Energy" and SDG 9 "Industry, innovation and infrastructure". Our activities included the launch of technology platforms to help explore our patent database Espacenet, and the publication of studies and insight reports on emerging trends in innovation relating to water technologies, enhanced electricity grids, and space propulsion.

Looking ahead, we will continue to mitigate the environmental impact of our office buildings across the EPO's sites. We will implement building projects that cut our energy consumption and gradually reduce our carbon emissions over the term of SP2028. In driving digital transformation, we will be mindful of the environmental impact of digital technologies and implement changes to our digital homes that will strengthen our environmental sustainability.

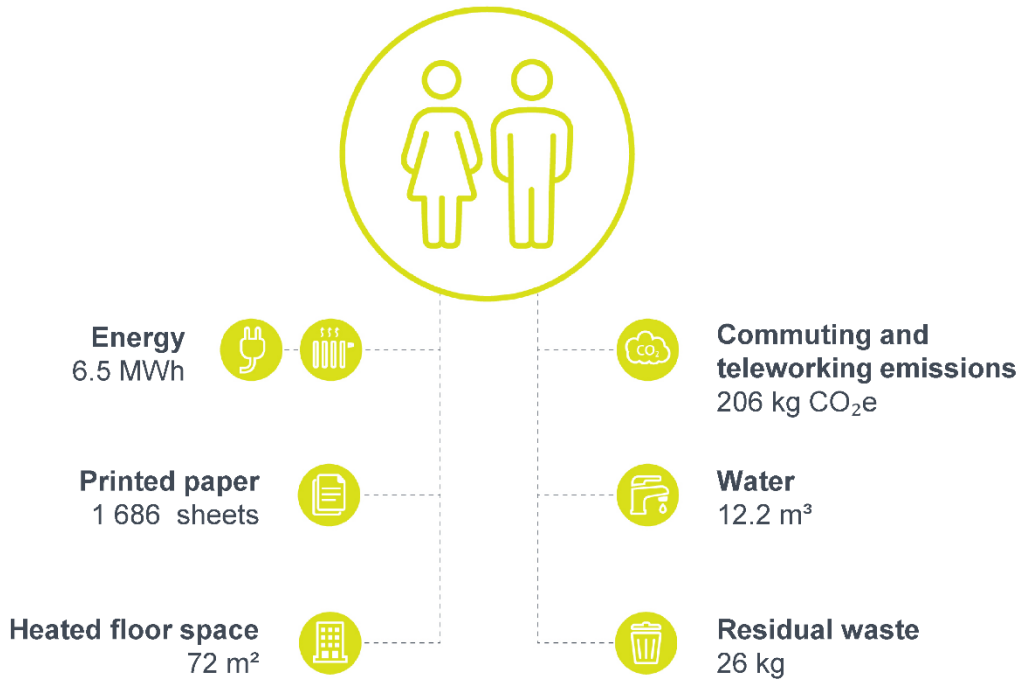
Figure 1 – Key environmental data*



Source: EPO

*In EMAS certified sites (Munich, The Hague and Vienna) and rented sites in Berlin and Vienna.

Figure 2 – Average footprint per staff member in 2024*



Source: EPO

*In EMAS certified sites (Munich, The Hague and Vienna) and rented sites in Berlin and Vienna.

Contents

1. The European Patent Office

The European Patent Office (EPO) examines European patent applications, enabling inventors, researchers, and companies from around the world to obtain protection for their inventions in up to 45 countries through a centralised and uniform procedure that requires just one application. The EPO is also the world's leading authority in patent information and patent searching.

Founded in 1973, from the 16 signatory states of the European Patent Convention, the Organisation has now grown to 39 member states. Today, the EPO is one of the largest public service organisations in Europe, employing over 6 000 staff of 35 different nationalities. Of them, over 4 000 are highly qualified scientists and engineers working as patent examiners in all fields of technology.

As the patent office for Europe, the EPO supports innovation, competitiveness, and economic growth across the continent. Innovation plays a vital role in mitigating and adapting to climate change. Through our core business of granting patents on inventions and making patent knowledge accessible to all, we contribute directly to technological advances that address climate change.

Headquartered in Munich with offices in Berlin, Brussels, The Hague and Vienna, the EPO has been certified since 2009 as complying with the Eco-Management and Audit Scheme (EMAS). The EPO owned buildings in Munich, The Hague and Vienna are registered as EMAS sites. Together with our rented site in Berlin, they are presented in more detail in Annex 3.

The Vienna site renovation was completed in October 2024 and EPO staff working in Berlin moved to a new rented office space in March 2025. The consumption figures relating to the previously rented office spaces in Berlin and Vienna are reported to ensure comparability with prior reports.

In 2022 the EPO extended its environmental reporting beyond the EMAS requirements and adopted the GHG Protocol as the standard for reporting on its carbon footprint (see 5.1 Greenhouse gas emissions).

The present report, setting out our environmental data and reporting on our environmental performance, is issued in accordance with EMAS Regulation (EC) No 1221/2009, Commission Regulation (EU) 2017/1505 and Commission Regulation (EU) 2018/2026. It can be downloaded from our website (www.epo.org).

2. Our environmental policy

Every year, the impact of climate change on our planet is more tangible, making any mitigating or adaptive action increasingly urgent.

For this reason, the EPO is committed to becoming a more environmentally sustainable organisation.

This policy guides all aspects of our work in achieving this goal. By reducing the environmental impact of our operations and by fostering innovation and access to knowledge on climate change technologies, we also contribute to the United Nations Agenda 2030 and its Sustainable Development Goals.

Our principles:

- Take a holistic approach to meeting our commitments.
- Comply with relevant environmental legislation and regulations.
- Reduce our consumption of resources and minimise our environmental footprint by promoting re-use, recovery and recycling.
- Encourage and engage our staff to embrace sustainable behaviour.
- Join forces with our external stakeholders to work towards environmental sustainability.
- Highlight the role of intellectual property and innovation in mitigating climate change.

Our objectives:

- Become carbon neutral by 2030.
- Assess our carbon footprint, accounting for and reporting on direct and indirect emissions across the value chain of our activities according to the GHG Protocol.
- Implement initiatives to mitigate our environmental impact towards our carbon neutrality goal.
- Conduct business with responsible suppliers that respect the rule of law and human rights and recognise their responsibility to protect the environment.
- Engage with local, national and international institutions and organisations.
- Provide our staff with appropriate training, advice and information on how they can play their part.
- Report regularly and transparently to the public on the implementation status of this policy.

At the EPO, we are deeply committed to sustainability and ready to embrace new and more sustainable ways of working. Success can only be achieved by joining forces within and outside the EPO. Every stakeholder has an important role to play in making this policy successful, and ultimately contributing to a more sustainable world.

3. Environmental goals

Within the framework of SP2028 with its sole goal, sustainability, the EPO is committed to becoming a carbon neutral organisation by 2030. This means working towards delivering our all our products and services with the lowest possible environmental impact, whilst maintaining our high-quality standards.

Our target supports the goal of the European Union's Green Deal (no net emissions of greenhouse gases by 2050) and contributes to the commitment of the United Nation's Paris Agreement (limit global warming to well below 2 degrees, preferably 1.5 degrees Celsius, compared with pre-industrial levels).

Our main direct impact on the environment is caused by the operation of our buildings. The New Ways of Working (NWoW) policy offering staff broad flexibility on where they choose to work, has already enabled us to improve significantly our environmental performance, by managing office spaces responsibly and efficiently.

In SP2028, we will implement projects that reduce our energy consumption and gradually reduce our carbon emissions.

Environmental sustainability guides us in how we maintain and develop our existing buildings, and guides decisions on bringing to an end the use of old buildings such as the Shell building in The Hague, which is very energy inefficient and would require a disproportionate investment in maintenance.

Our top-level KPI is to be a carbon neutral organisation by 2030. To remain on track to reach this target, we must reduce our emissions and achieve a carbon footprint of 1 000 tonnes of CO_2 from operations by the end of 2028.

4. Assessment of environmental aspects

All EPO activities have an environmental impact, directly or indirectly. In accordance with our environmental policy, we strive to optimise this impact by applying an environmental management system and continually improving our environmental performance.

To establish a basis for developing environmental objectives and measures, we have identified and evaluated our environmental aspects according to the following criteria:

- the potential harm or benefit to the environment
- the condition of the environment
- the size, amount, frequency and reversibility of the aspect or impact
- the existence and requirements of relevant environmental legislation
- the concerns of interested parties, including EPO staff.

All significant environmental aspects are recorded and assessed on an annual basis. This assessment is taken into consideration when developing new policies and measures for further improvement.

Environmental aspects are subdivided into direct and indirect aspects. To help assess their relevance and the need for action (significance), the different direct and indirect environmental aspects have been rated as follows:

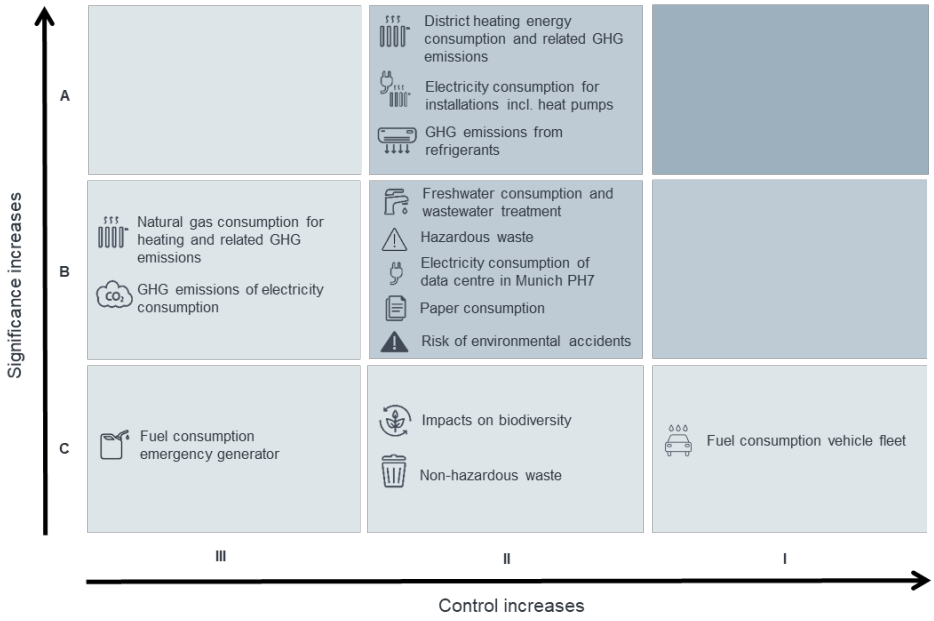
A = very significant environmental aspect with above-average need for action
B = significant environmental aspect with average need for action
C = less significant environmental aspect with low need for action.

In addition, the extent to which they can be influenced (control) is indicated by the following ratings:

I = short-term control possible
II = mid to long-term control possible
III = control not possible or possible only in the long term or subject to third-party decisions.

Figure 3 shows the direct environmental aspects of the EPO activities. A detailed assessment of the direct environmental aspects is included in Annex 2.

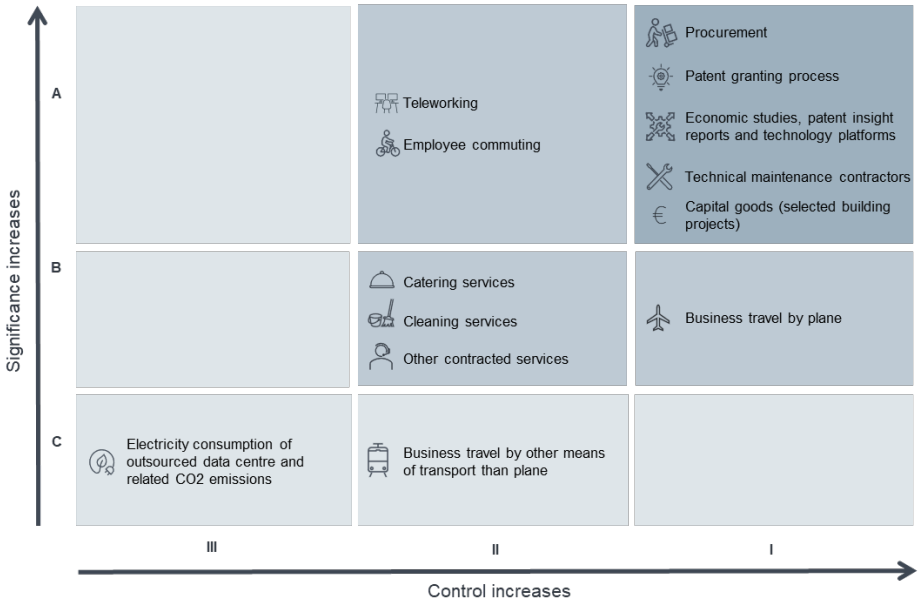
Figure 3 – Direct environmental aspects of EPO activities



Source: EPO

All indirect environmental aspects under the EMAS III Regulation have been assessed for their relevance to the EPO (Figure 4).

