EUROPEAN COMMISSION
Environmental Management System

Environmental Statement 2025 (data to 2024)

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Case studies

AENOR International has, as in previous years, been responsible for the verification of the Commission's sites although for the verification exercise of 2025 (as in 2024) this did not include JRC Karlsruhe which instead was verified by Dr Georg Sulzer. The corresponding declarations are presented here:

AENOR

ENVIRONMENTAL VERIFIER'S DECLARATION ON
VERIFICATION AND VALIDATION ACTIVITIES

AENOR CONFÍA, S.A.U., with EMAS environmental verifier registration number ES-V-0001, accredited for the scopes 99.00 "Activities of extraterritorial organisations and bodies", 84.11 "General public administration activities", 71.20 "Technical testing and analysis", 72.11 "Research and experimental development on biotechnology" 72.19 "Other research and experimental development on natural sciences and engineering", 72.20 "Research and experimental development on social sciences and humanities", 36.00 "Water collection, treatment and supply", 37.00 "Sewerage" 35.11 "Production of electricity", 35.30 "Steam and air conditioning supply" (NACE Codes), declares

declares to have verified whether the organisation as indicated in the update environmental statement of the organization EUROPEAN COMMISSION with registration number BE-BXL-000003

meet all requirements of Regulation (EC) N° 1221/2009 of the European Parliament and of the Council of 25 November 2009 on the voluntary participation by organizations in a Community Eco-Management and Audit Scheme (EMAS).

By signing this declaration, I declare that:

- the verification and validation has been carried out in full compliance with the requirements of Regulation (EC) N° 1221/2009,
- the outcome of the verification and validation confirms that there is no evidence of non-compliance with applicable legal requirements relating to the environment,
- the data and information of the updated environmental statement of the organization reflect a reliable, credible and correct image of all the organisation activities, within the scope mentioned in the environmental statement.

This document is not equivalent to EMAS registration. EMAS registration can only be granted by a Competent Body under Regulation (EC) N° 1221/2009 amended by Regulation (EU) 2017/1505. This document shall not be used as a stand-alone piece of public communication.

Done at Madrid on 10 December 2025

Signature of the Verifier

AENOR CONFÍA, S.A.U.

DR. SULZER
UMWELTGUTACHTERBÜRO

ENVIRONMENTAL VERIFIER'S DECLARATION ON
VERIFICATION AND VALIDATION ACTIVITIES

Dr. Georg Sulzer, with EMAS environmental verifier registration number DE-V-0041, accredited or licensed for the scopes 71.2 (Testing and technical analysis); 72.1 (Research and experimental development in natural sciences and engineering); 99 (Activities of extraterritorial organisations and bodies), (NACE Code) declares to have verified whether the site as indicated in the updated environmental statement of the organisation

EUROPEAN COMMISSION

1049 Bruxelles (Belgium))

Site: **Joint Research Center (JRC) Karlsruhe**
Herrmann-von-Helmholtz-Platz 1
76344 Eggenstein-Leopoldshafen

with registration number: BE-BXL-000003

meet all requirements of 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) amended by Regulation (EU) 2017/1505 and Regulation (EU) 2018/2026.

By signing this declaration, I declare that:

— the verification and validation has been carried out in full compliance with the requirements of Regulation (EC) No 1221/2009, amended by Regulation (EU) 2017/1505 and Regulation (EU) 2018/2026

— the outcome of the verification and validation confirms that there is no evidence of non-compliance with applicable legal requirements relating to the environment,

— the data and information of the updated environmental statement of the site reflect a reliable, credible and correct image of all the sites activities, within the scope mentioned in the environmental statement.

This document is not equivalent to EMAS registration. EMAS registration can only be granted by a Competent Body under Regulation (EC) No. 1221/2009, amended by Regulation (EU) 2017/1505 and Regulation (EU) 2018/2026. This document shall not be used as a stand-alone piece of public communication.

Done at Altfraunhofen on 17/10/2025

Dr. Georg Sulzer
Hangleite 2, D-84169 Altfraunhofen

1 Introduction and background

1.1 What is the European Commission?

The European Commission is the executive arm of the European Union. Alongside the European Parliament and the Council of the European Union, it is one of three main institutions that govern the Union, and by far the largest. The Commission's activities are steered by 27 Commissioners, assisted by over 30 000 civil servants and other staff working in 34 Directorates-General (DGs), 16 services/offices and departments all over the world. Each Commissioner takes responsibility for a particular area of policy and heads one or more entities that are generally known as DGs.

The Commission's primary role is to propose and enact legislation, and to act as 'Guardian of the Treaties', which involves responsibility for initiating infringement proceedings at the European Court of Justice against Member States and others whom it considers to be in breach of the EU Treaties and other Community law. The Commission also negotiates international agreements on behalf of the EU in close cooperation with the Council of the European Union.

The Commission's headquarters are in Brussels (Belgium), but it also has offices in Luxembourg, Grange (Ireland), Geel (Belgium), Ispra (Italy), Karlsruhe (Germany), Petten (The Netherlands), Seville (Spain) and many other places, agencies in several Member States and representations in all EU countries (http://ec.europa.eu/about/ds_en.htm). On 1st December 2009, the Treaty of Lisbon entered into force giving the Commission the institutional tools needed for the various enlargements and for meeting the challenges of an EU of 27 Member States.

1.2 Description of activities at the Commission's EMAS registered sites

The Commission's main sites are registered under its Eco-Management and Audit Scheme (EMAS).

Brussels Is the main site, the Commission's administrative centre, with a range of buildings dominated by offices but including conference centres, catering facilities, storage depots, print shops, childcare, medical and sports facilities.

The **Luxembourg** site is of a similar nature, though smaller but also hosts the main data centres of the Commission and a small radiation protection laboratory operated by the DG for Energy.
The five Joint Research Centre (JRC) sites outside Brussels are all incorporated under EMAS. In contrast to Brussels and Luxembourg, these scientific sites mainly comprise unique research and technical infrastructures. More details on the different JRC sites can be found here and a summary is presented as follows.

JRC Geel (Belgium) is recognised worldwide, both for being a major certified reference material (CRM) producer as well as for its nuclear activities with its two nuclear accelerators Gelina and Monnet. The site is also known for its expertise in metrology and standardisation in several fields (nuclear, health and food, transport and border security).
JRC Ispra (Italy) is considered one of Europe's leading research campuses with many laboratories and research infrastructures, including a power plant, a fire station and a water treatment facility as well as over 100 heated buildings. There are also several nuclear installations on the site as follows:

- Nuclear activities in long term shutdown, i.e. interrupted and included in the decommissioning programme (ESSOR – ESSais ORgel, Cyclotron, LCSR - Laboratorio Caldo Studi e Ricerche, STRRL - Stazione Trattamento Rifiuti Radioattivi Liquidi). The ECO-FARO Esperienza Critica ORGEL Fuel Assemblies melting Oven installation was dismantled in 2014.
- Installations where activities functional to the decommissioning programme are performed, e.g. radioactive waste management (Stazione Gestione Rifiuti Radioattivi, Stazione Trattamento Effluenti Liquidi, Tank farm, Intermim Storage Facility, Dry Wells) and nuclear fuel dismantling (Atelier Démantèlement Eléments Combustible).
- Laboratories where research activities connected to nuclear safety and safeguards are performed (PERLA: PERformance LAboratory, PUNITA: PUlsed Neutron Interrogation Test Assembly).

JRC Karlsruhe (Germany) is a self-contained site located in a research campus (KIT Campus Nord) on the outskirts of Karlsruhe, and the core of the JRC research for Nuclear Safety and Security. Research activities are conducted only in the nuclear field within the framework of the EURATOM treaty. They cover the following: fundamental properties and applications, safety of nuclear fuels and fuel cycle, nuclear waste management and decommissioning, monitoring of radioactivity in the environment, nuclear safeguards, nuclear non-proliferation and security (including trainings e.g. EUSECTRA).
JRC Petten (The Netherlands) executes and manages institutional and competitive research activities to support European policy-making for energy, mobility and climate. In particular, for energy - ensuring sustainable, safe, secure and efficient energy production, distribution and use); for mobility - fostering sustainable and efficient mobility in Europe; and for climate - providing scientific and technical analysis to support to integrated air quality, climate and related policies.
JRC Seville (Spain) provides socio-economic and techno-economic support for the conception, development, implementation and monitoring of EU policies. It has advanced computing infrastructure. As an administrative building, it is similar in nature to the EMAS sites of Brussels and Luxembourg, with the added complexity of occupying rented premises.

DG SANTE site at Grange, Ireland is a purpose-built low level wooden clad structure dating from 2002 and set in countryside 45km north-west of Dublin. It accommodates Directorate F, Health and Food Audits and Analysis, but was previously known as the Food and Veterinary Office (FVO). Many staff members are inspectors or auditors and travel frequently, and typically up to half may be away from the office at any one time.

The activities of the ***Houses of Europe*** are typically administrative, communication and public outreach activities, augmented by additional functions such as conference and meeting organisation, and supporting the local activities of European Parliament Members. EMAS in 2021 started with the sites of **Vienna (Austria)** and **Valletta (Malta)**. In 2022 the sites **Budapest (Hungary)** and **Nicosia (Cyprus)** were added. In 2023 the sites **The Hague (the Netherlands)**, **Copenhagen (Denmark)** and **Sofia (Bulgaria)** were added. These sites are jointly managed with the European Parliament's Liaison Offices in buildings known as the **Houses of Europe (HoE)**, specific data for the HoE are included in a separate Annex as a standalone document, but the total of the Commission is incorporated in the present document and added to other sites' data.

Contacts for further information about the Commission's environmental management system

For global enquiries, please contact EC-EMAS@ec.europa.eu.

For site specific queries, the contact points are listed below:

OIB-RE3-EMAS@ec.europa.eu (Brussels)
OIL-EMAS@ec.europa.eu (Luxembourg)

Virginie.TREGOAT@ec.europa.eu (JRC Geel);
JRC-ISPRA-ENVIRONMENTAL-OFFICE@ec.europa.eu (JRC Ispra);
Andreas.BITTERHOF@ec.europa.eu (JRC Karlsruhe);
Franz.HUKELMANN@ec.europa.eu (JRC Petten);
JRC-SEVILLE-ENVIRONMENT@ec.europa.eu (JRC Seville)

SANTE-IRL-Greening@ec.europa.eu (DG SANTE at Grange, Ireland)
COMM-EMAS-IN-REPRESENTATIONS@ec.europa.eu

1.3 What was new in 2024?

In 2024, the Commission continued to advance the Communication outlining the path to achieving climate neutrality by 2030.

The primary changes since 2024 included

- conducting a Progress Review of the Commission's Greening initiative involving key stakeholders and forming specialized focus groups;
- standardizing the reporting of Green Public Procurement to monitor all relevant purchasing procedures in line with the Greening Communication;
- developing an IT tool for data collection, monitoring, and reporting, which is currently in a trial phase;
- creating an HTML webpage to facilitate public access and comprehension, with last year's statement available at: Environmental Statement 2024 - results 2023 | Directorate-general of Human Resources and Security (DG HR).
- considering all the Commission's working places for reporting missions' emissions
- Site-specific targets have been defined for Houses of Europe where energy efficiency audits were completed, allowing for an informed approach to setting ambitious, yet realistic targets.
- Reporting aggregate data for DG COMM's Representations in Member States as an additional site in the Environmental Statement, making a total of 9 reporting sites

Actions identified as directly contributing to the objectives of the Greening Communication form a significant portion of the EMAS actions. Approximately 300 actions were identified in the 2023 Global Annual Action Plan, increasing to nearly 400 in 2024 and reaching 476 in 2025.

The scope of the EMAS system remains stable with seven Commission Representations in Member States.

While the number of individual sites within the Commission's registration remained stable, the total surface area covered by buildings registered in the system decreased, mainly due to the removal of some buildings in the Brussels portfolio. Since the EMAS system reached relative maturity in 2014 when it included the eight major Commission sites, there has been in recent years a reduction in total surface area, which has been accompanied, in 2024, by also a reduction in staff number.

* https://commission.europa.eu/about-european-commission/organisational-structure/people-first-modernising-european-commission/people-first-greening-european-commission_en

Progress of Greening Communication Plan actions

No	Overall status of actions under Greening Communication Headings	Done	On target	Attention	Problems
Actions to reduce Greenhouse Gas (GHG) emissions					
Buildings and office space					
1	**Brussels: buildings energy efficiency**				
	Renovation, rent and purchase of buildings: reduction of 25% of overall surface and 50% of number of buildings to manage by 2030				
2	**Brussels: implement green office space**				
	Gradual implementation of dynamic collaborative space				
3	**Luxembourg: buildings, energy efficiency (JMO2 occupation by 2026)**				
	OP to Mercier/Post in 2023				
4	**JRC sites: buildings, energy efficiency**				
5	**On-site energy production (PVs, cogeneration, heat pumps)**				
	Feasibility study for photovoltaic panels in Brussels				
6	**Climate-resilient buildings and workspace (including vulnerability, risk assessment)**				

Note

The 30 Greening objectives could have one or many actions; status is based on qualitative assessment of progress on these (see Annex I)

Caution (sustainable business travel)

Individual actions are generally on track/done, but achieving sought after reductions remains challenging!

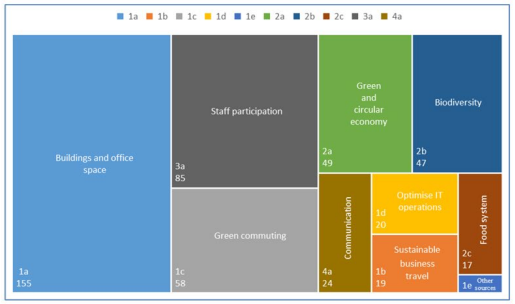
NB: 'Attention' for

- 19) Extend gradually the use of GPP to (all) tenders and contracts
- 23) Environmental labelling in canteens/cafeterias information about footprint of food more environmental information
- 7) Revise Guide to Missions
- 18) Carbon calculator for events (travel)

European Commission

Slides presented to the EMAS Steering Committee meeting of 26-02-2025

GAAP actions for Greening…



- 476 actions related to Greening Communication
- 933 actions, see Annex II (digitally)

European Commission

The figure above represents the number of actions per Greening heading in the Global Annual Action Plan (GAAP). The largest proportion of actions is attributed to buildings and office space reflecting the long history of site management in EMAS and efforts to reduce energy consumption and emissions. Similarly, the large number of staff participation and communication actions is particularly indicative of EMAS requirements and is reinforced by the Greening Communication.

In 2024, the Commission continued implementing actions from the Greening initiative by, for example:

- Finalisation of the new Guide to Missions
- About 10 500 colleagues in dynamic collaborative space
- 92% corporate car fleet low or zero emissions: target exceeded
- Sale of 23 buildings in Brussels
- Decision to sublet part of JMO2 and vacation of LACC in Luxembourg
- Continuation of developments in JRC sites including new/upgraded buildings (Seville)
- Greening the real estate park: abandoning old buildings with low energy efficiency (23 buildings sales procedure completed); negotiations started for the occupation of five new energy efficient buildings, in addition to the existing L107, L51, SB34, C-46, MO34 and T211 buildings
- Genève Pole abandoned in 2024
- Brussels biodiversity study/strategy resulted in two biodiversity projects at buildings B-28 and ORBAN/L-41 ongoing study for the courtyards and surroundings of CSM1 and BERL
- Development of new green roofs projects in CHAR and ORBAN completed in 2024.
- Project of installing photovoltaics panels in DAV1, L-15, SB34, CO46 and geothermal heat pumps in SB34 and CO46
- Further optimisation of energy consumption in Commission buildings (e.g. BEST summer; end/beginning of year)

1.4 Environmental policy

The Commission updated its **Environmental policy in 2022** to incorporate the European Green Deal that Commission President Ursula von der Leyen introduced in 2019. Following the Commission's adoption of the **Communication on Greening the Commission** in April 2022, it is now working towards its headline objective of achieving carbon neutrality in 2030.

Under EMAS individual sites may develop their own environmental policy. The policies, corporate and site level, are displayed at the entrance to all Commission buildings. For instance, JRC Ispra's site policy is displayed at the main entrance and at the entrance of the buildings hosting considerable quantity of staff (e.g. the canteen, cafeteria and Club House).

European Commission

EMAS

EMAS ENVIRONMENTAL POLICY

As a contribution to the Green Deal, the European Commission demonstrates its commitment to sustainable development, and sound environmental practice, by ensuring that it reduces the impact of its day-to-day activities in a manner consistent with the policies that it has developed for the European Union.