Figure 4 – Indirect environmental aspects of EPO activities

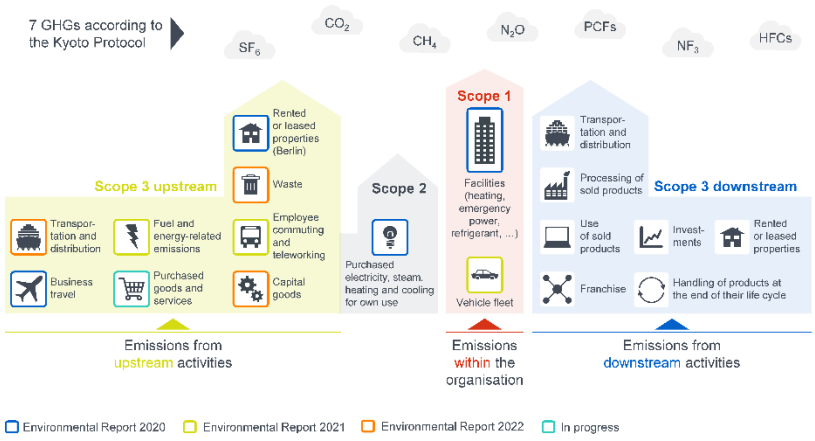


Source: EPO

5. Environmental performance

The EPO aligns its accounting and reporting of emissions with the GHG Protocol standard with its well-known scopes[1] (Figure 5).

Figure 5 – Scope 1, 2 and 3 categories, according to the GHG Protocol



Source: EPO

Our GHG inventory includes emissions in scopes 1 and 2 for the owned sites Munich Isar, Munich PH, The Hague and Vienna. GHG emissions in scope 3 include the categories of fuel and energy-related activities (for the part not already

[1] Scope 1 includes direct GHG emissions from facilities owned or controlled by the reporting organisation, such as natural gas burnt at premises owned by the EPO, fuels used for vehicles or leakages of cooling agents. Scope 2 covers indirect GHG emissions from purchased energy, in our case electricity and district heating. Scope 3 includes all other indirect GHG emissions originating in the value chain. Biogenic CO2 emissions from the combustion of gas obtained from biomass are reported separately. Emissions are indicated in CO2 equivalents (CO2e), which includes carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF6) and nitrogen trifluoride (NF3).

included in scopes 1 and 2), transportation and distribution (upstream activities), waste generated in operations, business travel, employee commuting and teleworking and leased assets (Berlin and the rented space in Vienna from November 2022 until October 2024).

With the completion of the Vienna renovation project, we are, for the first time, reporting emissions relating to the category "Capital goods" where we focus on major investments in our buildings (see 5.10 Capital goods).

The following sections outline the major developments in 2024.

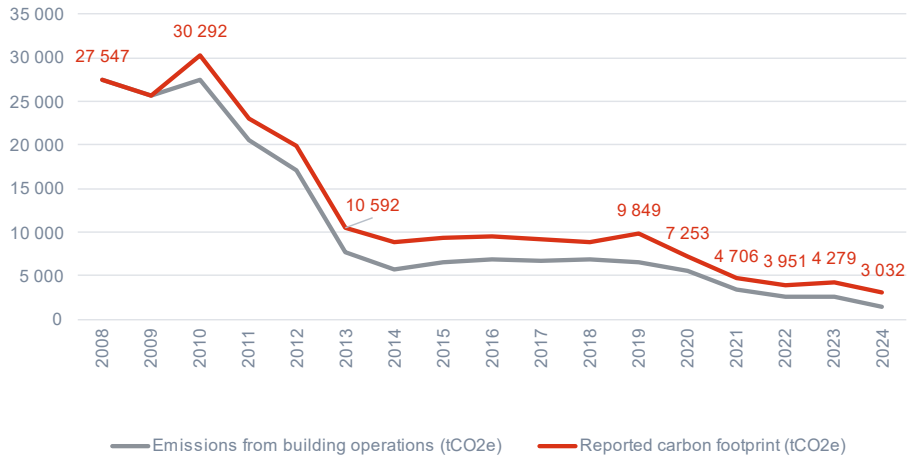
5.1 Greenhouse gas emissions

Total GHG emissions from operations 2024:
3 032 t CO_2e

-29%
compared with 2023
-69%
compared with 2019

In 2024, there has been significant progress toward our carbon neutrality goal (Figure 6). Emissions from activities in operations in scopes 1, 2 and 3 total 3 032 t CO_2e, a 29% decrease (-1 247 t CO_2e) compared with 2023. Emissions from scope 1 and scope 2 categories decreased by 55% and emissions from scope 3 categories decreased by 8%.

Figure 6 – Progress towards carbon neutrality



Source: EPO

Table 1 summarises our GHG inventory for 2019 (the first year reported according to the GHG Protocol) and the last three years. Details of the methodology and emission factors[2] used as well as site-specific scope 1 and 2 emissions, are included in Annex 1 and Annex 3 respectively.

[2] Emission factors are used to calculate the GHG emissions for a given source, relative to units of activity. They reflect average values by sector, technology type, and/or fuel type.

Table 1 – GHG emissions (t CO_2e per year)

	2019	2022	2023	2024	Change 2023-24 in %
Scope 1	**2 070**	**776**	**1 036**	**34**	**-97**
Facilities	1 475	194	19	25	+32
Vehicle fleet	14	9	11	6	-48
Loss of cooling agents	581	572	1 006	4	100
Scope 2	**2 829**	**1 072**	**893**	**841**	**-6**
Purchased electricity[3]	0	0	0	0	
District heating	2 829	1 072	893	841	-6
Scope 3	**4 950**	**2 104**	**2 350**	**2 157**	**-8**
Fuel and energy-related activities not included in scope 1 or 2	1 194	444	356	198	-44
Upstream transportation and distribution	-	100	249	157	-37
Waste generated in operations	-	69	88	53	-40
Business travel	1 297	79	135	158	+17
Employee commuting and teleworking	1 984	1 027	1 162	1 240	+7
Upstream leased assets (Berlin[4], Vienna rented space)	474	385	361	351	-3
Total emissions from operations	**9 849**	**3 951**	**4 279**	**3 032**	**-29**
Scope 3 Capital goods (emissions from major building investments)				**1 017**	
Total non-biogenic emissions	**9 849**	**3 951**	**4 279**	**4 049**	
Biogenic CO_2[5]	**-**	**1 049**	**930**	**393**	**-58**

[3] For calculating GHG emissions from purchased electricity, we use the market-based approach from the GHG Protocol, reflecting the emissions from the electricity mix (100% green electricity) purchased by the EPO via its electricity contracts. Using the location-based approach, emissions amount to 14 966 t CO_2e (2019), 10 266 t CO_2e (2022), 9 013 t CO_2e (2023) and 8 901 t CO_2e (2024), respectively.

[4] 2023 figure differs from previous report due to updated consumption figures from the landlord in Berlin. 2024 figure is based on preliminary meter readings by the landlord.

[5] According to the GHG Protocol, direct CO2 emissions from biologically sequestered carbon (e.g., CO2 from burning biomass/biofuels) are reported separately from scopes 1 to 3.

Scope 1 emissions

Scope 1 emissions decreased by 97% (-1 003 t CO_2e) compared with 2023. This was mostly thanks to corrective actions taken to minimise the leakages of cooling agents (4 t CO_2e, a historic low), including intensifying the frequency of leakage testing for higher risk installations and where possible switching to cooling agents with lower global warming potential (GWP). As some of the technical installations have reached the end of their lifespan, investments are foreseen as part of the Building Investment Programme to reduce the risk of leakages.

Other scope 1 emissions from our facilities originate from diesel and heating oil consumption for our emergency generators in Munich and The Hague and from biomethane consumption for heating in The Hague (methane and nitrous oxide). Overall, these increased by 32% compared with 2023 because longer tests of our emergency generators were performed in The Hague in 2024.

Scope 2 emissions

Scope 2 emissions include emissions from purchased electricity in Munich, The Hague and Vienna and from district heating in Munich and Vienna (until October 2022[6]). Given that the EPO has purchased green electricity since 2019, emissions from electricity consumption are zero according to the market-based calculation approach.

Emissions from district heating decreased by 6% in 2024 compared with the previous year (-52 t CO_2e). The main drivers for this decrease are presented below in 5.2 Energy.

In 2025 and beyond, we will maintain a strong focus on reducing our energy consumption that will add to the ongoing efforts made by our suppliers to decarbonise their products.

Scope 3 emissions

Scope 3 emissions represent 71% of the reported total in 2024. In comparison to the previous year, they decreased by 8% (-194 t CO_2e).

Upstream emissions from the supply chain of the electricity, biomethane and fuel consumed at our own sites[7] decreased by 44% (-157 t CO_2e) in comparison to 2023. This positive result is due to the energy saving measures detailed in 5.2 Energy.

Other emissions, such as SO_2 (sulphur dioxide), NO_x (nitrogen oxide) and particulates, are considered only if they arise directly at one of our sites. This applies exclusively to natural gas and biomethane consumption at the sites The Hague and the previously rented office spaces in Berlin and Vienna, and diesel, heating oil and petrol used for our emergency generators, boilers and cars.

---

[6] Emissions from electricity and district heating for the rented office space in Vienna to which staff has been moved as of November 2022 are accounted for in scope 3 Upstream leased assets.

[7] According to the GHG Protocol, the category includes: emissions for the extraction, production and transportation of fuels consumed at EPO premises; emissions for the extraction, production and transportation of fuels consumed in the generation of electricity, steam, heating and cooling consumed by the EPO; and transmission and distribution losses.

Since these emissions are of minor impact, they are presented with the core indicators in Annex 3.

Emissions from logistic services purchased by the EPO (scope 3 category Upstream transportation and distribution), which relate to letters, parcels and other deliveries mainly sent from our sites in Munich and The Hague, are reported according to primary data from our service providers or, when not available, estimated based on the number of items sent, and emission factors from the International Post Corporation (IPC).

Reported emissions have decreased by 37% compared with 2023 as the number of documents sent and the corresponding amounts of printed paper continued to decrease, reflecting the uptake of the MyEPO services and cited patent literature in search and examination proceedings only being available in electronic format as of October 2024 (see 5.4 Paper).

The category "Waste generated in operations" covers the disposal and treatment of both solid waste and wastewater produced in our operations by third parties. The impact is assessed by applying the waste-type-specific method which involves using specific emission factors per type of waste and method of treatment (e.g., recycling, incineration, or landfill). Emission conversion factors from the UK Department for Environment, Food & Rural Affairs (DEFRA), which are highly regarded in the literature, are used in the absence of primary data and comprehensive sources specific to our hosting countries.

Compared to 2023, when emissions peaked as a result of clean-up actions such as the disposal of old archives of paper files, emissions from waste generated in operations decreased by 40% in 2024 (5.6 Waste).

In 2024, emissions from scope 3 category "Business travel" totalled 158 t CO_2e, 17% above 2023 but still 88% below the pre-pandemic year 2019, when business travel was a significant contributor to the EPO's carbon footprint with almost 1 300 t CO_2e reported emissions (see 5.7 Business travel).

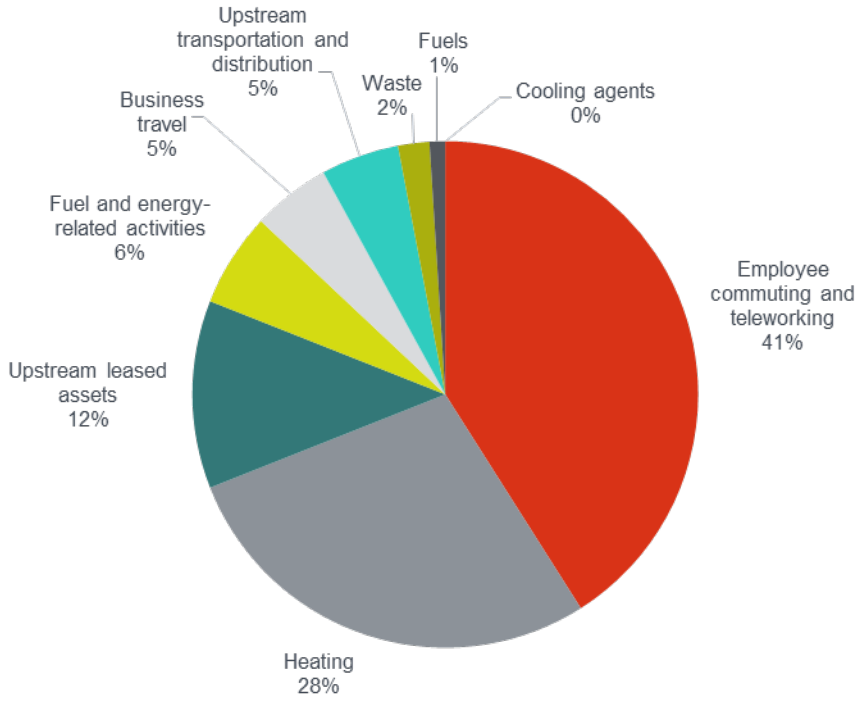
The combined estimated emissions from "Employee commuting and teleworking" increased by 7% compared with 2023 (+78 t CO2e), mainly because of the adoption of a country-specific emission factor for public transport in Germany, more accurate and also higher than the previously used generic factor. Overall, they account for 41% of the EPO's total emissions in 2024 (see 5.9 Employee commuting and teleworking).