Continuing efforts to improve its environmental performance that started in 1997, the Commission achieved in 2005 its first registration under the Eco Management and Audit Scheme (EMAS). The Commission has implemented EMAS across its eight[1] largest sites in Europe since 2014, and will endeavour to continue extending the scope of its registration to the Executive Agencies and to its representations across Europe.

The Commission will continue to protect the environment, including preventing pollution, and in 2019, her President, Ursula von der Leyen, committed to make the Commission climate neutral by 2030.

On 5 April 2022, the Commission adopted a Communication entitled "Greening the Commission" establishing an action plan and targets to decrease its greenhouse gas emissions and to become climate neutral by 2030.

Under EMAS, the Commission seeks to continually improve its environmental management system and its environmental performance and therefore reduce the environmental impact of its everyday work in accordance with the UN's Sustainable Development Goals (SDGs) by :

(1) Using natural resources more efficiently, particularly in relation to energy, water and products such as paper ;
(2) Continuously reducing its operations' atmospheric emissions (mainly from building operations and transport) with the objective of making the Commission climate-neutral by 2030 ;
(3) Improving waste management and sorting, where waste prevention measures have been exhausted, so that waste recycling is optimised and residual waste reduced ;
(4) Protecting biodiversity ;
(5) Promoting sustainable and environmentally responsible public procurement procedures, for example by introducing appropriate criteria into the tender and contract process, and incorporating life cycle cost considerations where feasible ;
(6) Ensuring (and demonstrating) compliance with environmental legislation and regulations including in relation to emergency preparedness, thereby reducing pollution risks ;
(7) Encouraging staff and contractors to embrace sustainable behaviour through improved internal communication, awareness-raising, and training ;
(8) Enjoying transparent relations and dialogue with external parties, taking into account and addressing stakeholders' expectations ;
(9) Improving the EMAS system including ensuring consistency with European Union policies.

Additionally, and though not falling within the EMAS scope, the Commission will ensure through assessments carried out by its services, that in relation to its core business, it will :

(10) Systematically assess the potential economic, social and environmental impacts of major new policy and legislative initiatives and promote systematic integration of environmental objectives into EU policies ;
(11) Ensure the effectiveness of environmental legislation and funding in creating environmental benefits.

By virtue of the powers conferred on the Appointing Authorities, the European Commission's EMAS Steering Committee hereby approves this Policy Statement, commits to adopt the Commission's EMAS objectives, targets and action plan, to supervise the system's implementation and to monitor the use of its allocated staff and financial resources in order to ensure that the environmental management system runs efficiently.

This document is effective from the date of signature,

Brussels, 04/10/2022

On Behalf of the EMAS Steering Committee,

Gertrud INGESTAD
President

[1] Brussels, Luxembourg, Ispra (Italy), Geel (Belgium), Karlsruhe (Germany), Seville (Spain), Petten (The Netherlands) and Grange (Ireland).

1.5 Governance structure

i) Corporate Coordination of the EMAS system
A College of Commissioners Decision ensures EMAS implementation at a high level. DG.HR's Director General chairs the **EMAS Steering Committee** (ESC) which meets twice a year. It defines environmental policy, adopts the Global Annual Action Plan, sets environmental objectives and monitors progress. In addition, and due to the Commission's decentralised organisation, management and line managers not directly involved in the ESC or without formally defined EMAS roles also participate in the system. The Commission's Management Board established a working group to encourage closer links particularly between Directorates General (DGs) HR, SG and BUDG. The ESC comprises the following services: BUDG, CLIMA, DIGIT, ENER, ENV, HR, JRC, MOVE, SG, SANTE, MARE, RTD, SCIC, OIB and OIL, COMM, PMO and the Executive Agencies.

The **EMAS coordination team** based in Brussels within **HR.D7**, the Greening, Safety & Buildings Unit of DG HR, assumes day to day coordination. The **EMAS Management Representative** is responsible to Management for EMAS implementation and is the contact point for external organisations such as IGBE (Brussels Environment) and other EU Institutions. Five full time staff members work predominantly on system coordination including communication and training and are assisted occasionally by a trainee.

The Commission's size and geographic spread requires the EMAS coordination team to work with a network of over 40 staff across the Commission services whose job descriptions include their EMAS responsibilities. The network includes staff dedicated specifically to **EMAS site coordination** and to **raising staff awareness**.

ii) EMAS site coordination
The **EMAS Site Coordinators** at each of the eight sites are EMAS coordination's team's main contacts and responsible for implementing EMAS at the site level. They report on performance, contribute to the Environmental Statement and participate in preparing site level objectives and actions. The **JRC EMAS Coordination** ensures the harmonisation and coherence of the inputs of the five JRC sites, when applicable, as well as the. The EMAS site coordination team for Brussels is located in unit RE3 of the Office of Infrastructure for Brussels (OIB), the Office responsible for the facility management and building policy within the European Commission in Brussels.

Site coordination is ensured by two full time staff members, who integrate a team of 11 responsible, among other files, for the buildings' energy performance and monitoring, environmental compliance of the EC buildings, inclusion of environmental criteria in tenders, namely concerning building works and prospecting the real estate market.

The **EMAS site coordination team for Luxembourg** is located in Unit O1 of the Office for Infrastructure for Luxembourg (OIL). The Office ensures that all activities associated with the housing of staff, the management of social welfare infrastructure and the logistics of the Commission in Luxembourg are carried out to the best standards. The site coordination is ensured by two and a half time staff members.

The EMAS Site coordination for the EC Representations Up until 2024, the Central coordination of the EMAS implementation is ensured for the Commission by Unit D2 of DG Communication, responsible for managing the infrastructure of the Commission's Representations in Member States, supported by the EMAS Central Coordination Team in DG HR.D7 which ensures alignment with the corporate EMAS process and provides the contractual framework for the internal and verification audits. On the Parlement's side, the EMAS and Sustainability Unit, in the Directorate for Innovation and Central Services attached to the Secretary-General of the European Parliament, coordinates the project implementation in cooperation with other service responsible for the management of EPLOs, notably DG COMM and DG INLO, the latter having designated a central contact person for EMAS. Representations site coordinators in DG COMM (EC) and EPLO project coordinators in the EMAS and Sustainability Unit (EP) ensure day-to - day coordination in liaison with local EMAS coordinators in the Houses of Europe.

iii) Raising staff awareness
EMAS correspondents (Brussels and Luxembourg only) provide a link between their directorate-general/department and HR.D7, particularly for communication; and are nominated by their services. They participate in formal meetings on average three times a year, usually before the start of information campaigns.

Other staff contribute to EMAS, particularly those in facilities management, for example by providing

1.6 EMAS system scope - areas and staff numbers

The system developed initially in Brussels with a first registration covering eight buildings in 2005. Additional buildings were added yearly, and other sites joined, with virtually full reporting of the eight main sites established in 2014. The scope of the registration for 2024 relating to the eight main sites, and DG COMM's representations in Member States is included in Annex Scope by site with individual buildings indicated in Brussels and Luxembourg.

The area in which the system is implemented after remaining stables for several years, has started to reduce. The system expanded to include seven EU representations in Member States.

Figure 1.1 Evolution of EMAS registered area (m^2)

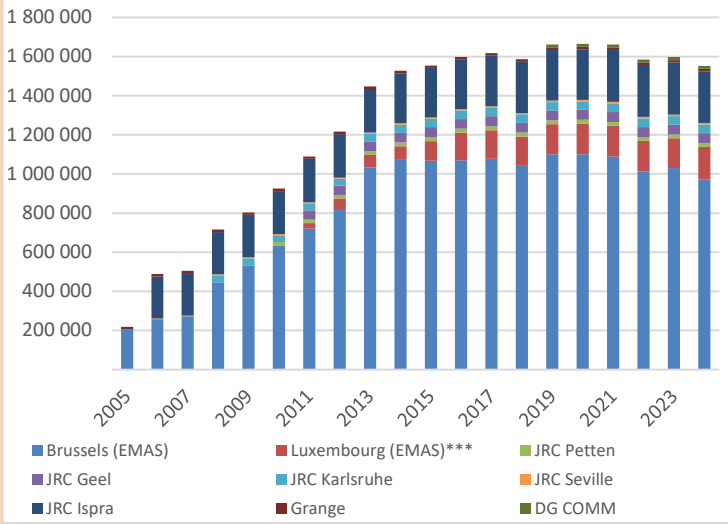


Figure 1.2 Evolution of staff in EMAS registered area

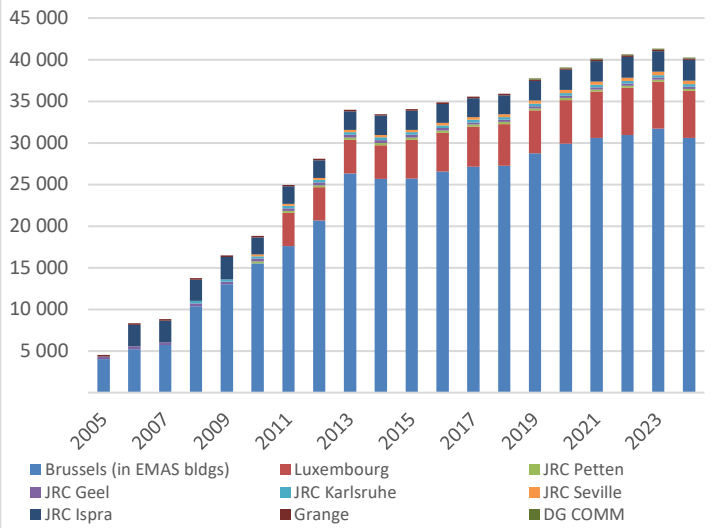


Table 1.1 Nomenclature of Economic Activities (NACE) codes for the EMAS sites

Code	Description	Brussels	Luxembourg	JRC Petten	JRC Geel	JRC Seville	JRC Karlsruhe	JRC Ispra	DG SANTE at Grange	DG COMM (Reps)
99	Activities of extraterritorial organisations and bodies	✓	✓	✓	✓	✓	✓	✓	✓	✓
84.1	Administration of the State and economic and social policy of the community	✓	✓						✓	✓
71.2	Testing and technical analysis		✓	✓	✓		✓	✓		
72.1	Research and expt'l devpt. in nat. sciences and engineering			✓	✓		✓	✓		
72.2	Research and experimental development					✓				
35.11	Electricity production							✓		
35.30	Steam and air conditioning suppl							✓		
36.00	Water collection, treatment and							✓		
37.00	Sewerage							✓		

Table 1.2 Evolution of surface areas (m^2)								a) Evolution in surface area where the system is implemented													
Site	**2014-24**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
Brussels (EMAS)		206 166	257 557	272 324	446 562	533 285	633 228	721 038	820 028	1 033 183	1 075 372	1 067 270	1 069 453	1 077 739	1 042 008	1 100 473	1 100 473	1 089 419	1 012 565	1 029 217	970 523
Luxembourg (EMAS)***								27 710	53 808	64 703	66 161	100 221	140 479	145 697	148 847	153 172	156 681	156 681	156 681	152 235	167 596
JRC Petten							18 400	18 400	19 150	19 150	19 458	21 397	20 502	20 842	19 996	19 996	19 996	19 996	19996	19996	19996
JRC Geel								46 996	46 996	46 390	48 815	50 538	50 538	50 382	50 499	50 525	50 651	50 650	50650	50650	50650
JRC Karlsruhe					35 592	35 592	35 592	35 592	35 592	41 735	41 735	41 735	43 170	43 170	43 170	43 170	43 170	43 170	43710	43710	43710
JRC Seville			4 462	4 462	4 462	4 952	5 577	5 577	5 899	6 497	7 017	7 165	7 165	7 580	7 580	7 698	7 756	8 039	8039	8039	8039
JRC Ispra			213 464	216 051	216 441	216 783	219 570	221 444	222 148	223 077	256 077	253 428	254 356	259 828	261 713	258 539	258 546	265 519	265516	265460	264114
Grange		12 402	12 402	12 402	12 402	12 402	12 402	12 402	12 402	12 402	12 402	12 402	12 402	12 402	12 402	12 402	12 402	12 402	12402	12402	12402
DG COMM																15 193	15 193	15 193	15 193	15 193	15 193
Commission		**218 568**	**487 885**	**505 239**	**715 459**	**803 014**	**924 769**	1 089 159	1 216 023	1 447 137	1 527 037	1 554 156	1 598 064	1 617 639	1 586 215	1 661 168	1 664 868	1 661 069	1 584 752	1 596 902	1 552 223
b) Additional surface areas also used for some calculations																					
Brussels (all)										1 051 557	1 075 372	1 069 673	1 082 004	1 090 075	1 069 020	1 124 768	1 124 768	1 128 653	1 138 289	1 090 167	1 045 833
Brussels (offices)		206 166	253 525	268 292	421 965	508 688	599 725	677 078	776 068	982 810	1 000 963	990 153	990 153	990 153	990 153	990 153	990 153	990 153	969 912	935 424	910 723
Luxembourg (all)								187 912	198 807	198 807	198 807	223 997	241 023	241 023	180 923	181 623	181 606	181 606	180 677	191 592	172 527
c) Total surface areas for Commission level calculations																					
Commission										1 447 137	1 527 037	1 554 156	1 598 064	1 617 639	1 586 215	1 661 168	1 664 868	1 661 069	1 584 752	1 596 902	1 552 223
Commission (all bldgs)										1 465 511	1 527 037	1 556 559	1 610 615	1 629 975	1 613 227	1 685 463	1 689 163	1 700 303	1 710 476	1 657 852	1 627 533

Table 1.3 Evolution of staff and contractor numbers*								a) Evolution in staff numbers where the system is implemented													
Site	**2014-24**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
Brussels (in EMAS bldgs)		4 033	5 238	5 702	10 393	13 014	15 527	17 586	20 663	26 336	25 667	25 698	26 562	27 148	27 254	28 769	29 916	30 604	30 928	31 717	30 591
Luxembourg								3 999	3 997	4 048	4 043	4 667	4 653	4 786	5 016	5 138	5 240	5 559	5 698	5 642	5 656
JRC Petten							232	229	266	263	282	278	276	263	248	249	247	240	230	228	236
JRC Geel		318	326	331	342	317	325	331	322	341	346	328	296	265	259	262	266	263	264	264	264
JRC Karlsruhe					276	273	294	305	299	305	320	322	324	322	317	315	309	305	306	304	300
JRC Seville							212	240	244	282	289	283	300	322	342	368	382	390	403	408	429
JRC Ispra			2 566	2 595	2 545	2 682	2 052	2 087	2 110	2 223	2 337	2 296	2 258	2 277	2 285	2 332	2 411	2 475	2494	2468	2494
Grange		195	195	195	195	195	188	186	189	182	179	180	190	188	179	176	173	178	182	169	162
DG COMM (1)																124	118	110	125	140	136
Commission		**4 546**	**8 325**	**8 823**	**13 751**	**16 481**	**18 830**	**24 963**	**28 090**	**33 980**	**33 463**	**34 052**	**34 859**	**35 571**	**35 900**	**37 733**	**39 062**	**40 124**	**40 630**	**41 340**	**40 268**
b) Additional staff numbers used for calculations																					
Brussels (all)**		21 203	22 635	23 760	24 936	24 937	25 750	26 305	28 681	26 499	27 392	27 089	26 927	28 225	28 494	28 948	29 941	30 604	30 928	32 532	33 041
Luxembourg (in EMAS bldgs)								759	1 315	1 422	1 492	2 378	3 912	4 059	4 277	4 355	4 494	4 809	4 946	4 549	5 212
c) Staff numbers for Commission level calculations																					
Commission										**33 980**	**33 463**	**34 052**	**34 859**	**35 571**	**35 900**	**37 733**	**39 062**	**40 124**	**40 630**	**41 340**	**40 268**
Commission (all bldgs)										**34 143**	**35 188**	**35 443**	**35 224**	**36 648**	**37 140**	**37 912**	**39 087**	**40 124**	**40 630**	**42 155**	**42 718**

* Includes staff (administrators, assistants, contract agents, temporary agents, local agents) and other staff (contractors, seconded national experts, trainees, interim agency staff) and Commission Members in Commission buildings

EMAS' staff are those staff located in EMAS registered buildings or premises. Staff numbers for Brussels adjusted by OIB **Excludes average of 1 257 staff based outside Commission buildings (2022), 2 366 (2023), and 3 005 (2024)

*** MERP bldg, is included for 2024, as it will be EMAS registered in current verification exercise

Table 1.4 Number of buildings registered under EMAS

Site	2014-24	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Brussels		8	13	15	23	32	42	48	54	59	62	62	62	62	58	60	60	60	48	49	46
(all bldgs)										59	62	62	64	64	61	61	61	61	54	55	52
Luxembourg [2]								2	3	4	6	7	10	11	13	13	14	14	14	12	13
(all bldgs)								13	14	14	14	16	18	18	17	17	17	17	16	15	16
JRC Petten		0	0	0	0	0	14	14	14	14	14	17	16	12	12	12	12	12	12	12	12
(all bldgs)		0	0	0	0	0	14	14	14	14	14	17	16	13	13	14	14	14	14	14	14
JRC Geel		0	0	0	0	0		14	14	14	15	16	16	16	16	16	17	17	17	17	17
JRC Karlsruhe		0	0	0	0	0	0	0	0	2	2	2	4	4	4	4	4	4	4	4	4
JRC Seville		0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1
JRC Ispra		0	0	0	0	0	0		0	0	419	409	410	402	402	384	376	366	360	358	352
Grange		0	0	0	0	0	0	0	0	0	3	3	3	3	3	3	3	3	3	3	3
DG COMM																		3	5	8	8
Commission		**8**	**13**	**15**	**23**	**32**	**56**	**78**	**85**	**94**	**522**	**517**	**522**	**511**	**509**	**493**	**487**	**480**	**464**	**464**	**456**
Commission (all bldgs)											**530**	**526**	**532**	**521**	**517**	**500**	**493**	**486**	**474**	**475**	**467**

(1) including Valletta, Vienna, Nicosia, Budapest, De Haag, Copenhagen and Sofia since 2019, even if registered later

(2) Including for 2024, MERP bldg that will be EMAS registered after current Verification

1.7 Support and leadership by top management: Testimonies by the Director General for Human Resources and site management

Stephen QUEST : Director General for Human Resources

The European Green Deal compels Member States to cut emissions significantly and highlights the need for sustainable food supply chains and biodiversity preservation. The 2022 European Commission Communication on Greening outlines how the institution aims to achieve these goals and become climate neutral 20 years ahead of the target date for Member States. The Commission's primary goal is to reduce its equivalent CO2 emissions by 60% from 2005 to 2030 through a wide range of measures.

I am delighted that the Commission this year is still on a positive path towards this 2030 objective. Since becoming the first EU Institution to achieve registration in 2005, the annual publication of EMAS results have shown that we have consistently delivered on our commitment to significantly reduce our environmental impact. Initially limited to Brussels, the Commission's scheme now includes its eight largest sites in Europe and seven Commission Representations (shared with the European Parliament Liaison Offices) in EU Member States.

The results achieved over the last years have been considerable, leading to a 31% reduction in our carbon footprint between 2019 and 2024. Buildings related emissions have decreased by about 25 000 tonnes through a variety of energy saving measures, including the reduction of the m^2 footprint of the institution. Emissions due to staff and experts' missions and commuting also decreased by 39% since 2019. Supported by a new staff commuting policy for Brussels and a new Guide to Missions, we hope to continue guiding our staff in the next years to make sustainable choices when choosing their mode of transport.

While progress towards 2030 targets is encouraging, we should be mindful that achieving them will require further work, in particular when it comes to reducing emission from staff professional travel. This year's Progress Review of the Communication on Greening will support these efforts by reconfirming our 2030 ambitions and setting out the pathway to achieve them in the next years.

With the continued commitment of all Commission staff, I am confident that we will make further progress and lead the way by becoming climate neutral by 2030.

Morten FJALLAND, Director of Office for Infrastructure, Brussels

The Office for Infrastructure and Logistics in Brussels (OIB) creates a workplace for Commission staff that is functional, safe, and comfortable. It also provides top-quality support, well-being and social services. OIB operations have a client-centred approach, and are environmentally sustainable and cost-efficient. This translates into key accomplishments, such as reduced energy consumption and more self-produced renewable energy, fewer CO_2 emissions, and use of less paper. The dynamic collaborative offices tailor for the changed work reality. Staff is encouraged to use public transport and active modes for commuting. The changes in waste collection and sorting inspire colleagues to also reduce their waste production. These achievements reflect OIB's lasting commitment to continue to do better.

The Communication on Greening the Commission sets a clear goal of reducing CO_2 emissions by 60% (compared to 2005) and reach climate neutrality by 2030. The Brussels-based Commission services, and in particular the OIB, are instrumental to accomplish this ambition. The recent Greening the Commission Progress Review shows, once again, how together we are working towards a more sustainable European Union.

José MIRANDA-VIZUETE, acting Director of the Office for Infrastructure and Logistics, Luxembourg

In OIL, we are dedicated to ensuring a secure and efficient work environment, in line with the "greener and smarter" real estate strategy, while offering services like transportation, office supplies, catering, and after-school childcare.

After the installation of services in the MERP building, which possesses a DGNB label ("platinum" level), we are preparing to finalize the construction of the Jean Monnet 2 building. The new complex will be certified under the BREEAM sustainable building label ("excellent" level) and aim for nearly zero emissions building (NZEB) performance standards. Subsequently, we will assess how to continue to optimize our real estate assets to remain aligned with the environmental commitments of the Commission.
In parallel, we maintain our focus on several key aspects, such as reducing energy consumption and waste production, as well as promoting sustainable mobility and awareness raising. Regarding the catering services, OIL will continue to explore how to reinforce its commitment to local sustainability, for example by prioritizing products from short supply chains whenever possible.

Ciarán NICHOLL, Director of JRC Geel

When JRC-Geel integrated EMAS in 2011, it vouched its commitment to implement an effective environmental management system, despite the challenges of housing and operating specialised EC laboratory infrastructures. Examples include two high energy consuming nuclear accelerators, a high-tech storage facility for reference materials, nuclear and non-nuclear laboratories with over/under atmospheric pressure requirements, etc.
Each year, JRC-Geel monitors and looks at ways to further improve in reducing its environmental impact and complying with the ever-more stringent legal requirements set by the Flanders Region. Thanks to its BMS (Building Management System), JRC-Geel is able to measure and accurately monitor its EMAS indicators and this allows management to take informed decisions and define improvement actions.

In an ageing site like JRC-Geel, real opportunity for saving energy resides in a refurbishment programme of buildings, including their insulation. To capitalise on this, JRC-Geel has launched an action plan with projects to consecutively renovate its facilities, including the deep refurbishment of one building according to the principles and values of the New European Bauhaus initiative. Another key element of this strategy is the transition to non-F-gas systems and the enhancement of leak detection protocols for insulation gases, addressing the site's inherent vulnerabilities in this area.
This action plan also seeks to integrate the present and future requirements of the respective JRC-Geel site's scientific work programmes, all the way up to up to 2034. A temporary downside when implementing refurbishment, insulation jobs and clean up exercises is an inevitable waste increase which contributes to the carbon footprint balance.
An avenue which still requires attention and improved directionality is travelling, despite the JRC commitment to do so.
Finally, the JRC-Geel site is working to preserve and foster biodiversity by creating "natural habitats for fauna" and striving to map its biodiversity through different Bioblitz projects.

Rien STROOSNIJDER, responsible for site management, JRC Ispra

EMAS is the most rigorous environmental management system available in Europe and is regarded as the premium standard for environmental excellence. Since early 2012, we have committed to the EMAS scheme, building on and extending our ISO 14001 certified management system. Our environmental policy aims to make sure that site operate in such a way that all activities, which have an environmental impact, are planned and executed in order to minimise damage to the environment, prevent pollution and improve environmental performance. Its implementation is only possible thanks to competent technical staff and strong engagement of all persons on site.

The EMAS results for the European Commission Ispra site during 2024 went generally beyond the targets originally set, particularly due to the impressive work done to reduce our impact on the environment carried out in recent years. Ispra Site Management continued to promote and apply energy saving measures within a more efficient management approach leading to a further reduction in consumption.

All the energy saving measures/activities put in place on the JRC-Ispra site are in line with the Communication on Greening the Commission that aims to achieving carbon neutrality by 2030. This is how the Commission intends to implement the European Green Deal internally and thereby lead by example. Our ambitious targets will be supported by our environmental core indicators, which facilitate multi-annual comparability within and between organisations. In all this, a participatory approach and the engagement of staff are key, as is the exchange of best practices with host country authorities and transparent communication of our performance to them and the general public.

Mikel LANDABASO, Director Fair and Sustainable Economy and responsible for site management at JRC Seville

In a world that urgently needs to accelerate efforts to achieve the green transition, it is essential for the European Commission to lead by example in managing and enhancing its own environmental performance. The JRC Seville site is fully dedicated to this goal, and I am delighted that our indicators demonstrate our efforts to improve our site's environmental performance while ensuring optimal working conditions for our researchers. Additionally, we are integrating sustainability into our core business of providing scientific and technical advice for policy making, demonstrating that we are turning our commitment into action.
Finally, I am pleased to report that we are making significant progress towards the construction of a new building for our JRC Seville site that will meet world-class environmental performance standards through innovative design, in line with the values and principles of the New European Bauhaus initiative.

Ms. Dana Spinant, Director-General DG Communication

The EU institutions' outposts in the Member States – the Commission Representations and the European Parliament Liaison Offices – joined the EMAS process in 2021. They are the institutions' public face at local level, with the overarching mission to engage with all segments of society. As such, the Representations and Liaison Offices are in the prime position to demonstrate first-hand, to the 450 million citizens of the Member States in which they are located, the European institutions' firm commitment to the protection of the environment.
As of today, the Commission and the Parliament joined forces to implement EMAS in Valletta (Malta), Vienna (Austria), Budapest (Hungary), Nicosia (Cyprus), Copenhagen (Denmark), Sofia (Bulgaria) and The Hague (Netherlands). This is done in the context of the so-called Houses of Europe, physical premises hosting the Commission Representations and the Parliament's Liaison Offices in Member States.
The two-fold aim of the project is to reduce the environmental impact of the Houses of Europe and in doing so, also add credibility to the efforts of the European Union to lead change across Europe at large. The initiative is also the first known example of two European institutions implementing EMAS together, developing additional synergies and efficiencies, as well as a possible blueprint for others to follow..

Ulla ENGELMANN, responsible for site management, JRC Karlsruhe

Among the JRC sites, Karlsruhe is unique, being in its entirety a nuclear research facility where the continuous operation of energy-intensive systems is mandatory to ensure nuclear and radiation safety at all times. Combining the very advanced EMAS goals with the realities of an aging infrastructure continues to present significant challenges, and major improvements require substantial investment.

While the last results show that maintaining progress remains demanding, JRC Karlsruhe has nevertheless achieved a meaningful decrease in energy consumption compared to the 2019 baseline. These reductions are the result of sustained optimisation of our monitoring systems and the efficient operation of our existing installations, even pending completion of our new state-of-the-art laboratory (Wing M).
JRC Karlsruhe remains committed to further environmental improvements within its facilities. More broadly, our research continues to contribute to the safe and secure use of nuclear energy which many EU member states rely on as an established low-carbon technology contributing to climate change mitigation.

Ruben TASCON, SANTE Dir. F (acting) Grange, Ireland

We are located in the lush, green farmland of County Meath, where cattle farming is the main activity although sheep are not an uncommon sight in the fields around us.
We are particularly conscious of the agricultural setting of our site and take steps to ensure that our activities do not have a negative impact on our neighbours or the local environment. We include EMAS compliance as a feature of all contracts and look at how services to our staff can be delivered in an eco-friendly way.

During 2024 we delivered a number of projects. In particular:

- *We continued the replacement of old high wattage lighting with new more efficient LEDs at different site locations (emergency light system; parking light system) .*
- *Like every year, large areas of our grassland (approximately 3.75 ha) were left to grow as meadow, in order to encourage the growth of plants and flowers to provide nectar for insects including bees, butterflies and hoverflies.*
- *The section of the building known as the Annex remains closed as is the ex-crèche following the phasing out of childcare services due to low demand. Both sections have been effectively mothballed and isolated from the other buildings which contributes to both lower utility KPIs and a lower carbon footprint.*

Piotr SZYMAŃSKI, JRC Petten Site Director

Site activities focus on sustainable energy and mobility solutions, nuclear safety and climate. The site is home to 27 buildings including state of the art laboratories and supporting infrastructure, where cutting-edge research is performed. Here, scientists and experts collaborate to provide reliable, independent data and technical expertise that help shape Europe's future.
The site is nestled within a Natura 2000 protected area. Biodiversity initiatives, nature management, and sustainable development goals are defined and implemented in close cooperation with local Dutch authorities and neighbouring organisations of the Energy and Health Campus (EHC), of which JRC Petten is part.

As one of the first EMAS-certified European Commission sites, JRC Petten and its staff have continuously demonstrated a deep commitment to upholding environmental standards, European Commission Decisions and Dutch host country legislation.

New investments are carried out taking the green procurement conditions as a guideline. As an example, the new JRC reception building whose construction started in 2025 and will be completed in Spring 2027, will be constructed as a near-zero energy building (NZEB), following the energy performance level A++++. Furthermore, following a recently performed Energy Study, future infrastructure investments in the horizon 2034, will further improve the sustainability of the buildings, current and future research infrastructures and energy performance of the site, considering the EU's 2030 and 2050 goals.

2 Significant aspects, objectives, indicators and targets

2.1 Significant aspects and objectives

Each site reviews its environmental impact to identify the direct (and indirect) significant aspects and determine how they should be managed. The detailed approach is described in the EMAS handbook's Procedure No1, and the site level results are summarised below in Table **Summary of significant environmental aspects** which is revised yearly. There is no separate review for the Commission as a whole, although the significant aspects tend to correlate with the required reporting under Annex IV of the EMAS Regulation, and all these parameters are reported at corporate level.

Significance is determined taking into account frequency, severity, breach of law, magnitude, scope for control, applicable legislation, stakeholders' concerns, previous incidents, and the potential for taking action. Indicators and reporting have take into account the best environmental practices included in the sectoral reference document (SRD) for public administration, following a detailed site level analysis conducted in 2020.

This considered all aspects of the SRD, particularly managing and minimising energy, water and waste consumption, minimising consumption of paper and consumables, and minimising the environmental impact of commuting, business travel, canteens and cafeterias, meetings and events organisation. It showed that the relevant aspects were generally well covered at Commission level. An evaluation is scheduled for 2024/5 to consider SRD aspects in the context of the EMAS Guide published in November 2023.

The table below lists the significant aspects under the **high-level objectives** in the Environmental Policy which include i) efficient resource use, ii) reducing emissions to air, iii) improving waste management, iv) protecting biodiversity, v) promoting green public procurement, and vi) legal compliance and emergency preparedness. Promoting internal and external communication in relation to these aspects, and staff participation, are also very important strategic objectives.

The **Greening the Commission Communication (2019-2030)** described how the Commission would seek climate neutrality by 2030, by first reducing its emissions as far as possible before compensating for the remainder through carbon removals. While reducing emissions is the most visible objective, the Communication also seeks to promote green public procurement and biodiversity. In effect the communication reinforces the main objectives of the Environmental Management System (as shown in the table below) but its main focus is quantitative targets for reducing emissions.
Table 2.1 indicates that resource consumption, particularly in relation to energy, CO2 emissions and other air emissions along with managing waste generation are particularly significant at most sites.

Nuclear emissions are a significant aspect of the JRC's former and current nuclear sites and are carefully controlled. Equally, waste discharges from experimental facilities at the JRC sites (whether solid or liquid) are important as they may potentially contain more hazardous chemicals than at sites serving a role of office administration, and are therefore subject to stricter control and monitoring.

Although not generally a research site, Luxembourg does accommodate a laboratory used by nuclear inspectors, and which handles radioactive material. Medical waste however also requires special consideration, and medical services are present at many of the sites.

The **Brussels** site comprises mostly office buildings (and supporting infrastructure), and therefore the main concerns are energy consumption and related emissions, as well as waste production. The impact of staff mobility (professional travel and commuting) is also important.

In **Luxembourg**, the activities are mainly of administrative nature, with some support and logistics services (such as catering, office supplies, childcare facilities, etc.) so broadly similar aspects to Brussels. But Luxembourg also hosts the main data centres of the Commission and a radiation protection laboratory.