Building-related emissions (electricity, natural gas, district heating, cooling agents) at our previously rented sites in Berlin and Vienna, over which we did not have full operational control, represent 12% of the EPO's reported carbon footprint (351 t CO_2e).

As of March 2025, our new office premises in Berlin, which combine modern office design with environmentally sustainable features such as natural lighting, energy-efficient systems, smart LED lighting and photovoltaic panels, reflect our commitment to sustainability. These features reduce energy consumption and CO_2 emissions by a factor of 10 compared with the former building. The central location, excellent public transport connections and bicycle parking with e-charging facilities are additional factors that encourage green commuting.

Figure 7 summarises the proportion of non-biogenic emissions per reported category.

Figure 7 – Non-biogenic GHG emissions from operations in 2024 (% of total)



Source: EPO

Finally, biogenic CO_2 emissions decreased by 58% in line with the reduction in the consumption of biogas in The Hague following the emptying of the Shell building.

Looking at 2025, reductions in scope 3 emissions are expected for the categories "Leased assets", with the new premises in Berlin, and "Transportation and distribution", with the further adoption of the MyEPO services.

Moreover, we will continue to collect data on emissions related to the scope 3 upstream category "Purchased goods and services", in line with our commitment to include all significant emission sources and obtain a complete picture of the climate impact of our operations (see 5.5. Sustainable information and communication technology and 5.8 Other purchased goods and services).

5.2 Energy

Energy consumption in the form of electricity and heating is the most significant environmental aspect at the EPO. Electricity consumption essentially consists of:

- cooling/heating systems
- ventilation and air conditioning
- IT equipment (e.g., data centres, workstations and printers)
- lighting in offices and public areas (e.g., canteens, parking), and other equipment.

Heating energy at the different sites is generated from various sources: district heating in Munich and in the new premises in Berlin, heat pumps in The Hague (Main building) and in Vienna, biomethane in all buildings in The Hague[8], natural gas in the old premises in Berlin (until February 2025).

Table 2 summarises the energy input from the different sources used.

In 2024, overall electricity consumption from the grid decreased by 11% compared with 2023. The main drivers for this decrease were the implementation of a software solution for weather-dependent regulation of ventilation and cooling in the Isar building as of the second half of 2023, and the further optimisation of the consumption in the empty buildings PschorrHöfe 5-7 in Munich and Shell in The Hague. The positive trend is reflected in our performance indicator "Total electricity consumption per employee", which decreased from 4.2 to 3.8 MWh per employee (Figure 8).

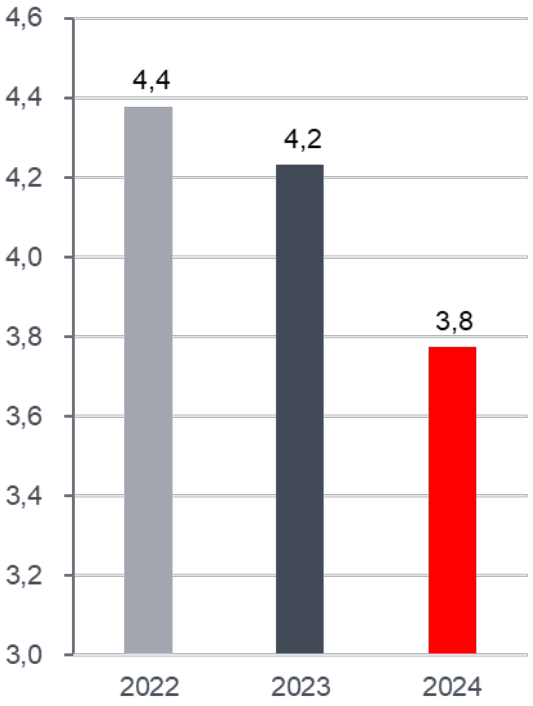
Total electricity consumption from the grid in 2024:
22 718 MWh

-11%
compared with 2023

Total district heating consumption in 2024:
12 823 MWh

-6%
compared with 2023

Figure 8 – Total electricity consumption per employee (MWh/employee)



Source: EPO

[8] In 2022 a small amount of heating energy was generated by burning diesel.

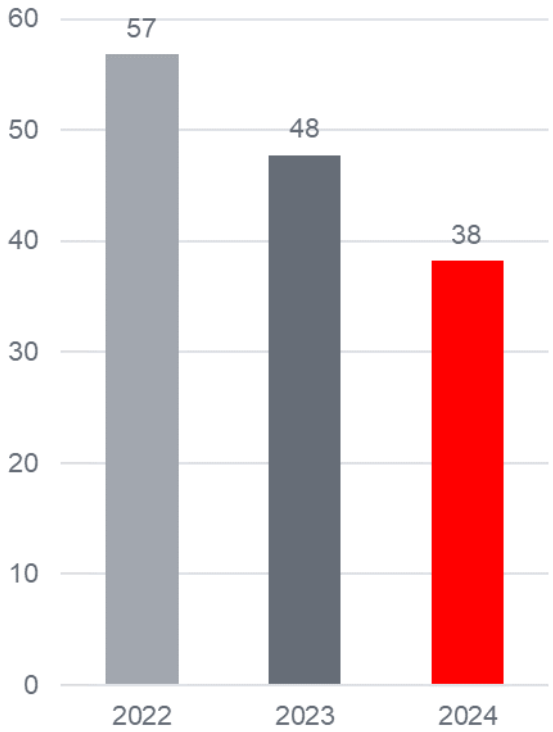
Table 2 – Total energy input (MWh per year)

		2022	2023	2024	Change 2023-24 in %
Electricity from the grid	Berlin[9]	351	306	276	-10
	MUC Isar	5 471	5 633	5 444	-3
	MUC PH	7 862	7 536	7 092	-6
	The Hague	12 438	11 917	9 727	-18
	Vienna	311	0	131	-
	Vienna – rented space	10	57	48	-17
Electricity from solar panels	The Hague	2	50	100	100
	Vienna			7	-
Total electricity		**26 444**	**25 499**	**22 825**	**-10**
District heating energy	MUC Isar	8 470	6 154	5 600	-9
	MUC PH	7 638	7 373	7 144	-3
	Vienna	389	-	-	-
	Vienna – rented space[10]	16	95	79	-17
Total district heating		**16 513**	**13 622**	**12 823**	**-6**
Biomethane	The Hague	5 746	5 113	2 164	-58
Natural gas	Berlin[11]	1 650	1 455	1 455	
Diesel (emergency power)	The Hague	153	39	64	65
Heating oil (emergency power)	MUC Isar	8	2	3	30
	MUC PH	30	21	24	12
Diesel (heating)	The Hague	524	0	0	-
Diesel (vehicles)	MUC Isar	3	17	14	-17
	The Hague	12	7	8	16
Petrol (vehicles)	MUC Isar	6	-	-	-
	The Hague	14	20	0	-98
All inputs	**EPO total**	**51 103**	**45 795**	**39 381**	**-14%**

[9] Vis-à-vis last year's report, the 2023 consumption has been updated with the landlord's figures. 2024 consumption is from preliminary meter readings from the landlord.
[10] No data from landlord available. Figure estimated based on average mean annual heat energy per square metre in office buildings in Austria (two months in 2022, ten months in 2024).
[11] Vis-à-vis last year's report, the 2023 consumption has been updated with the landlord's figures. For 2024, data was not available at the time of compiling of this report and 2023 data was used as an estimate.

In Munich, the energy monitoring and control systems made it possible to reduce district heating consumption by 6%. In The Hague, biomethane consumption decreased by 58% following the emptying of the Shell building in October 2023. Heat energy input per unit of heated floor space dropped from 48 to 38 kWh per square metre (Figure 9).

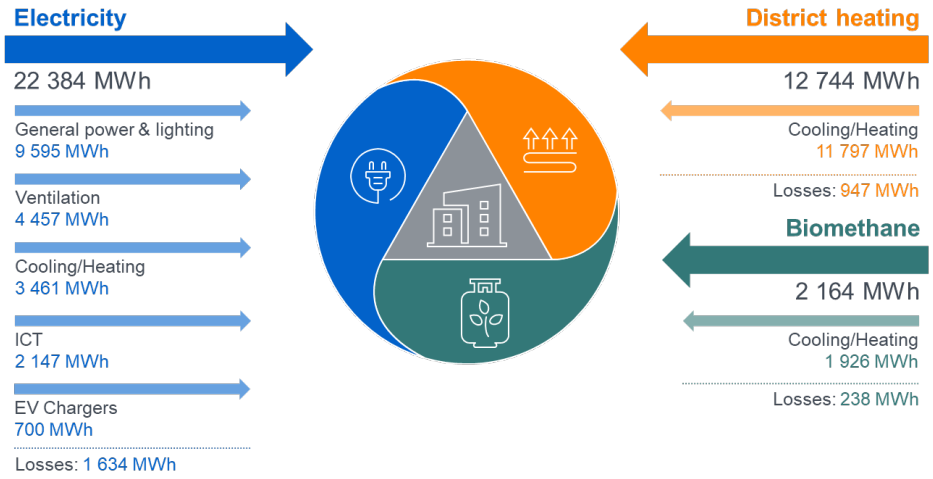
Figure 9 –Total heat energy input per heated floor space (kWh/m²)



Source: EPO

Routine monthly maintenance tests of emergency generators are conducted at both Munich and The Hague sites. In addition to regular checks, longer stress tests were performed to evaluate the generators' reliability and endurance under prolonged operational conditions, which resulted in the increased fuel consumption for emergency generators. Figure 10 is a representation of the energy consumption in owned buildings by source and purpose (e.g., main categories of usage).

Figure 10 – Estimated energy flows in owned buildings associated with main input sources and purposes[12]



Source: EPO

5.3 Water

At all sites, water is provided by the municipal supplier. It is mostly deployed in sanitary facilities and kitchens. In Munich and in The Hague, water is also used for the air conditioning systems and for watering plants and green spaces on site. Wastewater contamination consists mainly of organic substances. Where needed, grease traps are installed in specific locations to remove contaminants from wastewater.

Total water consumption in 2024: 73 429 m³

-3% compared with 2023

Water consumption decreased by 3% in comparison to 2023 (Table 3 and Figure 11 for water consumption per employee). The main driver was the further optimisation of water consumption in the empty buildings PH 5-7. The increase in The Hague was due to isolated leaks that have now been rectified.

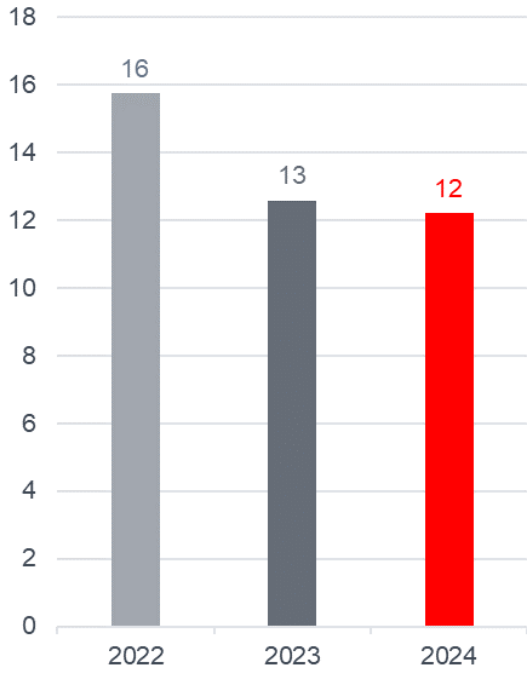
Table 3 – Water consumption (m³ per year)

	2022	2023	2024	Change 2023-24 in %
Berlin	1 021	1 325	1 325	-
MUC Isar	15 422	18 428	18 740	2
MUC PH	35 031	33 229	28 667	-14
The Hague	43 023	22 367	23 830	7
Vienna	648	0	439	-
Vienna – rented space[13]	86	515	429	-17
Total	**95 231**	**75 863**	**73 429**	**-3**

[12] Including energy losses from transmission, distribution and transformation.

[13] No data from landlord available. Figure estimated based on mean annual water consumption per employee from 2019 to 2021 at the owned site in Vienna.

Figure 11 – Freshwater consumption per employee (m^3/empl)



Source: EPO

5.4 Paper

Paper consumption is measured as input (paper procured) and output (paper sheets printed). The former is relevant for assessing the carbon footprint of the goods we purchase; the latter reflects the impact of the digitalisation of our core business and corporate services on printing patterns.

Total paper consumption in 2024 (procured): 10.2 million sheets

-26%
compared with 2023

Paper procured decreased in 2024 by 26% compared with 2023 (Table 4), with procured paper consumption per EPO product[14] decreasing by 30% as production was higher than in the previous year (Figure 12).

In 2024, printing reached a record low of 10.1 million sheets, 27% less than in the previous year. Over 47% related to documents mailed to externals (4.8 million sheets, -34% compared with 2023).

Total paper consumption in 2024 (printed): 10.1 million sheets

-27%
compared with 2023

The increasing adoption of MyEPO, an integrated suite of services that makes it easy for inventors, companies and their representatives to conduct their EPO business online, is directly linked to the decrease in paper mailing. These services are increasingly becoming the standard means of interacting with the EPO concerning all aspects of the patent grant procedure.

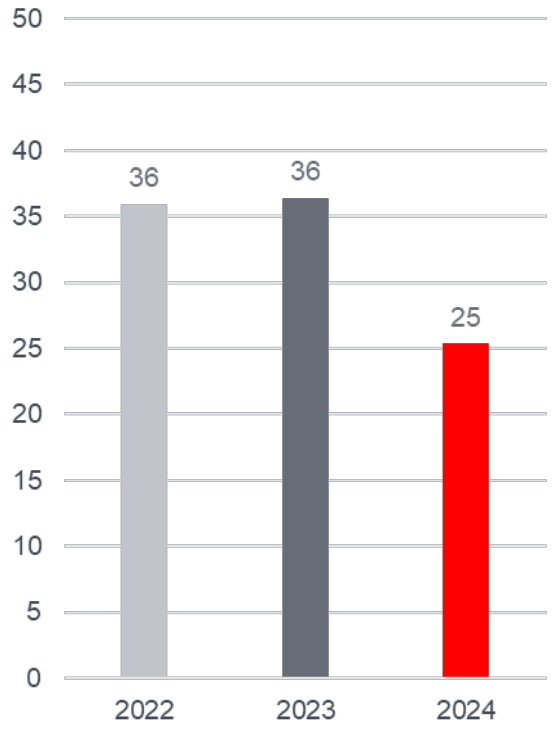
The continuous growth in the number of users of MyEPO and the extension of the MyEPO functionalities are expected to enable further reductions in the number of documents we print and mail to externals and, together with the necessary legal changes, lead to a paperless patent granting process by the first half of 2027.

[14] EPO products filing, search, examination and opposition

Table 4 – Total procured paper (paper sheets per year)

	2022	2023	2024	Change 2023-24 in %
Berlin	96 500	0	0	-
Munich	5 020 000	5 760 000	5 080 000	-12
The Hague	7 920 000	7 920 000	5 160 000	-35
Vienna	0	120 000	0	-100
Total	**13 036 500**	**13 800 000**	**10 240 000**	**-26**

Figure 12 – Paper consumption (procured sheets) per product



Source: EPO

5.5 Sustainable information and communication technology

More than 4% of global greenhouse gas emissions come from the IT sector[15]. Moreover, around the world electronic waste or e-waste amounted to a record 62 million metric tonnes in 2022, up 82% from

E-waste devices repaired and reused in 2024:
3 842 (25% of total)

[15] "World Bank. 2023. Green Digital Transformation: How to Sustainably Close the Digital Divide and Harness Digital Tools for Climate Action. Climate Change and Development Series. © Washington, DC: World Bank. License: CC BY 3.0 IGO."

2010, and is considered the fastest growing domestic waste-stream[16].

As a knowledge-intensive organisation, the EPO is highly dependent on information and communication technology (ICT) for its core business and will become even more so as it continues to digitalise all its processes. ICT sustainability is therefore an essential aspect of the EPO's environmental performance. With increasing demands on ICT systems and end-to-end digital workflows, it is essential to choose environmentally friendly options and find sustainable and efficient ways to operate them.

To facilitate smart, sustainable decisions concerning its ICT systems, the EPO has developed a specific policy on ICT sustainability. In doing so, our objective is to reduce the environmental footprint associated with ICT assets, including their electricity consumption. This is achieved, for example, by streamlining and digitalising business processes in close cooperation with the relevant business areas. A further example of how we have successfully embedded ICT sustainability in our operations is our treatment of e-waste, in which respect we aim to maximise the number of devices repaired and reused upon disposal from the EPO (see 5.6 Waste).

As provided for in SP2028, in driving digital transformation, the EPO will be mindful of the environmental impact of digital technologies by extending our measurement of CO_2 emissions to cloud services and applying circular economy principles to the lifecycle of our digital equipment.

Overall, our aim is to build a culture of ICT sustainability across the EPO. Internally designed online digital training modules on "E-waste Sobriety" and "Digital Responsibility" are available for all staff and are mandatory for all newcomers and “young professionals”. Additionally, we promote ICT sustainability in two regular annual events, the Digital Clean-up Day and the International e-Waste Day.

5.6 Waste

Wastepaper and residual waste constitute the main categories at all sites and the EPO has established a waste separation system with clearly identifiable and distinguishable waste containers on all sites. Staff are briefed on waste avoidance, recycling and correct disposal.

Total paper waste in 2024:
160 t

-66%
compared with 2023

In 2024, wastepaper decreased significantly both compared with 2023 (-66%), when paper archives were disposed of in Munich and The Hague, and with 2022 (-56%), when the clearing in preparation for the renovation project took place in Vienna. The positive trend is in line with the reduced paper consumption resulting from the digitalisation of our processes (see 5.4 Paper above).

Residual waste, which also peaked in 2023 as several clearing actions took place, returned to its previous levels in 2024.

[16] Global e-Waste Monitor 2024, https://unitar.org/, United Nations, https://unitar.org/about/news-stories/press/global-e-waste-monitor-2024-electronic-waste-rising-five-times-faster-documented-e-waste-recycling

In Munich, a change in catering contractor led to an increase in plastic packaging waste because stored material from the previous contractor, which could not be reused, was disposed of. Moreover, implementation of more frequent emptying of the grease separators explains an increase in the corresponding reported waste.

Finally, the treatment of e-waste (i.e. ICT devices) is managed via a dedicated service provider. In 2024, 42% of the collected e-waste by weight could be repaired and reused, the rest being recycled, a concrete example of our commitment to UN SDG 12 – Responsible Production and Consumption.

Table 5 – Total waste generation (t per year)[17]

	2022	2023	2024	2023-24 change in %
Residual waste				
Berlin[18]	40	40	40	0
MUC Isar	23	19	19	3
MUC PH	32	53	38	-28
The Hague	43	70	55	-21
Vienna	13	0	2	NA
Vienna – rented space[19]	1	4	4	-17
Total	**151**	**186**	**158**	**-15**
Paper waste				
Berlin	11	18	10	-47
MUC Isar	121	142	79	-44
MUC PH	105	184	31	-83
The Hague	58	126	37	-71
Vienna	70	0	2	NA
Vienna – rented space	0	1	1	-17
Total	**365**	**471**	**160**	**-66**
Plastics				
Berlin	4.7	4.7	4.7	0
MUC Isar	2.3	2.3	3.2	37
MUC PH	0.4	6.4	8.4	30
The Hague	2.3	4.7	4.5	-3
Total	**10**	**18**	**21**	**15**
Food waste				
MUC Isar	7	18	19	8
MUC PH	12	37	35	-5
The Hague	14	23	25	10
Total	**33**	**78**	**80**	**2**
Grease separator waste				
MUC Isar	67	106	194	82
MUC PH	8	22	55	146
The Hague	30	41	14	-65
Total	**104**	**170**	**263**	**55**
Hazardous waste				
MUC Isar	40	13	13	0
MUC PH	5	20	7	-66
The Hague	12	32	45	41
Vienna	1	-	-	NA
Total	**59**	**61**	**64**	**-1**

[17] In some cases, the percentage change does not reflect the displayed data because of rounding.
[18] In Berlin, residual waste and plastics/packaging waste are calculated based on the containers' volume and the number of collections by the disposal companies.
[19] In Vienna, plastic waste is not collected separately and is included in the residual waste figures.

5.7 Business travel

Leveraging the benefits of the NWoW and digital videoconferencing tools, a wide range of activities, including training and outreach, take place in hybrid format or completely online, drastically reducing the need for duty travel.

GHG emissions from air travel in 2024: 149 t CO_2e

+17% compared with 2023

In 2024 business travel emissions totalled 158 t CO_2e, an increase of 17% compared with 2023 (Table 6), but still well below the almost 1 300 t CO_2e emissions reported pre-pandemic (2019), when business travel was a significant contributor to the EPO's carbon footprint.

Table 6 – GHG emissions from business travel (kg CO_2e)

	2022	2023	2024	Change 2023-24 in %
Flights	75 298	126 520	148 641	17
Rail	367	1 072	887	-17
Public transport	365	1 014	1 301	28
Taxi	866	1 416	2 051	45
Private cars	2 412	4 827	5 177	**7**
Total	**79 308**	**134 849**	**158 057**	**+17**

5.8 Other purchased goods and services

With the implementation of the Sustainable Procurement Policy in 2024, the Office seeks to achieve high standards of integrity, inclusivity, transparency and stewardship in its supply chain. The Office wants to conduct business with responsible suppliers – companies that respect the rule of law and human rights, understand the nature and impact of the products, materials and production and transport methods they provide and use, and recognise their responsibility to protect the environment.

Suppliers are evaluated against EPO-specific sustainability requirements, both environmental and social. We have continued our efforts to assess the emissions associated with the goods and services we purchase, aiming at including them in the perimeter of our reported emissions. In 2024, we met with selected vendors to request vendor-specific data on emissions relating to the goods and services they deliver to the EPO, the preferred approach for obtaining an accurate estimate of the environmental impact of our supply chain.

Moreover, in 2024, sustainability criteria were integrated into contracts covering a wide range of environmental matters, such as for technical planning for energy optimisation and for the renovation of the Isar building in Munich. Moreover, building on the results of the previous years, we continued to convert our office supplies to green versions, and environmentally friendly products now constitute 87% of the total.

5.9 Employee commuting and teleworking

In 2024, the combined estimated emissions from commuting and teleworking amounted to 1 240 t CO_2e, 7% higher than in 2023, the first full post pandemic year with staff having the flexibility to choose between working on our premises and teleworking.

GHG emissions from employee commuting and teleworking in 2024:
1 240 t CO_2e

+7%
compared with 2023

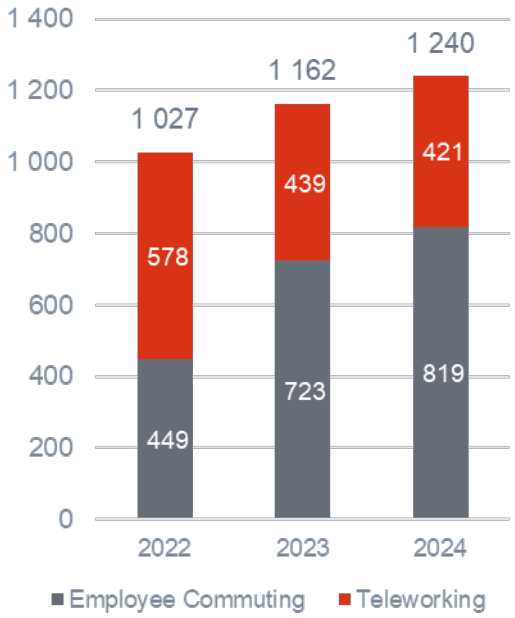
The increase is mainly due to updates in the emission factors which result in higher, albeit more accurate, estimates (e.g., the country-specific emission factor adopted for public transport in Germany is higher than the generic one previously used).

To encourage our staff to adopt optimum sustainable mobility practices, we introduced a microlearning module on green mobility highlighting the benefits of different transport options. Moreover, our sustainable mobility guide highlights the sustainable transport options available at all our sites. First published in 2022, it is regularly updated with additional information provided by our colleagues.

On our owned premises, we have installed over 1 870 bike racks and dedicated repair stations. Charging stations and lockers for e-bike batteries are also available. To support colleagues who still need to drive to work while transitioning to more sustainable solutions, 20% of the parking spaces in Munich, The Hague and Vienna are equipped with electric vehicle (EV) charging points, which are available free of charge. Accordingly, we take into consideration the impact of EVs in estimating emissions in this category (see Annex 1 Methodology).

Furthermore, a commuting dashboard accessible to all staff raises awareness of emissions caused by employees travelling to and from work.