For the JRC

- **JRC-Geel** is classified as a Class 1 facility under the environmental license, indicating that its operations in the nuclear and chemical/biological sectors have a significant environmental impact. Consequently, nearly all aspects outlined in the EMAS objectives are relevant.
- At **JRC Ispra**, the environmental aspects and impacts are calculated on the basis of a site-procedure, which takes into consideration Probability (P) and Gravity (G) criteria to define whether an environmental aspect is significant or not.
- **JRC Karlsruhe** undertook the first full update of the environmental aspects in 2007. These are described in the Environmental Aspects Register (IMS-KRU-S6.6-RGS-0001). It is usually reviewed annually and updated, when necessary and most recently in February 2025. Significant impacts associated with four main aspect groups were identified, mainly concerning the use of resources, emissions and the generation of radioactive waste. Due to the mostly static character of site activities, these have remained unchanged for several years.
- **JRC Petten** monitors the Environmental Aspects of the site by carrying out annual reviews on unit level. According to the results all six EMAS aspects are significant for the site.
- In **JRC Seville**, the identified significant environmental aspects are related to offices used in rented premises. Business travels are considered under the corporate umbrella. Although refrigerant losses from buildings rarely occur, they have been considered a significant aspect due to their high potential impact.

For DG SANTE at Grange, a study of the Grange environmental aspects was undertaken for the first time in 2014. Examination and evaluation of Grange's environmental aspects and impacts, both direct and indirect under normal, abnormal and emergency conditions was developed in 2017 and reviewed annually.

The identification of environmental impacts takes account of the organisation's current and past activities, products and/or services.

The table is reviewed and updated every year. The last addition, as a direct consequence of Covid-19, has been the indicator regarding public health.

In **DG COMM's Representations**, the activities are mainly of administrative nature, with some support and logistics services. The identified significant aspects reflect the Houses of Europe as a whole, including the EPLO.

Table 2.1 Summary of significant environmental aspects at site level

	JRC								Representations in EU Member States									
EMAS Objective and significant aspect	Brussels	Lux'bourg	Petten	Geel	Seville	Karlsruhe	Ipsra	Grange	Valletta	Vienna	Budapest	Nicosia	Cop'hagen	Sofia	The Hague	Services	Significant impacts*
1) Efficient resource use																	
Emissions from energy generation (large scale, gas)							✓										a
*Buildings energy consumption**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		b
*Fleet vehicle energy consumption**	✓	✓		✓						✓	✓		✓				b
Water use	✓	✓		✓				✓		✓		✓	✓	✓			c
Paper consumption	✓	✓		✓						✓		✓					
2) Reducing emissions to air (CO_2e and other) from:																	
*Buildings energy use**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		a, b
Buildings refrigerant loss	✓	✓		✓	✓				✓	✓	✓	✓					a
*Staff missions**	✓	✓		✓			✓			✓		✓	✓	✓		✓	a, b, e
*Experts missions**																✓	a, b, e
*Emissions from staff commuting**	✓	✓		✓						✓				✓			a, b, e
Emissions from site vehicles		✓		✓					✓	✓	✓	✓	✓	✓			a, b, e
Emissions from energy generation (large scale, gas)				✓			✓										a, b, e
Emissions of particles, etc	✓		✓	✓			✓				✓						e
Nuclear emissions		✓		✓		✓											f, g
Noise**							✓										
3) Improving waste management																	
Non hazardous waste	✓	✓		✓	✓		✓		✓		✓	✓	✓				g
Hazardous waste	✓	✓		✓			✓		✓	✓	✓	✓	✓	✓	✓		f, g
Wastewater/liquid water	✓	✓		✓			✓										g
Nuclear waste				✓		✓											f, g
4) Protecting biodiversity																	
*Protecting biodiversity**	✓	✓	✓	✓			✓										h
5) Promoting green procurement																	
*Contractor behaviour**	✓		✓	✓			✓			✓		✓	✓	✓	✓	✓	i, j
*Promote fair, healthy, sustainable food system**																	a, c, g, k
6) *Improving management* of legal compliance and emergency preparedness																	
Managing legal compliance and emergency preparedness	✓	✓	✓	✓							✓	✓	✓	✓	✓		l

Notes: *Buildings' energy use ** Direct priority of Greening Communication*; Paper consumption - Indirect priority of the Greening Communication*

** specifically added this year for JRC Ispra

Table 2.1a* notes on (potential) significant impacts

a) contribution of CO_2e emissions to global warming;
b) environmental footprint of energy production, fuel storage and distribution including potential for fuel spills;
c) over exploitation of surface and groundwater sources affecting flora, fauna and human populations;
d) unsustainably forestry, and consequences for biodiversity;
e) Non CO_2 emissions (e.g. SO_2, NOx; particles) particularly affecting respiratory health and surface water pollution (tyre wear);
f) radiation deleterious to health;
g) contamination of air, soil, surface and groundwater;
h) removal of habitats conducive to diverse flora and fauna;
i) use of unsustainable material supplies;
j) noise annoyance for neighbours;
k) unsustainable agriculture (over intensive, use of too many pesticides);
l) operating outside legal with environmental, financial and reputational consequences

The impacts assessment system therefore takes into account the environmental impact of EU policies and legislation on Member States. All draft impact assessment reports must be submitted for quality and scrutiny to the Regulatory Scrutiny Board (RSB). In principle, a positive opinion of the RSB is needed for an initiative accompanied by an impact assessment to proceed. RSB opinions are published alongside the final impact assessment report and proposal at the time of adoption. As the responsibility of the adoption of EU policies is shared with the European Council and European Parliament, the EMAS management system is not the appropriate tool for managing the detailed impact of these policies.

The Commission's management system therefore focuses on the Commission's operational activities, i.e. those that EC management can control or influence.

Detailed information on EU policies available on https://european-union.europa.eu/index_en
https://commission.europa.eu/law/law-making-process/regulatory-scrutiny-board_en
Impact assessment reports

2.2 Assessing the environmental impacts of European Union policies

The Commission takes environmental issues into account when drafting and revising EU policies, through the impact assessment system usually managed through the Secretary General. This document does not consider this system and its application to the myriad of EU policies.

The Commission provides financial support for environmental projects via the LIFE (and other) programmes and has policies addressing global warming and in relation to energy and transport. The following pages are among those dedicated to particular policies and important initiatives:
Impact assessment system: https://commission.europa.eu/law/law-making-process/planning-and-proposing-law/impact-assessments_en
EU environment policy and evaluation: https://environment.ec.europa.eu/index_en
LIFE+ programme: https://cinea.ec.europa.eu/programmes/life_en
Climate policy: https://climate.ec.europa.eu/index_en
Energy strategy: https://energy.ec.europa.eu/index_en
Transport policy: https://transport.ec.europa.eu/index_en
The European Green Deal: https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en

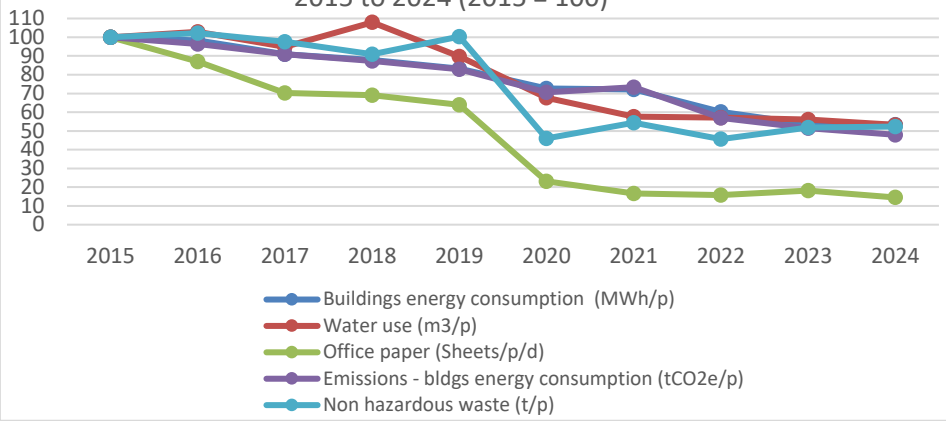
2.3 Indicators and targets

i) Corporate level indicators, initial 2020 targets

In order to monitor the reduction of environmental impact at Commission level, several core indicators are defined for reporting at all the sites, and these generally correspond (or are closely related) to the parameters required under the EMAS Regulation. Sites may have their own indicators for specific purposes, e.g. use of buses to get to the site in the JRC in Ispra and Petten, or in the case of the nuclear site of JRC Karlsruhe, the measurement of alpha and beta aerosols in the exhaust air. JRC Geel monitors air emissions with alpha-emitting aerosols to ensure they meet nuclear safety regulations and stay below the defined thresholds. The site targets for each parameter are added together and weighted to provide an overall Commission target. Sites review their targets annually and any changes result in a corresponding change in the overall Commission target.

Targets for the core indicators are established for the medium to long term. When Commission level reporting was introduced in 2014 the target horizon was 2014-2020. (Currently 2015 is sometimes referred to as a base year because the data was more complete in the second Commission level reporting exercise, and because some Directorates use this as a base year for model predictions).

Figure 2.1 Evolution of selected Commission core parameters, 2015 to 2024 (2015 = 100)



ii) Targets for 2030 and the Greening Communication

After 2020, the Commission selected 2030 as its next target year for performance improvement, consistent with the Sustainable Development Goals. The Commission's adoption of its Greening Communication in 2022 established 2019 as the baseline year against which to measure targets for 2030 and is widely used in EMAS reporting, particularly for emissions. The Commission is conducting a progress review of the Greening Communication in 2025.

Overall targets include:

- 50% reduction in staff missions' and experts' missions (by 2024) - the most challenging of the Greening Communication targets
- 30% reduction in emissions from buildings operations and fixed assets
- 36% reduction in staff commuting and vehicle fleet emissions
- 29% reduction in IT fixed assets emissions
- 6% reduction in emissions from goods, waste and services

Other considerations

- Transition to 100% green electricity
- 100% electric vehicle fleet by 2027

iii) Past performance

Figure 2.1 shows how selected core EMAS parameters have reduced since 2015, and demonstrates continued improved performance at Commission level. The Covid situation led to significant reductions in office paper use and non-hazardous waste generation as staff worked from home. Energy, water consumption also reduced although emissions rose slightly owing to the additional heating needs (as recirculation was not possible) in the office buildings.

Some of the parameters experienced a rebound in 2023 generally due to a higher office presence following the Covid pandemic and as explained in the following chapters.

Table 2.2 Corporate performance indicators and targets

Corporate indicator			Performance (%)		Targets (%)*
No	**Description**	**Units***	**2015-24**	**2019-24**	**2019-30****
1a	Total energy consumption (buildings)	MWh/p	-47	-36	-37
		kW/m^2	-33	-28	-25
1c	Non renewable energy (buildings)	MWh/p	-57	-44	-38
1d	Water use	m^3/p	-47	-41	-25
		L/m^2	-37	-32	-19
1e	Office paper consumption	Sheet/p/d	-85	-77	-62
2a	CO_2 emissions (buildings)***	tCO_2e/p	-50	-39	-44
		$kgCO_2/m^2$	-40	-29	-35
2c	CO_2 emissions (vehicles****)	gCO_2/km	-60	-48	-57
Total carbon footprint***		**tCO_2e**		**-31**	**-38**
3a	Non hazardous waste	t/p	-48	-48	-24
3c	Residual waste	t/p	-76	-71	-26

Notes * targets from **2025** Global Annual Action Plan;

** target in green achieved in 2024; for individual site targets see 1a - Table 4.2,

1c - Table 4.3, 1d - Table 11.1, 1e - Table 11.3,

2a - Table 4.5, 2c - Table 5.8, 3a - Table 7.5, 3c - Table 7.7

(data based on internal targets action plan **2025**)

***from operational energy use and coolant losses ****manufacturers' specification

*****for scope as defined in Greening Communication, plus additions since publication

3 Overview of the Commission's Carbon footprint

3.1 Commission summary

The Commission has developed its approach to evaluating the carbon footprint gradually, with the scope expanding to incorporate expert advice provided during annual internal reviews. A significant development occurred in 2018 when, to deliver a better life cycle approach, several additional categories of (Scope 3) emissions were introduced including i) embodied (fixed asset) emissions for buildings and IT equipment, ii) for service contracts (for example catering, security, cleaning etc) and for iii) waste disposal. Emissions from experts' travel were introduced in 2021 reporting along with those from teleworking. Moreover in 2023 embodied emissions for furniture and for additional food categories (e.g. lamb, veal, fruits, vegetables...) were added. The additional categories substantially increase the data requirements for reporting, and the carbon footprint.

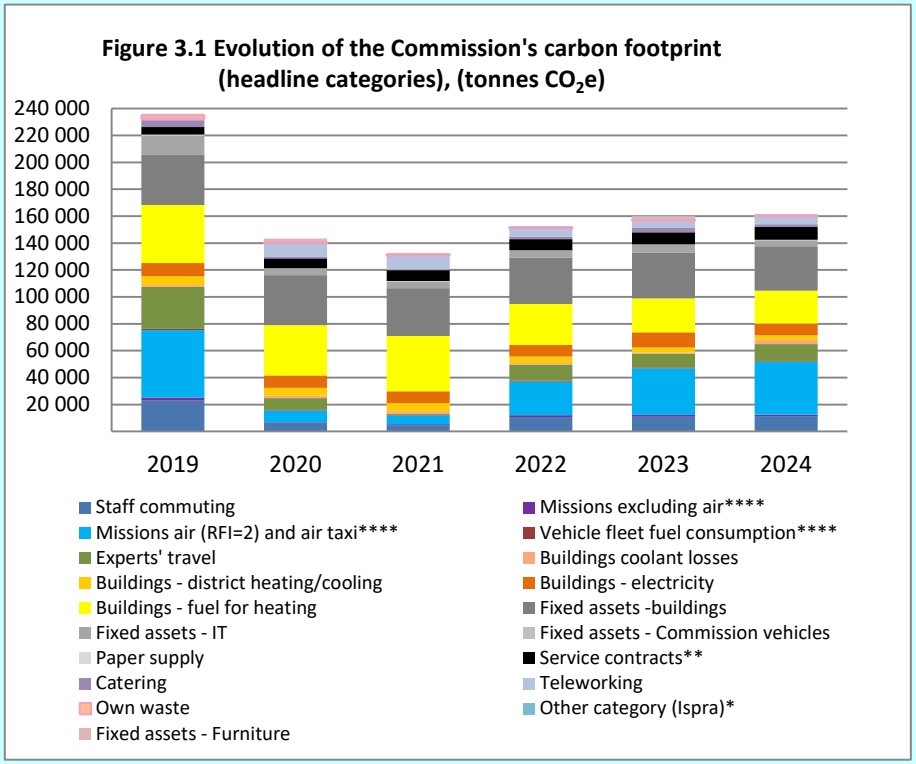
Since the Greening Communication established 2019 as a baseline for targets to achieve a 38% reduction in emissions at the 8 main EMAS sites by 2030, for consistency any new categories introduced to the carbon footprint (or procedural modifications) are calculated and applied back to 2019 where possible. Headline categories are shown in the figure below.

In 2023 the Commission was advised to change its approach to calculating emissions for fixed assets (other than buildings) to be consistent with the Greenhouse Gas (GHG) Protocol, as this has become the dominant approach to carbon footprinting. The change mainly applies to IT and furniture and means that emissions are allocated in the year of acquisition rather than being amortised over a fixed period. For buildings the Commission continues to apply amortisation and uses the ADEME (now known as France's Agence de la transition écologique) Bilan Carbone methodology.

The coefficients used to calculate emissions in the Commission's carbon footprint are largely from the ADEME database. However other public sources are used where considered appropriate, for example DEFRA (UK government's Department for Energy, Food and Rural Affairs) for professional air travel (see Section Conversion factors used for calculating emissions).

The figure traces the evolution of the carbon footprint since 2019. It shows a 31% reduction in emissions in 2024 compared to 2019 (against a target of 38% reduction by 2030).

Figure 3.1 Evolution of the Commission's carbon footprint (headline categories), (tonnes CO_2e)



This is mainly due to a reduction in emissions from missions and from buildings' energy consumption, the latter partly due to the Commission's goal of a 15% reduction in energy consumption in the winter of 2022-23 and which remained in place for the winter of 2023-24, in line with the EU voluntary target for Member States to reduce their natural gas consumption by 15% between 1 April 2023 and 31 March 2024.

The Commission reduced emissions from fuel for heating its buildings by 43% since 2019. This is due to a combination of measures including closing buildings where possible over low occupancy periods, and managing 'comfort' hours more efficiently across the sites.

While emissions from staff and expert missions along with staff commuting reduced drastically with Covid in 2020 and 2021, there has since been a rebound in all three and this was strongest for staff missions, for which the Greening communication objective of a 50% reduction in 2019-24 was not met.

The increase in the coefficients used to calculate emissions from air travel, applied in 2024 contributed to the increase in missions emissions. This is discussed further in Chapter 5.

Scope of the EC carbon footprint

In the current carbon footprint calculations, only the environmental impacts from the Commission's daily operations are considered. This focuses on emissions necessary to "run" the organisation. Consequently, some aspects are excluded as they pertain to the Commission's core business, where we have less influence.

The following are excluded from the calculations:

- Emissions associated with **service contracts** related to the core business (i.e. studies and policies), rather than operational contracts.
- Travel for **experts** that is funded through operational rather than the administrative budget.
- Emissions from **other sites that are not EMAS registered**, such as Representations (except for the seven Representations that are EMAS registered) and EC Delegations (other than emissions from EC staff missions)

Data for Figure 3.1 (tonnes CO_2e)												*Trend****
Mobility	2014	2015	2016	2017	2018	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	*2019-24*
Staff commuting	13 908	12 103	12 725	13 086	13 611	22 887	6 247	4 597	10 769	10 904	11 465	*-50%*
Missions excluding air****	1 643	1 795	1 814	1 633	1 597	2 355	605	681	1 341	1 440	1 098	*-53%*
Missions air (RFI=2) and air taxi****	55 467	50 870	51 005	51 572	52 286	50 023	8 644	6 432	24 797	34 593	39 265	*-22%*
Vehicle fleet fuel consumption****	965	976	1 001	947	947	977	535	598	665	613	467	*-52%*
Experts' travel						31 216	8 730	748	12 141	10 092	12 657	*-59%*
Buildings												
Buildings coolant losses	1 119	1 830	2 950	1 160	1 308	1 293	1 781	2 050	1 041	988	3 148	*143%*
Buildings - district heating/cooling	3 544	4 296	3 815	3 859	6 746	6 542	5 928	6 039	4 994	3 826	3 283	*-50%*
Buildings - electricity	14 328	12 762	12 069	12 743	11 688	9 918	9 123	8 634	8 554	11 303	8 725	*-12%*
Buildings - site generated renewable energy	177	253	217	216	408	309	288	398	318	465	481	*56%*
Buildings - fuel for heating	41 718	48 264	48 977	45 928	42 061	43 108	37 477	41 228	30 406	25 102	24 461	*-43%*
Fixed assets -buildings					37 500	37 487	37 065	35 390	34 451	34 188	32 962	*-12%*
Other												
Fixed assets - IT					3 311	13 714	4 538	4 948	5 109	5 504	4 483	*-67%*
Fixed assets - Furniture					1 081	1 258	2 728	1 150	748	2 356	1 138	*-10%*
Fixed assets - Commission vehicles					174	173	101	123	148	140	138	*-20%*
Paper supply					913	888	330	227	281	272	244	*-73%*

Service contracts**					5 062	5 581	7 384	8 090	8 322	9 083	9 399	*68%*
Catering					649	5 073	1 477	495	1 620	3 065	2 198	*-57%*
Teleworking						1 110	9 868	10 437	6 455	5 575	5 678	*411%*
Own waste					2 000	2 322	738	742	676	706	614	*-74%*
Other category (Ispra)*					168	143	143	143	143	124	124	*-14%*
Total (tonnes CO_2e)	132 869	133 149	134 573	131 144	181 509	**236 379**	**143 730**	**133 150**	**152 979**	**160 340**	**162 026**	*-31%*
Change in total (tonnes CO_2e) since 2019 (%)							-39%	-44%	-35%	-32%	-31%	
Total (tonnes CO_2 e/person)	*3,97*	*3,91*	*3,86*	*3,69*	*5,06*	*6,26*	*3,68*	*3,32*	*3,77*	*3,88*	*4,02*	*-36%*

*Wastewater treatment or goods (e.g. furniture) calculated on the basis of the Ispra Organisation Environmental Footprint (OEF) methodology

** The scope of service contract reporting is currently under revision

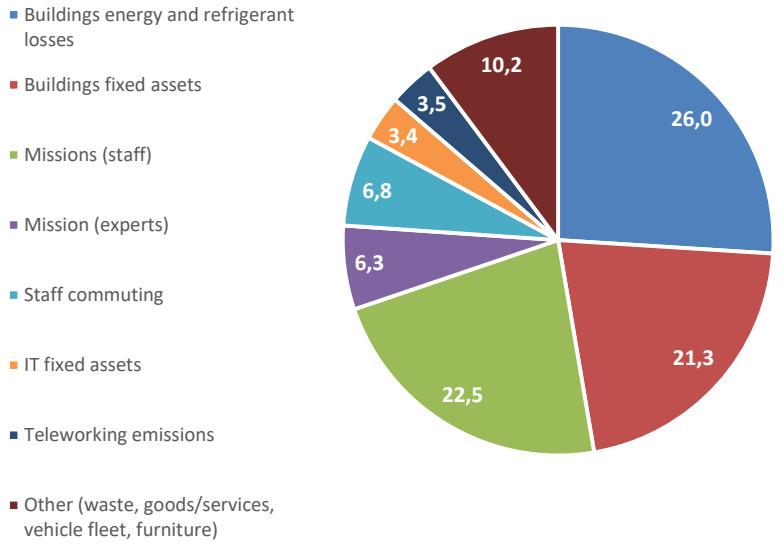
*** Change in emissions from 2019-24 for… i) staff missions: **-23%** …ii) staff missions and experts' travel: **-37%** …iii) overall mobility (staff missions, experts travel and commuting): **-40%**

****Staff missions applies to all Commission staff (and is therefore no longer based on staff working at the main sites as n previous Environmental Statements)

The **Commission reduced mobility emissions** (staff commuting, staff professional travel and experts' travel) **by around 40% since 2019**. In this period, **emissions from staff commuting halved**, experts' travel emissions reduced by almost 60%, and those from staff professional travel by air reduced by 23%**.** In 2019 these categories represented 45% of the carbon footprint, reducing to 40% in 2024.

Figure 3.2 shows the main components of the carbon footprint. Buildings related emissions account for roughly half with those from buildings energy use and refrigerant loss equivalent to those generated from construction (fixed assets). The embodied emissions from buildings' construction has decreased by 12% since 2019 but should reduce further under the Commission's real-estate policy.

Figure 3.2 Main components of the Commission's carbon footprint in 2024 (%)



3.2 Detailed carbon footprint, and site specificities

Table 3.1 (overleaf) shows the categories of the carbon footprint by scope, providing more detail than **Figure 3.1**. The totals clearly reflect different site characteristics and patterns of energy usage. For example:

- **Brussels, Luxembourg** and **JRC Seville** have the lowest per capita footprint (<4 tonnes), consistent with their mostly administrative role or, for JRC Seville research that can be office based.

- Some JRC sites have a far greater per capita carbon footprint, reflecting the energy-intensive nature of their activities.
  In particular, **JRC Karlsruhe** must comply with legal requirements, which is the dominant influence on energy consumption. For example, the site is obliged to maintain an air flow of around 300 000 m^3 per hour, 24 hours per day throughout the year. Moreover, JRC Karlsruhe is located in the campus of the Karlsruhe Institute of Technology has no direct control over the selection of the electricity mix (and therefore emissions). Due to the nature of the site, indicators are usually per m^2 because the floor space is the main indicator and is independent from the number of staff working and only based on technical and regulatory requirements and scientific activities.

- According to the carbon footprint of **JRC Petten** around two thirds of the emission sources are linked to Scope 3 emissions, which are indirect emissions and are created by the value chain. Service contracts, Commuting and Business travel by air are the main categories in Scope 3. **JRC Petten's** direct emissions (Scope 1) are mainly related to the gas consumption which is used for heating/cooling of buildings.

- At the **Ispra site**, CO_2e emissions are mainly related to onsite buildings. The site's tri-generation plant accounts for 59% of the emissions (11 047 tonnes CO_2e) as its processes use natural gas to produce electrical, as well as heating and cooling energy. Fixed asset emissions for buildings account for 15% of the total emissions (2 804 tonnes CO_2e). The data related to emissions linked to service contracts currently includes only cleaning and safety contracts.
  As explained in chapter 4.2c, the energy consumption related to third parties are not included within the above reporting. This consequently also affects the calculation of the CO_2 emissions associated with this figure. The total value of CO_2e emissions for Ispra site, including all third parties are 18 715 tonnes in 2024.

- **JRC Geel and Grange** have similar per capita emissions, about double the Commission average. JRC Geel has a wide range of scientific installations and activity, whereas Grange has a relatively large surface area as it accommodates two large meeting rooms with interpretor facilities. One of these is among the largest in Ireland.

- **DG COMM** Emissions from building energy, which includes electricity, district heating and gas, have decreased overall, attributed to the increased share of renewables and energy-saving measures. However, it's important to acknowledge that in Vienna, Budapest, Copenhagen and Sofia, energy use, particularly district heating, is partly linked to common consumption within the condominium, affecting the scope for control and precision of related data. The planned installation of smart meters is expected to address this issue. Climatic conditions have also influenced energy use, contributing to increases in Valletta and Nicosia. Additionally, fluctuations in the value of service contracts, which vary annually based on operational needs and political objectives, impact emissions calculations.

- Overall, **Scope 1 emissions** account for around 15% of the Commission carbon footprint while **Scope 3 account** for more than 80%. The situation at site level varies considerably (at Ispra due to the trigeneration plant, scope 1 represents 50% of emissions), and reflects to some degree, for Scope 1, the greater local reliance on fossil fuels for energy supply.

Table 3.1 Emissions at the EMAS sites in 2024 (tonnes CO_2e)

Scope and category of emissions	Brussels	Luxem-bourg	JRC Petten	JRC Geel	JRC Seville	JRC Karlsruhe	JRC Ispra	Grange	DG COMM	Other sites (staff	Total carbon
Scope 1: Own fuel use and direct loss	**10 908**	**1 724**	**470**	**1 271**	**44**	**7,1**	**9 357**	**267**	**37**		**24 085**
Fuel for bldgs: mains gas	8 949	1 344	404	208	40		9 285		21		20 251
Fuel for bldgs: tanked gas (1)								1,5			1,5
Fuel for bldgs: diesel	5,0	1,2	0,9	7,3	4,1	2,8	12	265	0,9		299
Biomass		4,0									4,0
Commission vehicle fleet	230	91	11	3,4	0,0	4,3	25	0,0	15		380
Refrigerants (2)	1 724	284	54	1 052	0,0	0,0	35	0,0	0,0		3 148
Scope 2: Purchased energy	**165**	**635**		**414**		**4 753**		**29**	**114**		**6 110**
External electricity supply (grey),	165	0,0	0,0	0,0	0,0	2 991	0,0	29	61		3 246
External electricity supply contract (renewables), combustion	0,0	143	0,0	0,5	0,0	0,0	0,0	0,0	0,0		144
District heating (combustion)		492		414		1 762			53		2 720
Scope 3: Other indirect sources	**97 851**	**14 631**	**934**	**1 616**	**1 390**	**1 822**	**9 057**	**985**	**373**	**3 174**	**131 832**
Fuel for bldgs: mains gas (upstream)	1 698	255	77	40	8		1 762		3,9		3 844
Fuel for bldgs: tanked gas (upstream) (1)								0,2			0,2
Fuel for bldgs: diesel (upstream)	1,1	0,3	0,2	1,6	0,9	0,6	2,5	57	0,2		65
Site generated renewables (upstream) (3)	47	6,9	8,2	2,1			413		0,0		477
External grey electricity supply, upstream	48	158,1	0,0	0,0	0,0	604	0,0	12	9,5		831
External grey electricity supply, line losses	5,8	5,8	0,0	0,0	0,0	176	0,0	2,7	2,6		193
External 'renewables' electricity contract (upstream with line loss)	3 371	393	33	88	57	0,0	363	0,0	6,1		4 311
District heating (upstream)		102		86		365			11		563
Business travel: air (combustion) + (including air taxi)	31 707	1 059	191	99	805	129	1 476	533	167	3 099	39 265
Business travel: rail (combustion)	335	39	6,6	2,4	8,1	11	19	1,5	2,4	42	468
Commission vehicle fleet (upstream)	51	21	2,7	0,8	0,0	1,06	6,1	0,00	3,6		87
Non rail surface travel 2 – hire cars, private vehicles, boat, bus, shuttle	293	216	5,4	7,1	8,4	25	34	3,8	4,3	33,5	630
Commuting (combustion and upstream) (4)	6 782	2 994	162	325	100	277	641	152	32		11 465
Experts' travel	12 657										12 657
Fixed assets - buildings	24 681	4 605	130	396	0,0	111	2 804	129	107		32 962
Fixed assets - IT	3 304	786	49	36	27	29	245	5,9	2,3		4 483
Fixed assets - Furniture	1 059	62	0,8	2,3	0,0	5,0	8	0,0	1,0		1 138
Fixed assets - Commission vehicles	96	28	2,4	0,4	0,0	0,0	8,6	0,0	2,5		138
Paper supply	205	24	0,1	1,9	1,2	2,1	8	0,8	1,4		244
Service contracts	6 129	2 188	185	418	285	27	135	32	0,0		9 399
Catering (5)	972	521	0,00	37	0,0	0,0	647	21	0,0		2 198
Teleworking emissions	4 014	1 086	67	46	90	46	284	30	15		5 678
Own waste	394	82	14	26	0,5	14	77	3,8	1,1		614
(Other category) - Ispra*							124				124
Sum	**108 923**	**16 989**	**1 404**	**3 302**	**1 434**	**6 582**	**18 414**	**1 281**	**523**	**3 174**	**162 026**
Total tonnes CO_{2e} per person	*3,6*	*3,0*	*5,9*	*12,5*	*3,3*	*21,9*	*7,4*	*7,9*	*3,8*		*4,0*

Notes: N.a. - Not applicable, Ne - Negligible

(5) The JRC sites in Petten, Karlsruhe and Seville use restaurant facilities outside the site boundary.

(1) Grange is the only site with tanked gas rather than mains gas
(2) Refrigerant losses reported as zero at Seville (maintenance register), Karlsruhe (according to maintenance protocols- less than 3%)
(3) Geothermal, biomass, PVs, for JRC Geel electricity supply for heat pumps includes upstream emissions
(4) Can include Commission bus service when appropriate
*Wastewater treatment calculated on the basis of the Ispra Organisation Environmental Footprint (OEF) methodology

3.2a The evolution of performance of individual sites to 2024 is as follows:

The evolution of the total carbon footprint at the individual EMAS sites is presented in Annex 10 and gives rise to the following observations

Brussels:
Brussels increased its carbon footprint in 2024 by 3% since 2023. The increase is mostly due to emissions from business travel and refrigerants mainly attributable to maintenance contract.

Luxembourg:
Luxembourg reduced its carbon footprint in 2024 by 10% compared to 2023. Overall reductions in energy consumption are reflected by reduced CO_2e emissions from energy use: The biggest reduction was achieved due to the upgarde of heating installations in BECH that now use green electricity ; LACC building was abandonned on last trimester of 2024 leading to reduced gas consumption and therefore reduced CO_2e. Emissions from fixed assets didn't decrease despite the fact that Mercier Euroffice was replaced as this was an old building with amortised CO_2 emissions.
*To be noted that there was an update of CO_2e factors for grey electricity and district heating leading to changes in past values (from 2019 onwards).

For the JRC:

- **JRC Geel** saw a roughly 22% rise in its CO_2 emissions in 2024 compared to 2023, primarily due to problems related to gas losses.
- **Ispra site** observed an increasing of 4,8% in 2024 emissions (855 tonnes of CO_2e) with respect to 2023. This was mainly related to increased emissions from buildings' energy consumption due to a higher consumption of natural gas (+4% compared to 2023).
- At **JRC Karlsruhe,** there was again a significant increase in CO_2e emissions from electricity, mainly due to the CO_2 conversion factor increasing from 0,273 in 2023 to 0,325 in 2024 reflecting a change in the supplier's electricity mix.

- Closer examination of heating consumption during the winter months of 2021 to 2024 - specifically focusing on October to March and their relation to degree days - shows that heating consumption for the winter of 2023-2024 once again is significantly lower than predicted by the degree days from December onwards. This suggests that the energy-saving measures (implemented in winter 2022, cf. 4.2.2) were somewhat effective in reducing heating consumption.