Figure 13 – GHG emissions from employee commuting and teleworking (t CO_2e)



Source: EPO

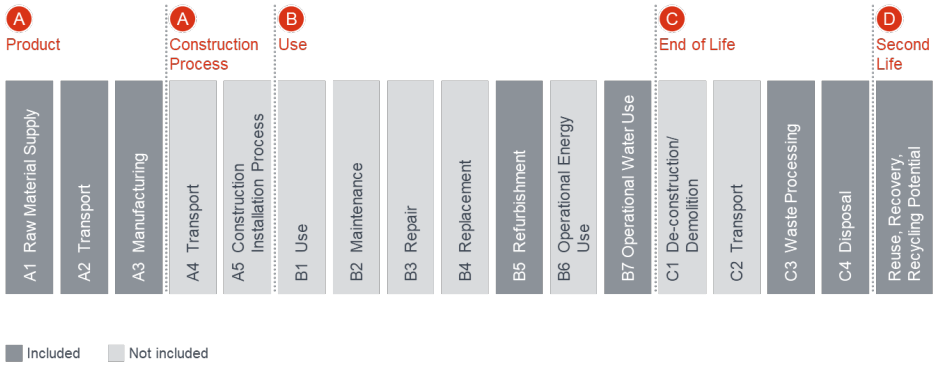
5.10 Capital goods

Capital goods are assets that organisations use to manufacture products and provide services (e.g., equipment, machinery, buildings, facilities, and vehicles). In this category, we report emissions relating to the acquisition or refurbishment of our owned buildings, i.e. major investment projects. Emissions from other purchased goods considered assets in the EPO financial accounting will be reported under the scope 3 category "Purchased goods and services (see 5.8 Other purchased goods and services).

The renovation of the Vienna building, completed in 2024, aimed at delivering a carbon-neutral building over its entire lifetime. The system boundaries of the life cycle assessment were defined according to the requirements from the Austrian Sustainable Building Council (Österreichische Gesellschaft für Nachhaltige Immobilienwirtschaft, ÖGNI). Figure 14 depicts the elements included in the calculation (standard DIN EN 15978:2012-10 "Sustainability of construction works – Assessment of environmental performance of buildings – Calculation method").

The emissions relating to the construction phase (stages A1-A3, Figure 14) concluded in 2024 total 1 017 t CO_2e (Figure 15). This is below the original estimate (1 089 t CO_2e) and 55% less than if we had decided on a complete reconstruction of the building.

Figure 14– Elements included in the lifecycle assessment of Vienna renovation project



Source: EPO

The calculation is based on the information available at the launch of the project. For example, the benefit of the surplus of electricity generated from the solar panels and injected into the grid is fixed at 308 g/kWh. This value will change with the progressive decarbonisation of the Austrian grid. Similarly, emissions estimated for maintenance of the building (stage B, for example the replacement of carpets) will profit from the decarbonisation of the supply chain.

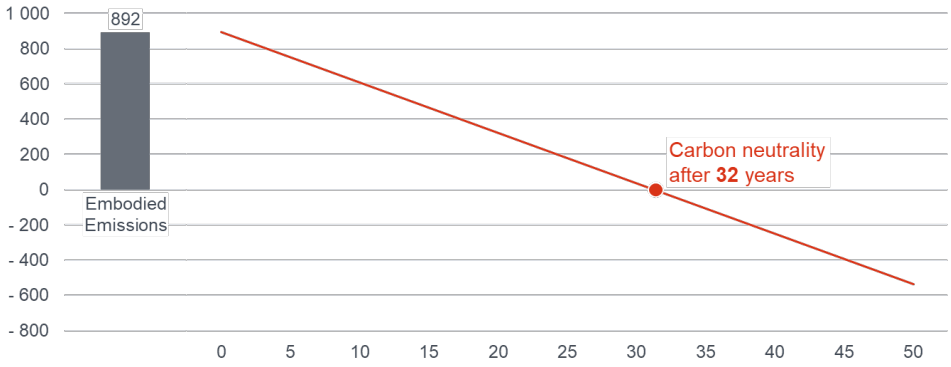
Figure 15: Life cycle emissions over 50 years

		Building stage					
		Products	Use		End of Life	Beyond Life	Life Cycle Emissions 50a
		A1-A3	B4-B5	B6-B7	C	D	kgCO2
Building layers	**Structure** Foundation, load-bearing	175.984	0		16.242	-26.203	**166.023**
	Skin Windows, roof, insulation	121.874	45.530		34.832	-179.028	**23.209**
	Space Plan Interior finishes	290.530	145.979		41.078	-148.508	**329.080**
	Services MEP	428.581	49.979	65.614	20.612	-125.897	**438.889**
	Carbon Compensation PV-Benefit			-1.495.990			**-1.495.990**
	Building Carbon Emissions	**1.016.969**	**241.488**	**-1.430.376**	**112.766**	**-479.636**	**-538.789**

Source: EPO

According to the latest assessment, carbon neutrality will be achieved after 32 years of operation, providing a sufficient contingency to deal with deviations during the expected operating life of the building (Figure 16). We will monitor the evolution of the different factors in the coming years to update our estimates accordingly and apply our findings to future projects, starting with those foreseen by the EPO's Building Investment Programme 2024-2028.

Figure 16: Predicted break-even point for carbon neutrality



Source: EPO

Our sustainable Vienna office

On 4 November 2024, the doors opened to welcome Vienna staff to our fully renovated building at Rennweg 12. This major milestone has been delivered on time, within just two years. The new premises reflect the Office's commitment both to sustainability and to creating a modern and vibrant work environment that meets the highest health and safety standards. The state-of-the-art office space supports professional and social exchanges, collaboration and a sense of belonging, adaptable to the evolving needs of our teams.

Each element of the renovation was carefully planned to create a building that will be carbon neutral for its entire life cycle, from the start of construction onwards. One aspect contributing to the sustainability of the renovated building is for example its innovative energy solution. A heat pump system connected to underground probes allows for efficient temperature regulation, drawing warmth from the ground during winter and cooling in summer while, solar panels on the roof and façade generate eco-friendly electricity. Sustainability is reflected in the design too, including the wooden façade, which integrates with Vienna's urban landscape and surrounding green spaces.

The Vienna building has been renovated respecting the biodiversity of its surrounding environment. To avoid any damage to the vegetation, heavy materials have been moved with the largest crane in Europe, and an ancient tree (estimated to be ca. 2 000 years old) has been protected with wards. Smaller trees taken out for construction have been replanted elsewhere by the Municipality. Furthermore, to respect the wildlife, construction workers adopted specific food waste measures to avoid attracting foxes to the area; boxes on poles placed around the building have created nidification opportunities for birds and bats, and measures were taken to protect the frogs populating the surrounding greenery.

5.11 Communication and staff engagement

Progress on our journey to carbon neutrality is reported transparently and consistently so that our staff, the member states and other stakeholders all have a clear idea of how we are progressing. Through internal and external communication, the EPO seeks both to promote sustainable thinking and to actively engage staff as multipliers of its environmental policies and activities.

The main highlights in 2024 included communication about the new sustainable procurement policy, about the Office's updated environmental policy, and about the creation of a dedicated section on sustainability at the EPO on our epo.org site, ensuring our sustainability commitment is visible in line with SP2028.

One area of focus was sustainable mobility at all sites. Options were promoted internally through articles on World Bicycle Day and European Mobility Week (see 5.9 Employee commuting and teleworking). During the Campus Days, colleagues were invited to join the "bike to work challenge!" as action to demonstrate our commitment to being a more sustainable office. In The Hague, the initiative was complemented by a free bike repair service.

A new intranet section on "What is happening in our buildings" and dedicated news articles informed staff about projects and plans to make our buildings more attractive and more sustainable, such as the opening of the renovated Vienna Office, bicycle parking improvements and milestones in the provision of EV-charging services.

Communication also reinforced awareness of the EPO's commitment to local sustainability initiatives, such as the City of Munich's Climate Pact. Environmentally relevant international occurrences were promoted via social media campaigns and targeted internal communication. Examples were "Earth Hour", "World Water Day", "International Zero Waste Day" and "World Intellectual Property Day".

Peer-to-peer exchanges on environmental sustainability took place in various formats. Climate Fresk workshops facilitated by staff for staff during the Campus Days in Munich and The Hague were well attended. Our Environmental Group promoted bicycle repair services at our buildings and organised donation campaigns of satchels and toys. The "EcoChat", an informal channel for colleagues to exchange ideas, best practice and tips on environmental matters, continued to grow, reaching almost 500 members by the end of 2024.

All initiatives were the outcome of cross-departmental collaboration and recorded high levels of participation, confirming that these topics are close to the hearts of our staff.

5.12 Impact of services

In co-operation with international partners, the EPO promotes the potential of the patent system in addressing climate change. These partnerships are instrumental in disseminating relevant patent information well beyond the traditional patent expert circles. We map critical technology developments and their pan-European innovation ecosystems. This provides the basis for promoting co-ordination and collaboration among the

key players to bring innovative solutions to market. By these means, businesses, inventors, researchers and policymakers committed to combating climate change can exploit the full potential of this invaluable source of knowledge.

In 2024, the EPO remained dedicated to its commitment to disseminating how innovation supports the global agenda for a more sustainable future, inspiring and empowering innovators and the general public to tackle sustainability challenges. The EPO comprehensive highlight report "Patents paving the way to a more sustainable future", updated at the end of 2024, links 25 of the EPO's most recent knowledge initiatives to 8 UN Sustainable Development Goals (SDGs). The report outlines the main examples of how patent knowledge serves as a catalyst for innovation and positive change: EPO technology platforms, patent insight reports and studies.

Our technology platforms make patent knowledge more easily available to our users via ready-made searches which can be input into our Espacenet database with just a few mouse clicks, thus supporting ongoing research or potentially sparking new ideas. Our patent insight reports focus on innovation trends in emerging technologies, using patent knowledge to analyse up-and-coming industries and provide insights into potentially transformative technologies. Finally, our studies provide high-level expertise and analysis on innovation topics.

In 2024, environmentally relevant platforms, studies and insight reports focused on UN SDG 6 Clean Water & Sanitation, UN SDG 7 Affordable and Clean Energy and UN SDG 9 Industry, Innovation and Infrastructure.

In relation to UN SDG 6, the EPO released a study on "Innovation in water-related technologies" and a technology platform on innovation in water technologies, addressing challenges from climate change such as droughts and floods.

The EPO also released two studies on "Financing and commercialisation of cleantech innovation" and "Patents for enhanced electricity grids: A global trend analysis of innovation in physical and smart grids" (UN SDG 7 Affordable and Clean Energy).

In relation to UN SDG 9, the EPO released a technology platform on space innovation and a patent insight report on "Propulsion systems for space". Space technologies not only help us understand the cosmos, but they are also critical in addressing current challenges and improving life on earth. Moreover, the study on "The role of European Universities in patenting and innovation" highlighted the role of higher education in inventive activity.

6. Action plan

In accordance with our environmental policy, we seek to minimise the direct environmental footprint of our operations. The action plan includes deliverables from the Building Investment Programme and actions for the continuous improvement of our environmental performance, including suggestions from internal and external audits, and suggestions from staff and environmental groups. It also takes account of best environmental management practices as recommended in the European Commission's sectoral reference document for public administration[20] and uses them as inspiration in developing improvement measures.

Total number of improvement measures completed in 2024: 29

The tables below present the main actions implemented in 2024 and those planned for 2025. Measures regarding technical installations relate exclusively to the buildings owned by the EPO, as rented buildings are operated and maintained by the respective landlords. Where applicable, the estimation of the benefits is quantified on the basis of available information.

Table 7 – Status icon

Completed		Cancelled	
In progress		Planned	

6.1 Initiatives completed in 2024

Action	Site	Benefits	Status	Impact
Sustainable procurement policy	All sites	Reduce environmental impact of purchased goods and services		
Integrate sustainability criteria into the following contracts:		Reduce environmental impact of purchased goods and services		
▪ Supply, operation and maintenance of network printing, copying and scanning services	All sites			
▪ Framework contract for electrical installations	Munich Isar and PH			
▪ Partial renovation PH (fire protection)	Munich			

[20] Commission Decision (EU) 2019/61 of 19 December 2018.

Action	Site	Benefits	Status	Impact
▪ Support services for Information Security Services	All sites		✓	
▪ Landscaping and interior green	The Hague		✓	
▪ Energy planning for energy optimisation and renovation in Isar	Munich		✓	
▪ Main kitchen, kitchenettes and fixed furniture for the Vienna Green Hub building	Vienna		✓	
▪ General framework contract for the supply of office furniture	All sites		✓	
Completion of renovation project	Vienna	Reduce energy consumption and related emissions	✓	
Network Infrastructure Rooms	Munich Isar and The Hague	Reduce energy consumption and related emissions	✓	
Replacement of elevators	Munich PH	Reduce energy consumption and related emissions	✓	
Water Treatment Replacement	Munich Isar	Reduce use of hazardous substances	✓	
Installation of e-charging stations in 20% of parking lots	Munich Isar, Munich PH and The Hague	Reduce emissions from employee commuting	✓	
Participation in local green mobility initiatives. For example: Zuid-Holland Bereikbaar in The Hague and EU mobility week	All sites	Reduce emissions from employee commuting	✓	
Climate Fresk during Campus Days	Munich, The Hague	Raise awareness and staff engagement	✓	
Campaigns: ▪ Digital clean-up day ▪ World Water Day ▪ Earth Hour ▪ UN Zero-Waste Day ▪ Earth Day ▪ World Bicycle Day ▪ World Environment Day ▪ International E-Waste Day	All sites	Raise awareness and staff engagement	✓	

Action	Site	Benefits	Status	Impact
Include emissions from further cloud services in the ICT dashboard		Raise awareness, reduce ICT emissions	✓	
iLearn day on digital sobriety	All sites	Raise awareness, reduce ICT emissions	✓	
Discontinuation of on demand paper files	All sites	Promote reuse and reduce waste	✓	
End of provision of printed cited patent literature with search reports	All sites	Promote reuse and reduce waste	✓	
End of acknowledgment of receipts for summonses and decisions	All sites	Promote reuse and reduce waste	✓	
Catalogue office supplies: 87% green articles	All sites	Promote reuse and reduce waste	✓	
Toys and satchels' collection	Munich	Promote reuse and reduce waste	✓	
EPO-EIB study on the commercialisation of inventions contributing to the EU Green Deal	n/a	Easier access to patent information on climate change mitigation or adaptation technologies	✓	
Chief Economist study and Espacenet platform on water-related technologies	n/a	Easier access to patent information on water-related innovation	✓	
Chief Economist study on energy transition in partnership with International Energy Agency	n/a	Easier access to patent information on the energy transition	✓	
Exhibition on firefighting technologies in Greece and Slovenia	n/a	Raise awareness	✓	
Updated environmental page on EPO.org	n/a	Raise awareness	✓	

6.2 Initiatives planned for 2025

Action	Site	Benefits	Status	Impact
Move to new premises in Berlin	Berlin	Reduce energy consumption and related emissions[21]		
Develop a high-level plan for carbon neutral buildings by 2030	All sites	Reduce energy consumption and related emissions		
Extend carbon footprint calculation to further material scope 3 categories (purchased goods and services)	All sites	Improve quality of reported carbon footprint		
BIT enhanced policy on ICT Sustainability	All sites	Raise awareness, reduce ICT emissions		
New eco-Design framework for IT developments	All sites	Reduce ICT emissions		
Catalogue office supplies: 90% green articles	All sites	Promote reuse and reduce waste		
Updated sustainability page on the EPO intranet	n/a	Raise awareness		
Environmental Communications Campaigns on: • Digital Clean Up Day • World Water Day / Earth Hour • UN Zero-Waste Day • Earth Day • World Bicycle Day • World Environment Day • EU Mobility Week • COP30	All sites	Raise awareness and promote internal knowledge		
Installation of solar panels in PH 7-8	Munich PH	Reduce scope 3 emissions from purchased energy consumption		
Bicycle parking optimisation in The Hague	The Hague	Reduction of emissions from employee commuting		
Environmental sessions at Campus Days, including Climate Fresks	Munich, The Hague	Raise awareness and promote		

[21] It is expected to reduce energy consumption and GHG emissions by a factor of 10 compared with the former building.

Action	Site	Benefits	Status	Impact
		internal knowledge		
Toys and satchels collection	Munich	Promote reuse and reduce waste		

Annex 1 Methodology

Greenhouse gas emissions are calculated in accordance with the requirements of the Greenhouse Gas Protocol Corporate Accounting and Reporting Standard and the Corporate Value Chain (Scope 3) Standard. The sources of activity data and the emission factors used for the calculation are shown in the table below.

Table 8 – Conversion factors for GHG emission sources

Emission source	Source of activity data	Source of emission factor
Energy		
Natural gas (The Hague)	Invoices, meter readings (if invoices are not available)	Milieu Centraal, Stimular, SKAO, Connekt, Rijksoverheid, CO_2emissiefactoren 2024
Natural gas (Berlin)	Data provided by landlord	Umweltbundesamt Deutschland, 03/2025, Emissionsbilanz erneuerbarer Energieträger, Bestimmung der vermiedenen Emissionen im Jahr 2023
Biomethane (The Hague)	Invoices, meter readings (if invoices are not available)	Direct emissions: Factor for natural gas (The Hague) due to comparable chemical composition; CO_2 reported under biogenic, CH_4 and N_2O reported in scope 1
		Upstream emissions: Certificate from energy provider
Heating oil (The Hague)	Invoices for tank refills	Milieu Centraal, Stimular, SKAO, Connekt, Rijksoverheid, CO_2emissiefactoren 2024
Heating oil (Munich)	Runtimes and refuelling quantities of emergency generators	Umweltbundesamt Deutschland, 03/2025, Emissionsbilanz erneuerbarer Energieträger, Bestimmung der vermiedenen Emissionen im Jahr 2023
Diesel, Petrol (Munich)	Fuelling records of cars	GEMIS 5.1
Diesel, Petrol (The Hague)	Fuelling records of cars, runtimes and refuelling quantities of emergency generators	Milieu Centraal, Stimular, SKAO, Connekt, Rijksoverheid, CO_2emissiefactoren 2024
District heating (Munich, Vienna)	Invoices, meter readings (if invoices are not available) Rented site Vienna: calculated based on average consumption per m^2	Certificate from energy provider
Electricity (100% renewable) Munich	Invoices, meter readings (if invoices are not available)	Scope 2 market-based: electricity provider
		Scope 2 location-based: Umweltbundesamt Deutschland, 2024, Entwicklung der spezifischen Treibhausgas-Emissionen des deutschen Strommix in den Jahren 1990 - 2023
		Scope 3: Study "The inventory and life cycle data for Norwegian hydroelectricity" (2020), M. Silva & I. Saur Modahl, Ostfold Research
Electricity (100% renewable) The Hague	Invoices, meter readings (if invoices are not available)	Scope 2 market-based: electricity provider
		Scope 2 location-based, scope 3: Milieu Centraal, Stimular, SKAO, Connekt, Rijksoverheid, CO_2emissiefactoren 2024

Emission source	Source of activity data	Source of emission factor
Electricity (100% renewable) Vienna	Owned building: invoices, meter readings (if invoices are not available) Rented space: calculated based on average consumption per m^2	Scope 2 market-based: energy provider
		Scope 2 location-based: Umweltbundesamt Österreich, 2024, Harmonisierte österreichische direkte und indirekte THG-Emissionsfaktoren für relevante Energieträger & Technologien
		Scope 3: Study "The inventory and life cycle data for Norwegian hydroelectricity" (2020), M. Silva & I. Saur Modahl, Ostfold Research
Electricity (100% renewable) Berlin	Invoices	Scope 2 market-based: electricity provider
		Scope 2 location-based, scope 3: Umweltbundesamt Deutschland, 2024, Entwicklung der spezifischen Treibhausgas-Emissionen des deutschen Strommix in den Jahren 1990 - 2023
Cooling agents		
Fluorinated gases	Maintenance protocols	Umweltbundesamt Deutschland, 2024, GWP_{100} according to EU F-Gas Regulation
Upstream transportation and distribution		
Transport of letters and parcels	Internally registered amount	Emissions calculated by service providers, average factor per letter/parcel from International Post Corporation (if emissions from service providers are not available)
Waste		
Different waste categories (incl. wastewater)	Invoices from disposal companies (Munich, The Hague), waste amount calculated based on volume of containers and number of collections (Berlin, Vienna)	UK Government GHG Conversion Factors for Company Reporting 2024
Business travel		
Air	Travel agency	American Express Global Business Travel
Rail	Duty travel requests	European Environment Agency, 2015, specific CO_2 emissions per passenger-km rail travel in Europe
Taxi	Duty travel requests	Calculated by EPO using specific emission factors and estimated distance per trip
Public transport	Duty travel requests	
Private cars	Duty travel requests (flight is taken as mean of transport when distance is more than 500 km)	European Environment Agency, 2024, CO_2 emissions performance of new passenger cars in Europe
Employee commuting		
Car	Estimates on km travelled per mode of transport based on:	European Environment Agency, 2024, CO_2 emissions performance of new passenger cars in Europe

Emission source	Source of activity data	Source of emission factor
Public transport	▪ Average commuting distance per site ▪ Data on building occupancy and number of employee cars entering our parking spaces ▪ Expert estimates on commuting patterns per site (e.g., means of transport)	- Germany: Umweltbundesamt, TREMOD 6.51 (2022) - The Netherlands: Milieu Centraal, Stimular, SKAO, Connekt, Rijksoverheid, CO_2emissiefactoren 2024 - Austria: Emissionskennzahlen 2022 - Bundesministerium Klimaschutz, Umwelt, Energie, Mobilität, Innovation und Technologie
Bike or walking		No emission calculation
Teleworking		
Electricity (Germany)	Average estimated electricity consumption per employee based on: ▪ working days per year ▪ hours worked per day ▪ percentage of teleworking per year ▪ IT equipment power[22] ▪ light power	Umweltbundesamt Deutschland, 2024, Entwicklung der spezifischen Treibhausgas-Emissionen des deutschen Strommix in den Jahren 1990 - 2023
Electricity (Netherlands)		Milieu Centraal, Stimular, SKAO, Connekt, Rijksoverheid, CO_2emissiefactoren 2024
Electricity (Austria)		Umweltbundesamt Österreich, 2024, Harmonisierte österreichische direkte und indirekte THG-Emissionsfaktoren für relevante Energieträger & Technologien
Data transmission	Average emissions per working hour	Umweltbundesamt Deutschland, 2020, Energie- und Ressourceneffizienz digitaler Infrastrukturen Ergebnisse des Forschungsprojektes "Green Cloud-Computing"
Heating energy mix (Germany, Netherlands, Austria)	Average heating energy consumption per employee based on: ▪ average heating energy consumption per m^2 in Germany[23] ▪ estimated size of working area ▪ estimated additional heating energy consumption due to teleworking (%)	GEMIS 5.1, factors for national heating energy mixes

Key environmental data has been presented with real-life examples to facilitate the understanding of our impact. The conversion factors are presented below.

[22] IT equipment refers to 38" screen, PC, iPad, webcam, headset, wireless keyboard, network, router.
[23] Germany heating consumption per m^2 applied to all sites.

Table 9 – Conversion factors for real-life examples

Comparative base	Real-life comparative	Source of conversion factor
Carbon footprint	Average electricity usage per household in Germany	De Statis, Statistisches Bundesamt, Environmental Economic Accounting, Electricity Consumption of household by household size 2021
	Electricity emission factor – Germany	Umweltbundesamt Deutschland, 2024, Entwicklung der spezifischen Treibhausgas-Emissionen des deutschen Strommix in den Jahren 1990 - 2023
Energy consumption	Average energy usage per person in The Netherlands	Eurostat, Energy statistics – quantities, annual data, Energy indicators, "Available energy, energy supply and final energy consumption per capita"
	Average people per household in The Netherlands	Eurostat, Household composition statistics
Water	Volume of water in an Olympic swimming pool	Wikipedia, "Olympic-size swimming pool"
Printed paper	Paper sheet A4 (80gr/m^2)	Zxprinter, Blog, The Thickness of Printing Paper List
	La Torre de Cristal	Skyscrapercenter, Spain, Europe, Overview

Annex 2 Evaluation of environmental aspects

To help assess their relevance and the need for action, the different direct and indirect environmental aspects have been rated as follows:
A = very significant environmental aspect with above-average need for action
B = significant environmental aspect with average need for action
C = less significant environmental aspect with low need for action

In addition, the extent to which they can be influenced is indicated by the following ratings:
I = short-term control possible
II = mid to long-term control possible
III = control not possible or possible only in the long term or subject to third-party decisions

With regard to the assessment of indirect aspects, there is no differentiation between the sites (Figure 4). All direct environmental aspects under the EMAS III Regulation were assessed according to their relevance for the EPO and only those found to be relevant are included below, differentiated by site.