- **JRC Petten's** total CO_2 emissions in 2024 was 1 404 tCO_2 eq. Compared to 2023 it means an increase of around 12%. The direct emissions of the site (Scope 1), mainly gas consumption for heating and cooling grew by 24%. Scope 3 emissions of the site increased slightly by around 2.7%.

- In **JRC Seville**, purchasing electricity from renewable sources was key to reducing CO_2e emissions in recent years. From 2023 on, the 30-year old building, that used to represent around 10% of the footprint, was amortised. Professional air travels continue to rise, as elsewhere in the Commission. Additionally, the scope of service contracts included in the calculation has been expanded, this can explain the increase of 1.1 tons/person between 2023 and 2024.

DG SANTE at Grange:
Electricity and oil continue being the two main sources of CO_2 production and a lot effort is concentrated in keeping them under control and in finding solutions that help reducing their consumption, while keeping the site welcoming and comfortable for its staff.

DG COMM:
2024 data indicates a clear reduction in carbon emissions compared to 2019 across most reported categories.
- Air travel emissions saw a sharp decline (from 227 to 167 tCO_2e).
- Emissions from vehicle fuel, district heating, electricity, and heating fuel also dropped significantly.
- Smaller sources like paper supply and waste show modest decreases.

3.3 Commission carbon footprint and Greening Communication action plan

Table 3.2 shows the distribution of expected emissions reductions for 2019-30 by category under the Greening Communication action plan, resulting in an overall reduction of 38%. While there is some site specificity, for several categories the quantities are Commission wide.

The scope of the carbon footprint when the Communication was published has since expanded. Teleworking was not included and generates additional emissions, but consequently commuting emissions are reduced. Although not introduced until reporting for 2021, it has been estimated for the baseline year 2019 and for the following years.

In 2024, the carbon footprint of the seven EMAS-registered representations was included, along with the emissions from Commission staff travels originating from non-EMAS registered sites.

3.4 Conversion factors used for calculating emissions

Too many conversion factors were used to prepare this report to list here. However, as in previous years, the majority were provided under the Bilan Carbone methodology that was originally established by ADEME, and available to the public: https://bilans-ges.ademe.fr

This was complemented by multiple other sources including, but not exclusively:

- DEFRA, the UK Government Department for Environment, Food and Rural Affairs, used for commercial aviation emissions, and carbon trust for calorific values of liquid fuels
- IEA, the International Energy Agency, used for the emissions factors for national electricity networks
- FEBIAC, the Belgian federation of automobiles and motorcycling, for emissions of national vehicle fleet
- EUROSTAT and https://www.odyssee-mure.eu projects for factors relating to domestic space heating and cooling data in EU Member States
- Internal operational data for vehicle fleets
- IPPC for refrigerant Global Warming Potential (GWP) values according to the Greenhouse Gas Protocol (GHG)
- Commercial sources for global warming potential for some refrigerants

Table 3.2 Progress against Greening Commission targets for emissions reduction 2019-2030

Progress on Greening Communication targets	2019* value	GC Target 2019-30 reduction	tCO_2e	Actual 2024 contributi	value
Emissions source	tCO_2e	% of CF	value	% of CF	tCO_2e
1) Buildings operations, fixed assets		**-13,1**		**-10,9**	
Brussels reduce office surface area by 200k sq. m	37 168	-5,9	17 511	-2,8	30 540
Brussels office space energy efficiency		-2,5			
Luxembourg; move to JMO2- Post building	7 781	-1,6	4 037	-1,2	4 988
all other bldgs, real estate	53 709	-2,6	46 454	-6,9	37 532
all other bldgs, increased energy efficiency		-0,5			
2) Mobility		**-16,2**		**-10,2**	
Staff Missions	52 378	-13,9	19 850	-5,1	40 363
Staff commuting Brussels	13 916	-2,1	9 002	-3,0	6 782
Staff commuting other sites	8 971	-0,1	8 737	-1,8	4 682
Vehicle fleet	1 152	-0,1	918	-0,2	605
3) IT fixed assets	13 714	**-1,4**	10 437	**-3,9**	4 483
4) Goods and services, own	14 008	**-0,3**	13 306	**-0,6**	12 579
5) Subsidised travel (experts	31 216	**-6,8**	15 304	**-7,9**	12 657
Total (original greening scope)	*234 013*	*-38*	*145 556*	*-34*	*155 211*
6) Teleworking**	*1 110*			**1,9**	*5 678*
7) Fixed assets furniture***	*1 258*			**-0,1**	*1 138*
Total *****	***236 381***			***-31***	***162 026***

Note * 2019 data reported in 2025, ** added in 2021, ***added in 2023

**** These values are most commonly communicated for the carbon footprint and considers changes in scope post Greening Communication and that are extended back to 2019

The Commission's approach to the carbon footprint is reviewed annually by experts who recommend updates to the methodology, coefficients and sources when required. This year the methodology to calculate scope 3 emissions results in some small changes, as stated in **Section 3.1**

4 Using more efficient, sustainable and climate resilient buildings and workspaces

Greening The Commission: *.....the Commission will comply with the relevant targets set in the package of proposals on energy and climate action aiming at delivering the European Green Deal*

4.1 Introduction

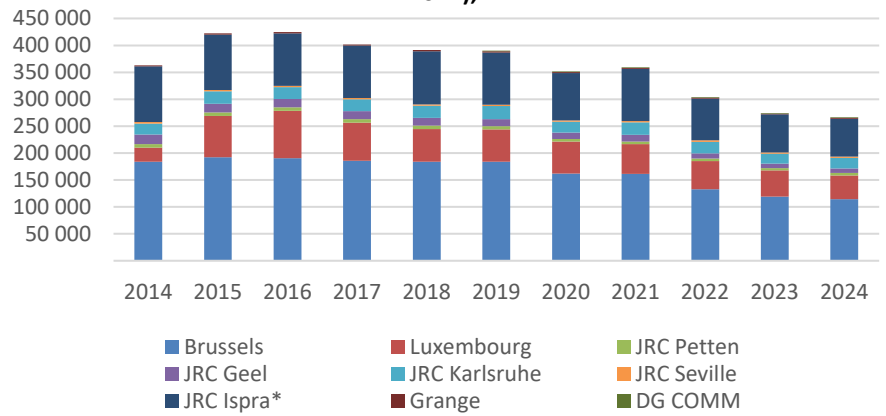
Emissions from buildings represent a major part of the Commission's carbon footprint, and the aspect over which it exercises the most control is **energy consumption.** Reducing overall energy consumption and **dependence on fossil fuels** are the two most important elements for reducing emissions.

A minor contributor, in comparison from an operational perspective, are **losses of refrigerants** from the technical installations in buildings of which each kilogram lost may result in several tonnes of CO_2e. Far more important are the **embedded emissions from building construction**, and which are accounted for using an amortisation approach.

4.2. Overview of buildings' energy consumption at the Commission's EMAS sites

Figure 4.1 indicates that the Commission continues to reduce its total buildings' energy consumption, and in the COVID years of 2020 and 2021 maintained this trend although more ventilation was required to avoid recirculating air in the buildings. The Commission reduced final energy consumption by 2% in 2024 compared with 2023, and by 32% since 2019.

Figure 4.1 Final energy consumption at EMAS sites (2014 to 2024), MWh



There is a general downward trend observed at all sites due to a combination of Commission wide and site level initiatives as described in Section 4.3

4.2a Brussels, key achievements and actions

The Commission seeks, under the Greening Communication, to halve the number of buildings it occupies and reduce the surface of office area by 25% by 2030 including the replacement of some old buildings by new high-performance ones. (Buildings plan foresees occupying only 31 buildings by 2030).
In 2023, occupation of greener buildings as L107, L-51, SB34, and 7 buildings fully organised in dynamic collaborative space (DCS). In 2024, occupation of the first Brussels 'zero emission in-use' building, the new CO46

In April 2024, and three years after the adoption of the new real estate strategy, the Commission sold 23 of its buildings in Brussels. The exit of these buildings will be gradual. The revenue from the sale will notably be invested to finance new buildings (incl. new conference centre) and renovate existing ones.

Brussels site continues developing winter and summer energy savings actions by closing some buildings on a short period of time:

- BEST (Building Energy Savings Together) summer action 2024: 29 buildings closed from 29/07 to 23/08 resulting in energy savings of 600 MWh
- End-of-year action 2024-2025: 39 buildings closed from 23/12/2024 to 02/11/2025 resulting in energy savings of 2100 MWh
- BEST winter action 2025: 33 buildings closed on 3rd January resulting in energy savings of 400 MWh

Brussels site continues to improve the energy efficiency of its buildings' technical installations (such as LED relighting, new Heating, Ventilation and Cooling equipment, new regulation systems and energy and water monitoring) and to deploy more renewable energies (including photovoltaics panels in DAV1, L-15, SB34, CO46 and geothermal heat pumps in SB34 and CO46).

4.2b Luxembourg, key achievements and actions

- 10% reduction in total energy consumption compared to 2023 and 27% compared to 2019.
- At the last trimester of 2024, Laccolith building was abandoned and DGT staff was moved to EUFO under modified DCS regime (individual or shared offices in dynamic settings). This led to important energy reduction (gas) for 2024.
- In 2024, OIL took over the management of two Data Center rooms, KAYL and DRB, from TAXUD. Electricity from Data Centers increased in 2024, accounting for 42% of total electricity consumption.

- 2024 was a year without MERCIER EUROFFICE in Luxembourg's bldg. portfolio and at the same time the first full year of occupation for Mercier Post Building, a building under dynamic collaborative space (DCS) for OP and DG CNECT staff. The building has Platinum level DGNB environmental certification for sustainable construction and will be EMAS registered during 2025's verification.
- Data from 2023 has been revised to reflect updated information from the owner of BECH: It was clarified that from 2023 part of heating and cooling has been produced using electricity instead of district heating, following the replacement of the existing system (district heating with gas cogeneration) with heat pumps. Consequently, the CO_2e factor for district heating also required recalculation. Consumption in electricity increased for 2024, while for district heating was reduced.
- Green electricity accounts for 100% in 2024, however only 90% reported as green; owners from BECH didn't manage to provide renewable certificate.
- Reduced woodchip biomass consumption in CPE5 due to damage in the boiler.
- Energy data for 2024 include minor estimations due to late gas invoicing for some bldgs.
- Due to a logistical error in reporting of BETZ electricity for 2023 (4440MWh instead of 7605MWh), total electricity and final energy consumption has been corrected.
- Small corrections to data from 2020-2023 due to more precise calculations for fuel-diesel for emergency generators.
- Progress on construction of the Jean Monnet 2 (JMO2) building: official dates for completion May 2026 (phase 1), and December 2026 (phase 2) under revision with the contractors.

Table 4.1 Final energy consumption at EMAS sites (2014 to 2024), MWh

Site	Trend 2014-2	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Brussels		183 896	191 982	190 364	185 485	183 868	183 707	162 011	161 381	132 880	119 294	114 306
Luxembourg		25 988	76 681	87 795	71 232	60 905	60 139	59 241	55 118	52 355	48 444	43 928
JRC Petten		6 766	6 913	6 623	6 298	6 551	6 035	4 918	5 015	4 372	4 213	4 621
JRC Geel		17 719	16 243	15 737	14 777	13 750	13 049	11 797	12 550	9 964	8 161	8 734
JRC Karlsruhe		20 500	22 786	21 889	22 104	23 158	24 222	20 486	22 977	21 366	18 614	19 238
JRC Seville		2 639	2 542	2 414	2 612	2 351	2 315	2 259	2 555	2 691	2 272	2 355
JRC Ispra*		103 362	102 941	97 609	97 025	98 618	97 245	88 114	96 846	77 393	70 722	70 383
Grange		2 271	2 425	2 378	2 177	1 925	2 034	1 709	1 525	1 502	1 415	1 566
DG COMM							1 435	1 270	1 382	1 300	1 239	1 225
Commission		**363 140**	**422 512**	**424 809**	**401 708**	**391 125**	**390 182**	**351 804**	**359 349**	**303 822**	**274 373**	**266 358**

* Data includes energy transformation at the trigeneration gas plant, in 2024 approximately 11 000 MW.

4.2c JRC (non Brussels) sites, key achievements and actions

Overall, the JRC reduced its energy consumption in 2024 by over 25% compared to 2019. This was achieved through measures such as reducing temperatures and the daily schedule for heating and ventilation, where possible. Some medium-term measures are also being developed such as more efficient planning of scientific activities.

It should be borne in mind that most JRC sites host energy-intensive scientific and/or nuclear infrastructures that need to comply with specific regulations. For example, some of these facilities need to be continuously ventilated due to legal compliance. In addition, some scientific tests require (high) energy consuming specific procedures (e.g. the use of very low temperature freezers).

• **JRC Geel**, in 2024, experienced an overall 7% increase in energy consumption, driven by increased use of district heating (+318%), gas (+9%), diesel (+7%), and geothermal heat pumps (+17%), partially offset by a 11% reduction in electricity consumption. JRC-Geel expects higher electricity use in 2025 due to the accelerator (Gelina: high-energy consumer) in 2025.

• **Ispra site's** total energy consumption decreased by 0,5% in 2024 compared with 2023. The contribution from renewable sources decreased by 11,6% due to decreasing in use of “green” grid energy (-16%) while the production of PV panels has increased by (+21%). There was an increasing in energy produced, from natural gas, by trigeneration plant (+4%) and this has led to an increase in CO_2e emissions from energy consumption of about 4,2%.

With reference to data reported in Fig.4.1 and Tables 4.1-4.2, to relate the site's consumption to the activities under the responsibility of JRC Ispra, the following energy consumption contributions are not included within the reporting because outside the EMAS scope of JRC Ispra: EUROPOL Decryption platform (in force since 2021), Ispra-1 nuclear facilities (under SOGIN administration since end of 2019), Italian Fire Brigade, Bank office, Post office, Carabinieri station, bus contractor's office, Wastewater treatment plant consumption related to Ispra Municipality.

The total energy consumption of the Ispra site for 2024, including all the above contributions is 76237 MWh (+1,8% compared to previous year), that corresponds to 31 MWh/p and 289 kWh/km^2.

• Due to the specific site characteristics of **JRC Karlsruhe**, only actions with major infrastructure works (e.g. thermal insulation of the old parts of buildings or renewal of the ventilation systems) that require heavy financial investment (ie likely more than EUR 10 million per action) will have a significant environmental impact on buildings' energy consumption.

As such funding levels cannot be foreseen, JRC Karlsruhe refrains from detailed planning in this context. Although they contribute to a more limited extent to improving energy consumption, other lower cost site actions such as exchanging "conventional" lights by light-emitting diode (LEDs), or reducing the time when the ventilation of the controlled areas is operating at 100% have been implemented.

• In 2024 the energy consumption at **JRC Petten** grew by approximately 10% mainly due to the increase of electricity and gas consumption for buildings. One reason for the increase could be the longer and colder Winter in 2024. Additionally, the study for the use of the geothermal system for heating and cooling was finalized.

• **JRC Seville** partially occupies a building built in 1990, that itself was made in part from reclaimed materials. The landlord plans to implement several energy efficiency measures, JRC Seville is looking to reduce the number of its ICT infrastructure rooms. In the medium-term, it also plans to move to a new energy-efficient building inspired by the values of the European Bauhaus.

4.2d DG SANTE at Grange, key achievements and actions

Most of the energy requirements for the buildings are met from the electricity grid and from heating oil supplied on average three times per year and stored in an 85,000 litres bunded storage tank. There is no mains connection for gas on site because there is no mains gas in the area. Bio-LPG is supplied by two small propane storage tanks of 2,000 lts each and used for cooking in the canteen and restaurant, and to heat the water on from May to September when oil boilers are shut down. Heating oil has in recent years provided a larger share of the site's energy use than electricity. The trends in energy consumption are largely related to external causes such as climate, seasons (natural light levels) and to office occupancy rates.

Insulating the building's roof and replacing/refurbishing windows has been effective. The replacement of old high wattage lights with lower consuming LEDs will continue across the site. Final energy consumption reduced by 6% since 2022 and by more than 30% since 2019. A wing of the site was largely closed off for all 2023/24 and also helped reduce energy consumption since then.

4.2e DG COMM, key achievements and actions

Overall, the absolute energy consumption trends across the seven Houses of Europe are positive, with 2024 recording the lowest total energy consumption since 2019. At all sites, measures such as temperature reduction, optimised daily schedules for heating and lighting, teleworking, and staff awareness campaigns have contributed to this outcome. Additionally, building closures during the end-of-year holiday period have further enhanced energy-saving efforts. As energy audits are gradually carried out at each location, more tailored and site-specific actions are expected to be introduced in 2025 to strengthen energy efficiency even further.

Valletta records a slight increase in energy consumption compared to the previous year. However, the overall trajectory remains downward when compared to the 2019 baseline. The ongoing implementation of LED lighting and follow-up actions from the site's energy audit are expected to support future efficiency improvements. Vienna continues to demonstrate a consistent record of reducing building energy consumption. This achievement is supported by various measures, including the installation of smart meters, the activation of motion detectors for lighting, and the completion of an energy audit. **Nicosia** showed a reduction in energy consumption in 2024 relative to previous years. Key actions contributing to this outcome include the upgrade to an energy-efficient lighting system and the completion of the site's energy audit, with further recommendations planned for future implementation.

Budapest also recorded a decrease in energy consumption compared to previous years. This improvement results from efforts such as the upgrade of the BMS and the installation of LED lighting throughout the building. Copenhagen and Sofia experienced an increase in energy consumption, which is attributed primarily to climatic conditions. In Copenhagen, the rise in electricity usage is notably linked to the installation of electric vehicle chargers. This emerging pattern warrants close monitoring, as it could distort perceptions of building performance. **The Hague** continues to adopt environmentally friendly measures, including the ongoing installation of energy-efficient lighting and sensor-based detectors. These efforts have contributed to a steady decline in energy consumption compared to previous years

Key Corporate level communication campaigns: addressing energy use

EU Institutions joined forces to achieve 15% of energy savings every autumn/winter as a contribution to European solidarity in times of energy scarcity. Energy-saving actions are continuing as part of the longer-term greening objectives.

Some of those measures are already being implemented in the context of the greening of the Commission. This includes, for example, the temporary closure of some buildings during the summer, under the 'Building Energy Savings Together' (BEST) action", which achieved roughly 330 MWh of electricity savings.

4.3 Main actions to reduce energy consumption and emissions at EMAS sites

The Global Annual Action Plan (GAAP) 2025, highlights more than 100 actions under the heading *Use more efficient sustainable, and climate-resilient buildings and office space*. Some of the more visible actions are highlighted below.

i) Corporate actions to reduce buildings energy consumption (and emissions) include :

- Buildings closure over holiday periods
- Lower thermoset settings and reduced 'comfort hours' for heating and ventilation
- More efficient use of office space, and adoption of dynamic collaborative spaces
- Efforts in line with EU initiative of Member States to reduce winter energy consumption by 15% compared to the five-year average
- Contracting electricity from renewable sources (most sites)
- Regular communication campaigns urging staff to switch off and generally minimise energy consumption

ii) Site level actions are as follows

Overall, the JRC - beside implementing the actions mentioned in section i) above - have put in place additional measures such as

- Reduction of the temperatures to 19 °C and the daily schedule for heating and ventilation, where possible.
- Medium-term measures such as the temporary mothballing of least energy-effective buildings or the efficient planning of the scientific activities.

More specifically and as an example, the main measures implemented in **Ispra site** in 2024:

- Improvement of energy management for the trigeneration plant
- Energy audit and implementation of measures for building 18 -Data centre, buildings 100 and 101
- Implementation of efficient automatic energy management procedures for buildings (especially 26b, 102, 58,58a)
- Ventilation and heating provided in offices only between 8:00 and 18:00, from Monday to Friday
- Reduction of street lighting hours
- Reduction of hot water temperature in the district heating, from 85°C to 80-70°C (depending on weather conditions)
- Heating and ventilation switched off during the Christmas holidays until 06.01.2025 in critical buildings
- Demolition of buildings 63 and complex 5
- Specific actions implemented in laboratories (e.g. punctual shutdown of air conditioning systems serving areas not used intensively in VELA 10)
- heating temperature set to 19°C from December 2024

JRC Karlsruhe has introduced energy-saving measures since winter 2022 which reduce the time when the ventilation in the controlled area is running at 100% by 2.5 hours per day, hence increasing the time when the system is running at 50%. In addition, the controlled area or even the whole site was closed on days when less work was expected (e.g. bridge days) during which ventilation was running at 50%.

Grange maintained temperature reductions (19°C in occupied offices, and 14°C in unoccupied offices), turned off parking and streetlights between 9pm and 7am in addition to the replacement of old lights by LEDs.

DG COMM: **Site level actions are as follows**

- Installation of LED lighting and movement sensors (All sites)
- Smart meters (Vienna)
- Manual ventilation for cooling, when possible (Nicosia)
- Inspection of buildings outside the occupancy hours to detect any irregular energy use (Vienna)
- Renovation of heating room, installation of a new boiler and 2 pumps (Copenhagen)
- Monitoring of temperature in server room (Budapest, Valletta)
- Monitoring of electricity service supply (Copenhagen, Sofia)
- Energy efficiency audits (completed in Valletta, Vienna, Nicosia, ongoing at other sites) and follow-up works (Valletta)

4.4 Final energy consumption data by surface area and staff

Table 4.2 presents energy consumption as per capita and per square meter. As indicated previously, the JRC sites in Ispra, Geel, Petten, Karlsruhe have laboratories and conduct energy-intensive experiments, which explain the higher consumption (per capita or m^2) than other EMAS sites, consisting mainly of offices. Luxembourg hosts the main data centres of the Commission whose consumption in electricity accounts for 36% of total electricity consumption and 24% of total energy consumption, which explains the higher consumption (per capita or m^2) than other similar office-type EMAS sites.

Table 4.2 Buildings' final energy consumption, 2014-2024

Site	2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Target * 2030
Part A - MWh/p													
Brussels		7,2	7,5	7,2	6,8	6,7	6,4	5,4	5,3	4,3	3,8	3,7	*3,8*
Luxembourg		6,4	16,4	18,9	14,9	12,1	11,7	11,3	9,9	9,2	8,6	7,8	5,9
JRC Petten		24	25	24	24	26	24	20	21	19	18	20	*21*
JRC Geel		51	50	53	56	53	50	44	48	38	31	33	*36*
JRC Karlsruhe		69	75	68	69	71	75	65	73	69	61	63	*75*
JRC Seville		9,1	9,0	8,0	8,1	6,9	6,3	5,9	6,6	6,7	5,6	5,5	3,8
JRC Ispra		44	45	43	43	43	41,7	37	39	31	29	28	27
Grange		12,7	13,5	12,5	11,6	10,8	11,6	9,9	8,6	8,3	8,4	9,7	7,6
DG COMM							11,6	10,8	12,6	10,4	8,9	9,0	7,6
Commission		**10,85**	**12,41**	**12,19**	**11,29**	**10,89**	**10,34**	**9,01**	**8,96**	**7,48**	**6,64**	**6,61**	**6,55**
Part B - kWh/m^2													
Brussels		171	180	178	172	176	167	147	148	131	116	118	*125*
Luxembourg		131	342	364	296	337	331	326	304	290	253	255	192
JRC Petten		348	323	323	302	328	302	246	251	219	211	231	*261*
JRC Geel		363	321	311	293	272	258	233	248	197	161	172	*189*
JRC Karlsruhe		491	546	507	512	536	561	475	532	489	426	440	*550*
JRC Seville		376	355	337	345	310	301	291	318	335	283	293	180
JRC Ispra		404	406	384	373	377	376	341	365	291	266	266	244
Grange		183	195	192	176	155	164	138	123	121	114	126	112
DG COMM							94	84	91	86	82	81	64
Commission		**235**	**256**	**250**	**235**	**241**	**239**	**216**	**216**	**192**	**172**	**172**	***176***

Note **** 2030 target value already reached in 2024***

Case Study 4.1: Level-ing up JRC buildings' performances

Level(s) is the European Framework for Sustainable Buildings developed by the JRC, It is an assessment and reporting tool for the sustainability performance of buildings. It is closely affiliated with the goals of the European Green Deal for a sustainable building sector, and part of the actions described in the new Circular Economy Action Plan and the Renovation Wave Strategy. It was developed as one of the important elements of the **New European Bauhaus (NEB)** initiative.

There are several sustainable practices of Level(s) at the JRC such as in Seville where candidates of the international architectural design contest for the new building were asked to include reports based on the Level(s) checklist in their proposals. Also in Geel, Level(s) is used for the refurbishment of the conference building (B100). This co-creation project involved JRC Geel staff in the building design which developed both flexible and multiple functionalities.

How does Level(s) support the New European Bauhaus?

Environmental sustainability is one of the three values of the New European Bauhaus, and part of the initiative's strategy is to better connect the European Green Deal to our daily lives and living spaces. Level(s) complements this agenda by equipping proponents of the NEB in the building sector to identify measures to improve the sustainability of Europe's buildings at every life cycle stage.

∞ Level(s) - European Commission (europa.eu)

4.5 Total renewable energy consumption

The Commission has reduced the total quantity and proportion of energy from non-renewable sources over the years, as shown in **Table 4.3**. Consumption of energy from non renewable sources in 2023 was 18% lower than in 2022, and 41% lower than in 2019. Non renewables represented 51% of energy consumption since 2023 compared with 58% in 2019.

In 2024 in **Brussels**, the reduction in renewable energy consumed is linked to the overall decrease in energy used, due to continued reduction in the office space of the EC building portfolio and continued replacement of old buildings by more sustainable ones, the implementation of a medium and long-term energy efficiency action plan in the buildings to reduce energy consumption.

In Brussels, since 2023, the BERL, SB34 and L-15 are equipped with photovoltaic panels (PV). In 2024, the installation of PV in new CO46 building is operational but need to be complemented by a metering system. Moreover, the project for the new renewable energy sharing schemes from nearby PV has been launched for DAV1 and NOHE. The implementation of a peer-to-peer system between NOHE and BERL, as well as between DAV1 and CHAR, is also planned to be effective in 2025. Other buildings are equipped with photovoltaic panels such as COLE and WALI. The newest buildings SB34 and CO46 are equiped with geothermal heat pumps.

In 2024, **Luxembourg** could have seen an increase in renewable energy consumption, primarily due to the replacement of BECH's existing heating system (district heating with gas cogeneration) with heat pumps powered by renewable electricity. However BECH's owner didn't provide a proper renewable certificate so instead of reporting 100% renewabel electricty we only report 90%.

Also to note that district heating is not considered a contributor to renewable energy. This is the case even though the city's plants connected to CPE 1,2 and DRB incorporate a significant proportion of renewable sources, such as wood pellets and waste incineration, into their energy mix.

For the JRC:

- The renewable energies at the **Ispra site** decreased by 11,6% in 2024 compared to the previous year mainly due to the 16,5% decreasing of the electricity purchased from contractors while PV plants production increased of 20,8%.
- Renewable energies include also the contribution of thermal exchange with lake water. To be noted that the renewable energies also include the contribution of heat pumps located in buildings 46i and 58 and the heat pump located in building 59x (recovering heat from the district cooling network). This value is not reported in the final energy consumption (table 4.1) as it cannot be considered primary energy.
- The same assumption of chapter 4.2c was made also for the calculation of total renewable energy consumption: the relative third-party contributions were therefore excluded from the reported data. The total 2024 Ispra site renewable energy consumption (MWh) contributions including all third parties was 22 071 MWh.
- In 2024, **JRC Geel**, the observed decline in renewable energy consumeption is associated with the decrease of electricity usage.
- **JRC Karlsruhe** does not set a target regarding the non-renewable energy use in buildings because the only type of energy coming from renewable sources is electricity. Electricity is supplied by KIT and upstream supplier(s) without JRC Karlsruhe having any influence on its sources.
- **JRC Petten.** In 2024, the renewable energy consumption increased by 3%. The site is located closed to the Petten beach which attracts Seagulls. This can lead to several issues such as droppings, nesting or scratching which reduces the efficiency and overall energy output. Due to these risks the site started to install nets to prevent the seagulls from landing on the panels. Additionally, the site regularly uses a service to clean the PV panels.
- **JRC Seville** uses non-renewable energy solely for heating and emergency electricity supply.

Grange has been using biogas for its cooking since 2023. The percentage of renewables in the electricity mix has increased from less than 40% in 2021, to more than 60% in 2022, and exceeded 75% since November 2023.

DG COMM In 2024, **Houses of Europe** used significantly more renewable energy than in 2019.
The share of non-renewable energy was reduced from 82% to 69%, and overall consumption decreased. This reflects strong progress toward cleaner energy use.
In the coming years, increased investments will be oriented towards developing on-site renewable energy, based on the results of our recent energy audit.

Table 4.3 Total renewable and non renewable energy consumption (MWh)

Site	2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Renewable energy consumption (MWh)												
Brussels		104 875	104 273	106 440	103 916	104 266	103 922	89 277	79 966	72 847	67 498	64 574
Luxembourg		18 756	38 262	40 167	31 187	27 597	28 687	27 717	26 443	27 101	29 032	29 387
JRC Petten		148	208	230	227	3 124	2 930	2 647	2 532	2 467	2 353	2 427
JRC Geel						9 392	9 276	8 197	8 102	7 612	6 731	6 029
JRC Karlsruhe		3 681	4 833	4 640	4 855	5 603	6 273	5 687	3 953	3 606	3 645	3 178
JRC Seville		597	427	381	429	486	313	1 798	2 106	2 292	2 092	2 125
JRC Ispra		4 629	6 173	5 069	5 486	10 416	8 400	10 859	13 068	17 360	23 077	20 404
Grange		171	209	240	260	300	302	242	213	366	438	434
DG COMM							256	237	249	349	366	383
Commission		**132 857**	**154 385**	**157 165**	**146 360**	**161 183**	**160 359**	**146 660**	**136 632**	**133 999**	**135 232**	**128 940**
Commission (as % of total)		**37**	**37**	**37**	**36**	**41**	**41**	**42**	**38**	**44**	**49**	**48**

Site	2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Target* 2030
Non renewable energy consumption (MWh)													
Brussels		79 020	87 709	83 924	81 569	79 602	79 785	72 734	81 415	60 033	51 796	49 732	*51 463*
Luxembourg		7 232	38 419	47 629	40 045	33 308	31 452	31 524	28 674	25 255	19 411	14 541	8 634
JRC Petten		6 618	6 705	6 393	6 071	3 427	3 105	2 271	2 482	1 904	1 860	2 193	*2 813*
JRC Geel		17 719	16 243	15 737	14 777	4 357	3 773	3 600	4 449	2 352	1 430	2 706	*3 019*
JRC Karlsruhe		16 818	17 953	17 250	17 249	17 556	17 949	14 799	19 024	17 760	14 969	16 061	*no target*
JRC Seville		2 042	2 114	2 033	2 183	1 865	2 002	461	449	399	180	230	
JRC Ispra		98 733	96 768	92 540	91 539	88 203	88 845	77 255	83 779	60 033	47 645	49 980	*62 192*
Grange		2 100	2 215	2 138	1 917	1 625	1 732	1 467	1 312	1 136	976	1 133	*1 146*
DG COMM							1 179	1 033	1 133	951	874	842	*1 146*
Commission (MWh)		**230 283**	**268 127**	**267 644**	**255 348**	**229 943**	**229 823**	**205 143**	**222 718**	**169 824**	**139 142**	**137 417**	**153 733**
Commission (MWh/p)		**6,9**	**7,9**	**7,7**	**7,2**	**6,4**	**6,1**	**5,3**	**5,6**	**4,2**	**3,4**	**3,4**	**4,0**
Commission (% non ren. energy)		**63**	**63**	**63**	**64**	**59**	**59**	**58**	**62**	**56**	**51**	**52**	

*Note: 1) Site generated renewable energy details is reported in Annex 1 ; Note 2) * numbers in green indicate the 2030 target value already reached in 2024*

4.6 Fuel use by site

The mains points are as follows:

- Most sites have contracted electricity with certificates of origin from renewable sources in recent years
- JRC Karlsruhe and DG SANTE at Grange do not have a main gas supply.
- The main source of energy in JRC Ispra site is the internal trigeneration natural gas plant, complemented by electric energy purchased from the grid, on site photovoltaic plants and cooling energy provided by exchange with cooling water. Other contributions come from different heat pumps (e.g. through exchange with wastewater or groundwater) located along the site and from diesel and petrol used for laboratories.
- JRC Petten uses diesel fuel for the Emergency Generator. The last delivery was made in June 2022, meaning the consumption data for diesel is valid from June 2022 to March 2024.
- District heating supplies 4 buildings in Luxembourg and the JRC sites in Karlsruhe and Geel.
- Most buildings in Luxembourg (8 out of 12) have a main gas supply, while the CPE5 also uses woodchip/biomass.
- Diesel is only used as the predominant heating fuel at DG SANTE at Grange, although at most sites it is used for testing the back up generators. It was phased out in Brussels buildings several years ago.