Environmental aspect and impact		Berlin	MUC Isar	MUC PH	The Hague	Vienna	Brussels
Electricity: resource consumption	General power	A II	A II	A II	A II	B II	C III
	Data centre	–	C III	B II	C III	C III	–
	Garages	–	B I	A I	B II	C I	–
	HVAC	–	B I	A I	A II	B II	–
	Canteen	–	A III	A III	A III	C II	–
Electricity: GHG emissions		B III	B III	B III	B III	B III	C III
Heating energy: resource consumption and related GHG emissions	District heating	–	A II	A II	–	–	–
	Natural gas / Biomethane	B III	–	–	B II	–	C III
	Diesel / Fuel	–	–	–	–	–	–
	Electricity consumption of heat pumps	–	–	–	A II	B II	–
Fuel consumption: resource consumption and related GHG emissions	Vehicle fleet	–	C I	–	C I	–	–
	Emergency generator	–	C III	C III	C III	–	–

Environmental aspect and impact		Berlin	MUC Isar	MUC PH	The Hague	Vienna	Brussels
Direct emissions from refrigerants: GHG emissions contributing to global warming		–	A II	A II	A II	B II	–
Freshwater for sanitary/canteen use: resource consumption		C II	B II	B II	B II	C II	C III
Freshwater for technical/cooling use: resource consumption		–	B II	B II	B II	–	–
Wastewater: energy and resource consumption for water treatment, risk of water pollution		C II	B II	B II	B II	B II	C III
Waste – non-hazardous: resource and energy consumption for waste treatment		C II	C II	C II	C II	C II	C III
Waste – hazardous: resource and energy consumption for waste treatment; emissions from waste combustion, risk of environmental pollution		C III	B II	B II	B II	C II	–
Paper: resource and energy consumption for paper production		B II	B II	B II	B II	C II	C III
Risk of environmental accidents: pollution of ground water		C II	B II	B II	B II	B II	–
Impacts on biodiversity: sealing of soils for construction purposes		C III	C II	C II	C II	C II	–

Annex 3 Overview per site

The following sections contain a detailed overview of our EMAS-certified sites. For each site, we present environmentally relevant facilities and legal aspects, and the core indicators for environmental performance.

1. Munich

Munich is the largest of our sites in terms of gross floor area and staff numbers. The condition of the buildings varies, with some being relatively old, such as the Isar building (opened in 1980), and others newer, namely PschorrHöfe 7 (2005) and 8 (2008). The Isar building and the PschorrHöfe buildings have district heating. Other facilities of environmental relevance are primarily situated in the Isar building. They include a repair shop and carpenter's workshop, as well as a water treatment installation.

The Isar building and PschorrHöfe 1-8 have an oil and/or grease trap and a kitchen/canteen and dishwashing area. All Munich buildings have storage areas for cleaning agents and chemicals. There is no information to suggest any land contamination at the Munich sites. Hazardous waste consists mainly of spent batteries and fluorescent tubes.

PschorrHöfe 5-7 were emptied by Q4 2023 following the rationalisation of office space after the implementation of the NWoW scheme.

GHG emissions from energy and cooling agents' losses in 2024:
898 t CO_2e

-34%
compared with 2023

Figure 17 – EPO Munich, Isar building

Source: EPO

Figure 18 – EPO Munich, PschorrHöfe complex

Source: EPO

Table 10 − Environmental law and relevant facilities, EPO Munich

Most relevant areas of environmental law	Relevant facilities/activities
Building energy efficiency regulations	Energy certification, building insulation, energy-efficient technologies, criteria for renovation/rebuilding and new buildings
Water regulations	Storage of heating oil, operation of grease traps, cooling and wastewater discharge into sewage system
Waste regulations	Recycling/separation/disposal of various types of waste, handling of hazardous waste (spent batteries, old fluorescent tubes and waste oil)
Pollution regulations governing small and medium-sized combustion systems	Emergency generators
Regulations on climate protection and refrigerants	Cooling installations with GWP of at least 5 t CO_2e, performance of density checks
Health and safety	Appropriate risk assessment, fire prevention, restrictions on certain chemical agents, availability of safety information sheets and operating instructions

EPO Munich – Isar building

Address	Bob-van-Benthem-Platz 1, 80469 Munich, Germany			
Status	Owned by EPO			
Reference values	**Unit**	**2022**	**2023**	**2024**
Gross floor area	m^2	91 346	91 346	91 346
Heated floor area	m^2	67 847	67 847	67 847
Built surface area (sealed)	m^2	18 113	18 113	18 113
Nature-oriented area on-site	m^2	10 579	10 579	10 579
Number of employees	empl	653	997	1 012
Emissions				
GHG emissions (electricity, heating and fuels incl. upstream emissions, cooling agents)	t CO_2e/empl	1.20	0.43	0.39
SO_2 (fuels)	kg/empl	0.00	0.00	0.00
NO_x (fuels)	kg/empl	0.01	0.01	0.01
Particulates (fuels)	kg/empl	0.00	0.00	0.00
Energy, water and paper consumption				
Electricity consumption	kWh/empl	8 378	5 650	5 380
Heat energy consumption (district heating)	kWh/m^2	125	91	83
Adjusted heat energy consumption (district heating)	kWh/m^2	138	102	83
Renewable energy as a percentage of total consumption (electricity and heat)	%	48	59	62
Heating oil consumption[24]	l	840	230	300
Diesel consumption	l	286	1 658	1 371
Petrol consumption	l	700	0	0
Water consumption	m^3/empl	24	18	19
Paper consumption (procured)	sheet/empl	1 500	1 727	1 532
Waste generation				
Residual waste	kg/empl	35.57	18.93	19.18
Paper/cardboard	kg/empl	184.61	142.04	78.53
Plastics	kg/empl	3.45	2.31	3.12
Food waste	kg/empl	11.03	18.05	19.21
Food waste per meal served	kg/meal	0.40	0.35	0.38
Grease trap residues	kg/empl	101.84	106.72	191.50
Hazardous waste	kg/empl	61.23	12.61	12.36

[24] Reported under diesel oil consumption in previous years.

EPO Munich – PschorrHöfe 1-8

Address	Bayerstr. 34, 80335 Munich, Germany			
Status	Owned by EPO			
Reference values	**Unit**	**2022**	**2023**	**2024**
Gross floor area	m^2	276 180	276 180	276 180
Heated floor area	m^2	178 320	178 320	178 320
Built surface area (sealed)	m^2	42 641	42 641	42 641
Total nature-oriented area on site	m^2	18 422	18 422	18 422
Number of employees	empl	2 693	2 339	2 303
Emissions				
Greenhouse gases (electricity, heating and fuels incl. upstream emissions, cooling agents)[25]	t CO_2e/empl	0.25	0.40	0.22
SO_2 (fuels)	kg/empl	0.00	0.00	0.00
NO_x (fuels)	kg/empl	0.01	0.00	0.00
Particulates (fuels)	kg/empl	0.00	0.00	0.00
Energy, water and paper consumption				
Electricity consumption	kWh/empl	2 919	3 222	3 080
Total heat energy consumption (district heating)	kWh/m^2	43	41	40
Renewable energy as a percentage of total energy consumption	%	58	61	62
Diesel consumption	l	3 020	2 119	2 366
Water consumption	m^3/empl	13.01	14.21	12.45
Paper consumption (procured)	sheet/empl	1 500	1 727	1 532
Waste generation				
Residual waste	kg/empl	11.70	22.74	16.58
Paper/cardboard	kg/empl	39.15	78.80	13.67
Plastics	kg/empl	0.14	2.74	3.63
Food waste	kg/empl	4.31	15.87	15.35
Food waste per meal served	kg/meal	0.21	0.29	0.31
Grease trap residues	kg/empl	2.82	9.55	23.88
Hazardous waste	kg/empl	1.96	8.56	2.93

2. The Hague

The Hague is our second-largest site after Munich. The New Main building is partly heated and cooled by groundwater heat pumps and additionally heated by biomethane. There is no information to suggest any land contamination at the site in The Hague. Under Dutch law, the site in The Hague is subject to an "activity decree", a simplified environmental permit.

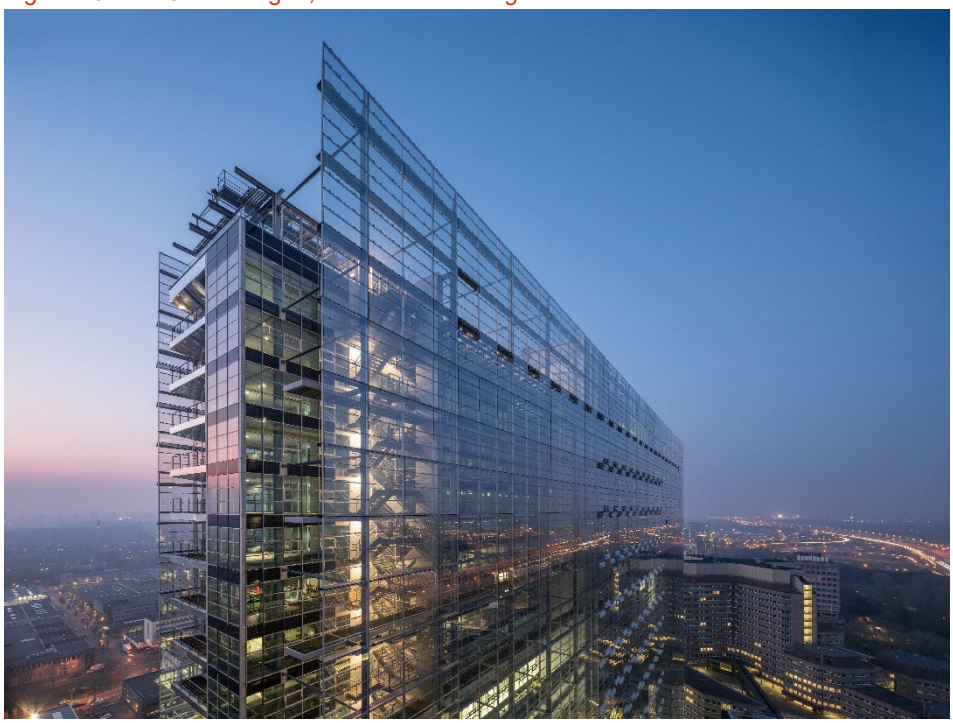
GHG emissions from energy and cooling agents' losses in 2024:
174 t CO_2e

- 81%
compared with 2023

Construction work on the New Main and new Hinge buildings in The Hague was completed in the summer of 2018 and the old buildings have since been demolished. The new buildings were constructed according to high sustainability standards, such as minimising the environmental impact in the construction phase, significantly reduced energy consumption, optimal and particularly user-friendly air conditioning. The EPO has chosen to comply with the certification criteria of multiple standards for sustainable buildings (Dutch Bouwbesluit Building Decree 2012, BREEAM[26]) and to aim for an energy efficiency rating of 20% above the requirements laid down in the 2012 Dutch building regulations. In the long term, 15% of the energy required for building operation is expected to be generated on-site, from groundwater heat and solar power, for example.

The Shell building was emptied by Q4 2023 following the rationalisation of office space after the implementation of the NWoW scheme.

Figure 19 – EPO The Hague, New Main building



Source: EPO

[26] BREEAM (Building Research Establishment Environmental Assessment Method) is a leading method for master planning projects, infrastructure and buildings. It recognises and reflects the value of higher-performing assets across the built environment lifecycle, from new construction to in-use refurbishment.

Table 11 – Environmental law and relevant facilities, EPO The Hague

Most relevant areas of environmental law	Relevant facilities/activities
Rules on general environmental management	Environmental permit, annual environmental report to the municipality of Rijswijk
Building regulations	Building activities: criteria for renovation/rebuilding and new buildings
Water regulations	Water discharge into sewage system
Waste regulations	Recycling/separation/disposal of various types of waste, handling of hazardous waste (spent batteries, old fluorescent tubes and waste oil)
Pollution regulations governing combustion units of type B	Heating system (natural gas), checked to comply with emission thresholds
Regulations on climate protection and refrigerants	Cooling installations with GWP of at least 5 t CO_2e, performance of density checks
Hazardous materials regulations	Handling/storage/transport of hazardous substances; transmission of hazardous waste (potential); grease traps, cleaning agents
Regulations on underground storage of hazardous substances	Underground storage area for diesel fuel (emergency generators)
Health and safety	Appropriate risk assessment, fire prevention, restrictions on certain chemical agents, availability of safety information sheets and operating instructions

EPO The Hague

Address	Patentlaan 2, 2288 EE Rijswijk, Netherlands			
Status	Owned by EPO			
Reference values	**Unit**	**2022**	**2023**	**2024**
Gross floor area	m²	217 465	217 465	217 465
Heated floor area	m²	159 884	159 884	159 884
Built surface area (sealed)	m^2	51 196	51 196	51 196
Total nature-oriented area on site	m^2	43 018	43 018	43 018
Number of employees	empl	2 438	2 437	2 441
Emissions				
Greenhouse gases (electricity, heating and fuels incl. upstream emissions, cooling agents)	t CO_2e/empl	0.34	0.38	0.07
SO_2 (fuels, natural gas, biomethane)	kg/empl	0.01	0.00	0.00
NO_x (fuels, natural gas, biomethane)	kg/empl	0.23	0.12	0.01
Particulates (fuels, natural gas, biomethane)	kg/empl	0.00	0.00	0.00
Energy, water and paper consumption				
Electricity consumption	kWh/empl	5 102	4 891	4 026
Heat energy consumption (2021 and 2023: biomethane, 2022: biomethane and diesel)	kWh/m^2	39	32	14
Renewable energy as a percentage of total energy consumption	%	97	100	100
Diesel consumption	l	16 559	4 599	7 244
Petrol consumption	l	1 607	2 220	44
Water consumption	m^3/empl	17.65	9.18	9.76
Paper consumption (procured)	sheet/empl	3 249	3 250	2 114
Waste generation				
Residual waste	kg/empl	17.53	28.72	22.59
Paper/cardboard	kg/empl	23.61	51.59	15.01
Plastics	kg/empl	0.94	1.90	1.85
Food waste	kg/empl	5.80	9.31	10.18
Food waste per meal served	kg/meal	0.17	N/A	N/A
Grease trap residues	kg/empl	12.11	16.79	5.91
Hazardous waste	kg/empl	5.07	12.94	18.23

3. Berlin

The rented site in Berlin is not in the scope of the EMAS validation. Until February 2025, the Berlin sub-office was located in a building constructed in the early 20th century. Due to the age of the building, it did not meet the highest standards of environmental sustainability, for example in terms of its insulation and energy efficiency. Facilities of environmental relevance included a gas-powered heating system with the landlord being responsible for operating the building's heating systems, while the EPO was responsible for operating the air conditioning systems in individual meeting rooms. According to the landlord, there was no land contamination at the Berlin site in 2024.

GHG emissions from rented space in Berlin in 2024:
348 t CO_2e

-2%
compared with 2023

Since March 2025, our new professional home in Berlin reflects our commitment to sustainability, combining modern office design with environmentally sustainable features such as natural lighting, energy-efficient systems, smart LED lighting and photovoltaic panels. These features reduce energy consumption and GHG emissions by a factor of 10 compared with the former building. Moreover, the central location, excellent public transport connections and bicycle parking with e-charging facilities are all factors that promote green commuting.

Figure 20 – EPO Berlin

Source: EPO

Table 12 – Environmental law and relevant facilities, EPO Berlin

Most relevant areas of environmental law	Relevant facilities/activities
Building energy efficiency regulations	Building insulation, energy-efficient technologies
Water regulations	Water discharge into sewage system
Waste regulations	Recycling/separation/disposal of various types of waste, handling of hazardous waste (spent batteries and fluorescent tubes)
Health and safety	Appropriate risk assessment, fire prevention, restrictions on certain chemical agents, availability of safety information sheets and operating instructions

EPO Berlin

Address	Gitschiner Str. 103, 10969 Berlin, Germany			
Status	Rented by EPO			
Reference values	**Unit**	**2022**	**2023**	**2024**
Gross floor area	m^2	20 000	24 090	24 090
Heated floor area	m^2	16 064	16 064	16 064
Built surface area (sealed)[27]	m^2	11 250	11 250	11 250
Total nature-oriented area on site	m^2	12 339	12 339	12 339
Number of employees	empl	192	187	180
Emissions				
Greenhouse gases (electricity, heating and fuels incl. upstream emissions, cooling agents)	t CO_2e/empl	2.00	2.17	1.93
SO_2 (natural gas)	kg/empl	0.00	0.00	0.00
NO_x (natural gas)	kg/empl	0.00	0.00	0.00
Particulates (natural gas)	kg/empl	0.00	0.00	0.00
Energy, water and paper consumption				
Electricity consumption[28]	kWh/empl	1 829	1 637	1 533
Heat energy consumption (natural gas)	kWh/m^2	103	103	91
Renewable energy as a percentage of total energy consumption[29]	%	17.55	17.38	15.94
Water consumption[30]	m^3/empl	5.32	7.08	7.36
Paper consumption (procured)	sheet/empl	503	0	0
Waste generation				
Residual waste	kg/empl	208.33	213.90	222.22
Paper/card	kg/empl	58.96	98.24	54.50
Plastic	kg/empl	24.58	25.24	26.22
Food waste	kg/empl	0.00	0.00	0.00
Hazardous waste[31]	kg/empl	0.00	0.00	20.41

[27] Area rented by the EPO (50% of the total building area).
[28] Electricity consumption at the EPO's Berlin site is estimated based on the landlord's division of overall electricity consumption among the tenants according to the size of the area rented. The 2023 figure changed compared with last year´s report due to more recent data becoming available.
[29] 2023 figure updated compared with last year´s report due to more recent data becoming available.
[30] 2023 figure updated compared with last year´s report due to more recent data becoming available.
[31] ICT electronic waste in 2024

4. Vienna

Vienna is the smallest of all EMAS-certified sites, in terms of both gross floor area and staff numbers. The site renovation project was completed according to plan and staff returned to the premises in November 2024. Following the renovation of the building, district heating is no longer in use. Facilities of environmental relevance are limited to a small storage area for cleaning agents.

The heating pumps use ammonia (NH_3), a natural cooling agent which does not contribute to ozone depletion and has no GWP. However, it is classified as a substance hazardous to water, so preventive measures, such as regular leakage inspections are undertaken, while an appropriate location for the pumps was selected.

There is no information to suggest any land contamination at the Vienna site.

From November 2022 until November 2024, staff worked in a rented office space in Vienna. It is noted that the related reported energy consumption reflects two months in 2022, the whole of 2023 and ten months in 2024. These figures are estimates as the metering system did not allow an exact assessment of the EPO's consumption by the landlord.

The core indicators reported below cover only the owned site, which is part of the EMAS scope. GHG emissions from energy consumption for construction works are reported in the scope 3 category "Capital goods".

GHG emissions from rented space (until October) and new building (as of November) in Vienna in 2024:
4 t CO_2e

- 10%
compared with 2023

Figure 21 – EPO Vienna

Source: EPO

Table 13 – Environmental law and relevant facilities, EPO Vienna

Most relevant areas of environmental law	Relevant facilities/activities
Building energy efficiency regulations	Energy certification, building insulation, energy-efficient technologies
Water regulations	Water discharge into sewage system
Waste regulations	Recycling/separation/disposal of various types of waste
Health and safety	Appropriate risk assessment, fire prevention, restrictions on certain chemical agents, availability of safety information sheets and operating instructions

EPO Vienna

Address	Rennweg 12, 1030 Vienna, Austria			
Status	Owned by EPO			
Reference values[32]	**Unit**	**2022**	**2023**	**2024**
Gross floor area	m^2	11 420	11 420	13 232
Heated floor area	m^2	7 260	N/A	7 973
Built surface area (sealed)	m^2	2 547	2 547	2 547
Total nature-oriented area on site	m^2	1 966	1 966	1 966
Number of employees	empl	65	68	75
Emissions				
Greenhouse gases (electricity, heating and fuels incl. upstream emissions, cooling agents)	t CO_2e/empl	0.16	0.07	0.06
SO_2 (fuels)	kg/empl	0.00	0.00	0.00
NO_x (fuels)	kg/empl	0.00	0.00	0.00
Particulates (fuels)	kg/empl	0.00	0.00	0.00
Energy, water and paper consumption				
Electricity consumption[33]	kWh/empl	4 783	N/A	1 749
Heat energy consumption (district heating)[34]	kWh/m^2	54	-	-
Renewable energy as a percentage of total energy consumption	%	57.54	52.23	52.23
Water consumption	m^3/empl	9.97	N/A	5.85
Paper consumption (procured)	sheet/empl	0	1 765	0
Waste generation				
Residual waste	kg/empl	192.31	N/A	26.67
Paper/card	kg/empl	1 076.92	N/A	20
Plastics[35]	kg/empl	N/A	N/A	N/A
Food waste[36]	kg/empl	N/A	N/A	N/A
Hazardous waste	kg/empl	19.40	N/A	N/A

[32] The reference values are indicated for the owned office in Vienna.
[33] 2024 value only for November and December, includes heating pump consumption
[34] No more district heating in Vienna following the renovation project.
[35] Plastic waste is not collected separately in Vienna and is included in the residual waste figures.
[36] Disposal handled by canteen service provider.

Annex 4 Environmental management system

Our environmental management system (EMS) according to EMAS has been implemented to integrate environmental aspects into all operational processes and identify potential improvements in environmental protection.

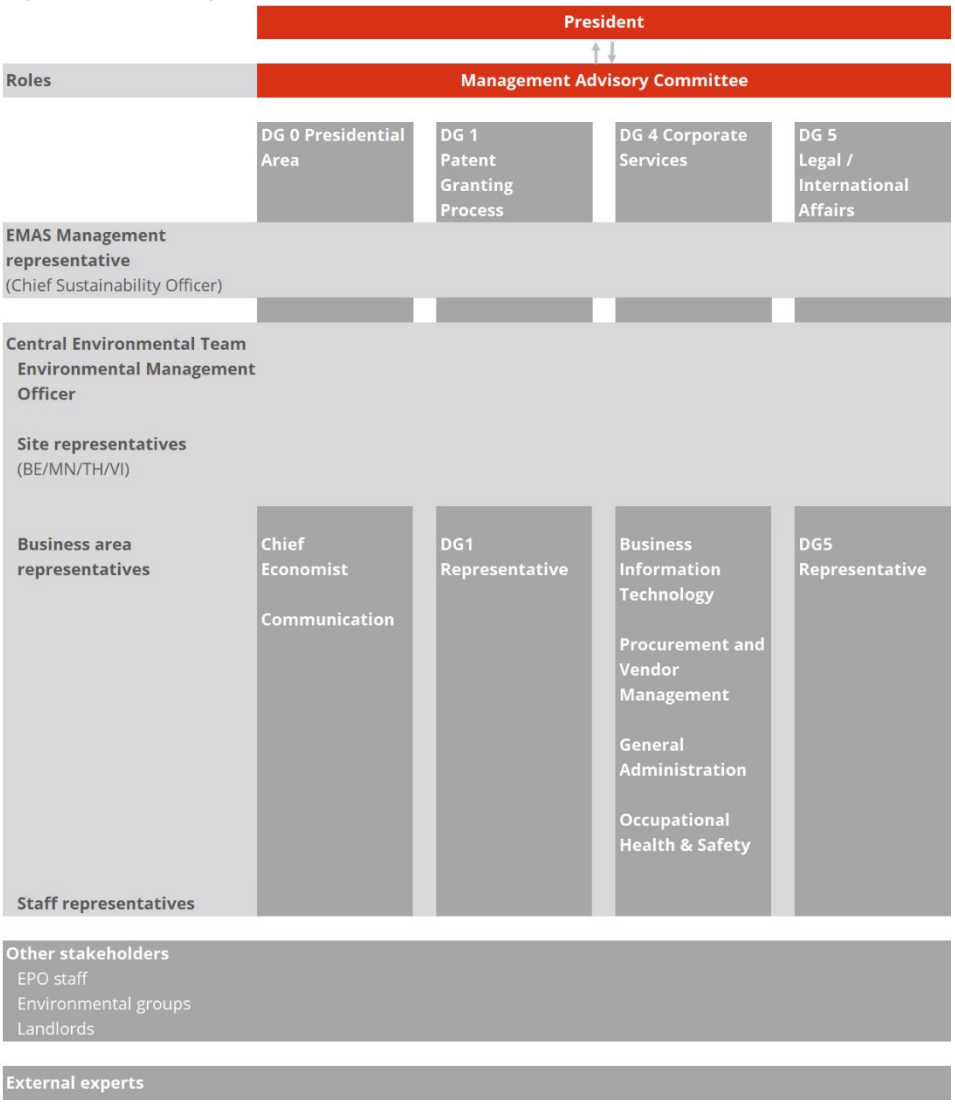
1. Structure and responsibilities

The structure of our EMS is set out in our environmental management documentation, which applies to all sites. We regularly evaluate our environmental context to identify relevant stakeholders and their expectations regarding the environmental management system. The EMS is regularly assessed in internal audits, thus ensuring a continuous improvement process. Staff are encouraged to adopt environmentally friendly behaviour. Relevant information is communicated to staff via info screens in the office buildings and the intranet and is made available to the public in the Environmental Report.

The Chief Sustainability Officer acts as EMAS Management Representative and is responsible for implementing and further developing the EMS with the support of the Environmental Management Officer (EMO). Site representatives monitor local activities with environmental impact (e.g., waste management) and ensure that environmental aspects are integrated into everyday operations at each site.

Together with business area representatives, the EMO and the site representatives form the EPO's central environmental team. The business area representatives are tasked with integrating environmental aspects in their respective departments, thereby strengthening the organisation-wide implementation of EMAS. Voluntary environmental groups initiated by staff in Munich and The Hague support the team's work by submitting proposals to the environmental programme.

Figure 22 – EMAS governance structure



Source: EPO

2. Compliance with binding obligations

EMAS and the environmental laws applying to the different EPO sites constitute external requirements to be met by the EPO and its EMS. The legal requirements and other binding obligations relevant for each place of employment have been identified. The most relevant environmental regulations for each place of employment are set out in the previous section. All binding obligations are documented in the legal register for each country in which the EPO is located. By continuously reviewing and updating the legal register, we identify changes to environmental law and implement new requirements. Moreover, all periodic obligations at the different sites are documented in local registers of periodic duties. Compliance with legal requirements is verified by annual internal audits. No non-compliances were detected.