4.7 Developing site generated renewable energy

The main points are summarised below:

- There have been large increases in use of geothermal heat pumps in recent years,
- Brussels plans to develop solar panel installation in the following years, as specified before.
- Luxembourg's JMO2 building will be one of the most technologically advanced building to be used by the European Institutions. It is targeting a BREEAM certification level "Excellent", and will benefit for example, from: a photovoltaic solar system, a water softener with CO_2 (healthiest and most ecological system available on the market), building occupation detection**,** energy recovery elevators converting braking energy into electricity, ventilation heat recovery of over 85%, etc.

4.8 Emissions from buildings

These represent a significant proportion of the Commission's carbon footprint, and include those from energy use in the buildings, from refrigerant losses for installations, and from construction of the buildings. Non CO_2 emissions, such as particulate matter are also considered.

4.8a Emissions from buildings' energy consumption

Buildings' energy consumption represents the part of the carbon footprint over which the sites have the most control. Data in **Table 4.4** show that the Commission reduced emissions by 9% in the last year, from 41 ktonnes CO_2e in 2023 to 37 ktonnes in 2024. Overall, the Commission has reduced emissions from buildings gradually since all sites have been included in reporting in 2014.

At the JRC:

- **JRC Geel** contracted a company to design the PV installation in accordance with building constraints and Flemish legal requirements, with a focus on cost-effectiveness and minimal environmental impact. The installation is scheduled for late 2025 or early 2026.
- At **JRC Petten**, a feasibility and compatibility study on using in future the existing geothermal system for heating/cooling in buildings was conducted. The study is still in development.
- **Ispra** site will further increase its renewable site energy consumption in the next few years by installing other PV systems (about 1,5 MW installed in 2024) and running pilot projects to produce and use hydrogen on site. On top of that, the site tried to acquired bio-methane to replace natural gas in the trigeneration plant including in the gas supply contract this request. However, there are currently important technical and market capability obstacles. Currently the renewable energy sources of JRC Ispra are:
  - electrical energy purchased from the grid (100% green);
  - electrical energy produced from the photovoltaic panels system (+6,8% of peak capacity compared to 2023);
  - cooling energy from lake water heat exchange;
  - thermal and cooling energy recovered through the heat pumps located in buildings 59x, 46i and 58.
- At **JRC Karlsruhe**, the installation of PV is not possible due to regulatory restrictions.
- **The JRC Seville** new building is projected with a solar dome able to produce about 2 times the electricity that will consume

DG SANTE at Grange is learning from the challenges it has faced in measuring the impact and maintaining is solar hot water heating system.

DG COMM There is currently no on-site renewable energy generation in the Houses of Europe. However, four of the seven Houses have already undergone energy efficiency audits, which identified concrete opportunities for improvement. Based on these findings, we will invest heavily in on-site renewable energy solutions. A rollout of photovoltaic systems is planned as a key step in this transition.

There are relatively few actions that directly target reducing CO_2e emissions from buildings, as this is often an additional benefit of actions that primarily target reducing energy consumption.

Table 4.4 Emissions from buildings' energy consumption at Commission EMAS sites (tCO_2e), 2014 - 2024											
	2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Brussels		17 838	19 606	18 406	17 809	19 967	19 929	19 016	20 421	15 749	17 314	14 290
Luxembourg		2 458	6 936	9 572	7 659	8 135	7 772	7 962	7 660	6 171	4 681	2 905
JRC Petten		2 985	2 951	2 592	2 504	808	746	595	571	463	450	524
JRC Geel		5 303	4 821	4 673	4 384	1 351	1 129	1 091	1 329	748	487	847
JRC Karlsruhe		6 165	6 440	6 093	6 955	7 419	7 067	5 729	6 116	6 224	5 766	5 901
JRC Seville		676	799	697	739	695	662	139	153	150	101	109
JRC Ispra		23 272	22 820	21 597	21 253	21 145	21 732	17 565	19 362	14 192	11 396	11 837
Grange		796	848	771	666	581	588	505	458	362	302	368
DG COMM							342	285	298	280	246	207
Total		**59 492**	**65 221**	**64 400**	**61 969**	**60 101**	**59 966**	**52 887**	**56 368**	**44 339**	**40 742**	**36 987**
Total change since 2019 (%)								**- 12**	**- 6**	**- 26**	**- 32**	**- 38**

Table 4.5 Emissions from buildings' energy consumption at Commission EMAS sites (tCO_2e/p), 2014 - 2024												
	2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Target *
Brussels		0,69	0,76	0,69	0,66	0,73	0,69	0,64	0,67	0,51	0,55	0,47	0,39
Luxembourg		0,61	1,49	2,06	1,60	1,62	1,51	1,52	1,38	1,08	0,83	0,51	0,61
JRC Petten		10,58	10,61	9,39	9,52	3,26	3,00	2,41	2,38	2,01	1,97	2,22	*2,74*
JRC Geel		15,33	14,70	15,79	16,54	5,22	4,31	4,10	5,05	2,83	1,84	3,21	2,95
JRC Karlsruhe		19,27	20,00	18,80	21,60	23,40	22,43	18,54	20,05	20,34	18,97	19,67	*no target***
JRC Seville		2,34	2,82	2,32	2,29	2,03	1,80	0,36	0,39	0,37	0,25	0,25	*0,25*
JRC Ispra		9,96	9,94	9,56	9,33	9,25	9,32	7,29	7,82	5,69	4,62	4,75	4,31
Grange		4,44	4,71	4,06	3,54	3,25	3,34	2,92	2,57	1,99	1,79	2,27	0,93
DG COMM							2,76	2,42	2,71	2,24	1,76	1,52	0,93
Total		**1,78**	**1,92**	**1,85**	**1,74**	**1,67**	**1,59**	**1,35**	**1,40**	**1,09**	**0,99**	**0,92**	**0,85**
Total change since 2019 (%)								**- 15**	**- 12**	**- 31**	**- 38**	**- 42**	**- 47**

*Note: * 2030 target value already reached in 2023*

** JRC Karlsruhe does not set targets per person for energy consumption

Table 4.4 also shows that Brussels emissions from energy consumption are relatively low considering its total consumption reflecting that electricity is supplied from renewable sources. **Brussels** and **JRC Ispra** together accounted for more than two thirds of total CO_2e emissions from buildings' energy consumption in 2024, with JRC Seville, Grange and the EC Representations responsible for very small amounts.

Luxembourg: Since mid-2023, part of the heating at BECH has been generated using green electricity, following the replacement of the existing system (district heating) with heat pumps. The CO2e factor for district heating has been recalculatied from 2018 onwards due to values provided by BECH owner. In 2024**,** Luxembourg reduced its CO_2 emissions from buildings' energy by 40% compared to 2023. Abandonning MERCIER EUROFFICE in mid 2023 and LACCOLITH on the last quarter of 2024 together with the replacement of BECH's existing heating system, these were the main reasons for this reduction.

JRC-Geel: The significant emission reduction observed in 2023, attributed to decreased district heating usage, was likely an artefact. In 2024, the district heating contractor replaced the monitoring system with digital meters and adjusted the settings- action prompted by suspected data acquisition issues-which revealed high level of consumption and led to increased level of CO_2 emissions.

At the **Ispra site**, the trigeneration gas plant provides for a more efficient energy supply for the site than that would be provided by the market and satisfies the thermal energy needs that anyway could not be provided by any external operator. The grid supplies a small amount of electricity, and the site is therefore responsible for a significantly greater proportion of the total emissions. The emissions related to buildings' energy consumption in 2024 increased by 3,87% compared to 2023 mainly due to a higher consumption of natural gas. The same assumption of chapter 4.2c was made also for the calculation of total emissions from buildings' energy consumption: the relative third-party contributions were therefore excluded from the reported data. The total 2024 Ispra site values for CO_2 emissions related to buildings' energy consumption including all third parties is 12 595 tonnes.

Table 4.5 shows the historical trends in per capita buildings emissions along with the aggregated Commission value. A gradual return to work in 2021, resulted in a 5% increase in per capita emissions but 2022 and 2023 continue to show a decrease despite the return to the office. The **JRC sites in Geel and Petten** significantly reduced their emissions in 2018 by switching to an electricity contract with predominantly renewable sources. **JRC Seville** followed in 2020. Moreover, JRC Geel employs heat pumps in one of its main buildings. Although such renewable supplies result in low or zero emissions for energy use, there is a small amount representing embedded emissions of the renewable sources.

Trends in emissions from refrigerant leaks

Overall, the Commission's total and per capita refrigerant losses have increased, and **Brussels** accounts for nearly half owing to the large number of staff working in buildings with HVAC systems. In 2024 Brussels reported emissions for two new refrigerants which have far lower Global Warming Potential (GWP) values than most other refrigerants (R455A, and R1234ze with GWP of 148 and 7 respectively).

In **Luxembourg**, total losses increased significantly, as losses of R134a were reported in 2 cooling installations during maintenance inspections in ARIANE and MERCIER POST buildings. The relevant installations have since been repaired.

For the JRC:

• Despite efforts to prevent gas leaks, **JRC-Geel** experienced, in 2024, a significant SF_6 gas loss from the Monnet accelerator due to a rupture in the central column, as well as additional losses during the decommissioning of cooling systems.

• At the **Ispra site**, the 35 tonnes of CO_2e of losses recorded in 2024 originated mainly from technical rooms (around 16 tCO_2e) and the trigeneration plant (around 5 tCO_2e). Refrigerant leaks are reduced of 10% with respect to 2023. The remaining minor leaks come from fridges and HVAC in offices. A cause analysis has been done for all the machinery involved. It was therefore possible to understand the causes according to the various machinery (e.g. damage of valves of cogeneration plant, compressors of laboratory and restoration fridges, mechanical system of HVACs equipment).
As an additional preventive measure, specific actions have been put in place to reduce the probability of further leaks, such as valves replacement every 2 years at trigeneration plant, a general control of all the fridges of the laboratory concerned and a maintenance check every 3 months for all office HVACs equipment.

• **JRC Karlsruhe** continues to report no losses during normal operation under its protocol (less than 3%).

• **JRC Petten** recorded a significant increase by 125% in refrigerant loss in 2024.
Grange did not experience gas losses in 2024 under the F-gases maintenance schedule.

DG COMM The common refrigerant used in the Houses of Europe is R410A. While there was an increase in 2023 due to a malfunctioning of equipment in Valletta, no leaks occured in 2024.

4.8b Emissions from refrigerants used in buildings and experimental installations

Refrigerants have Global Warming Potentials (GWP) typically between 1 000 and 10 000 meaning that a leak of just a few kilograms can have the equivalent atmospheric global warming impact of several tonnes of CO_2. They typically account for 1 to 2% of buildings' CO_2e emissions from energy consumption.

Between 15 and 20 refrigerants are recorded in EMAS reporting at JRC Ispra and JRC Geel, and 15 at JRC Petten, and the distribution by site is shown in **Figure 4.2.**

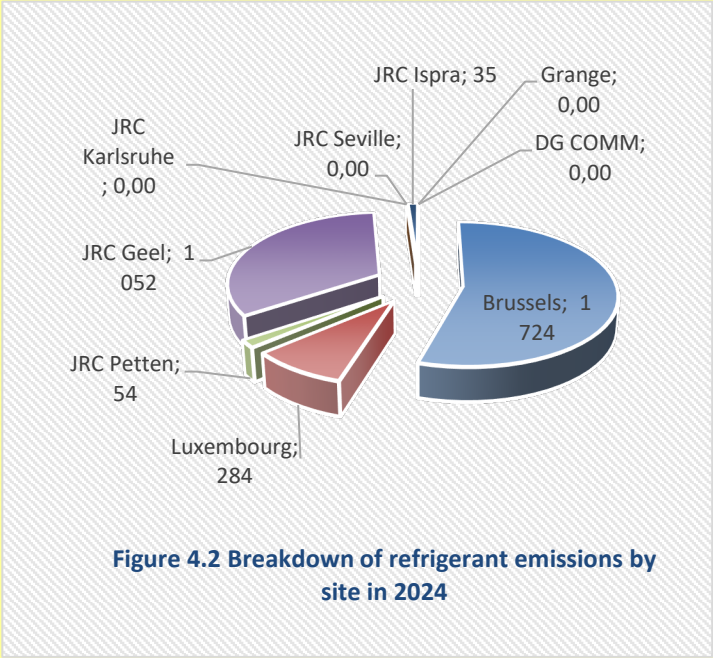


Figure 4.2 Breakdown of refrigerant emissions by site in 2024

The evolution of refrigerant emissions from 2014 to 2024 is shown in **Table 4.6.**

Table 4.6 Refrigerant emissions at Commission EMAS sites (tCO_2e), 2018 - 2024

	2018-24	2018	2019	2020	2021	2022	2023	2024
Brussels		847	677	876	1 163	771	711	1 724
Luxembourg		218	89	211	336	73	178	284
JRC Petten		46	42	2,40	28	69	24	54
JRC Geel		98	278	143	195	62	35	1 052
JRC Karlsruhe						0,00	0,00	0,00
JRC Seville		27				4,88	0,00	0,00
JRC Ispra		37	208	540	315	62	39	35
Grange		34		7,88	11,79	0,00	0,00	0,00
DG COMM				0,00	0,00	0,01	0,05	0,00
Total		**1 308**	**1 293**	**1 781**	**2 050**	**1 041**	**988**	**3 148**

4.8c Emissions from buildings fixed assets (embodied emissions)

Emissions from buildings (fixed assets) are evaluated using an amortisation approach in which the emissions for a building are distributed over its assumed design life. Different sites may use different values according to the characteristics of their buildings. It is a 'broadbrush' approach, a relatively small number of factors are applied to the calculation. The calculation of fixed asset emissions by site in **Table 4.7** are subject to the following considerations:

Brussels

The spreading of these emissions across a long period of time limits the impact of the introduction of just one building in the scope. Figures for 2022 show the first effects of the new building policy, in the framework of the Greening of the EC communication, aiming at a reduction of 200 000 office m² by 2030. The small increase for 2023 is due to the entry of the new building L107 in the EMAS scope. The decrease in 2024 is due to the removal of three buildings from the scope. In the coming years, the impact of emissions is expected to gradually decrease. However, the lapse between quitting old buildings and the incorporation in the EMAS scope of new ones may slightly cause fluctuations in this figure.

Luxembourg

In 2024, Luxembourg's fixed asset emissions for buildings account for 4 605 tCO_2e, slightly increased compared to 2023 due to the additon of 2 Data center rooms in KAYL and DRB. The value will continue to change during the next few years as more buildings are removed from the portfolio with the final move to JMO2 which should be a long term solution.

Table 4.7 Fixed asset (embodied) emission for Commission buildings (tCO_2e), (2018-2024)

	2018-24	2018	2019	2020	2021	2022	2023	2024
Brussels		28 466	28 920	28 381	27 154	26 264	25 910	24 681
Luxembourg		4 279	4 298	4 298	4 298	4 298	4 589	4 605
JRC Petten		138	138	130	130	130	130	130
JRC Geel		647	538	540	540	504	396	396
JRC Karlsruhe		111	111	111	111	111	111	111
JRC Seville				87	87	87	0,00	0,00
JRC Ispra		3 731	3 248	3 283	2 835	2 822	2 816	2 804
Grange		129	129	129	129	129	129	129
DG COMM			107	107	107	107	107	107
Total		**37 500**	**37 487**	**37 065**	**35 390**	**34 451**	**34 188**	**32 962**

For the JRC:

- In **JRC Ispra**, fixed asset emissions account for 2 804 tonnes CO2e in 2024. It depends on building's design life and the type of construction, and is based on a 50 years amortisation period. The overall value reduced by 13,7 % since 2019 and 0.4% with respect to 2023.
- In **JRC Karlsruhe**, fixed asset emissions are based on the generic factor - "not specified - offices" (m²) - which is unchanged since 2016.
- In **JRC Seville**, the 30-year building is fully amortised.

For DG SANTE at Grange, the 25-year building is fully amortised

For DG COMM's EC Representations A common 50 years design life period is used for the Houses of Europe.

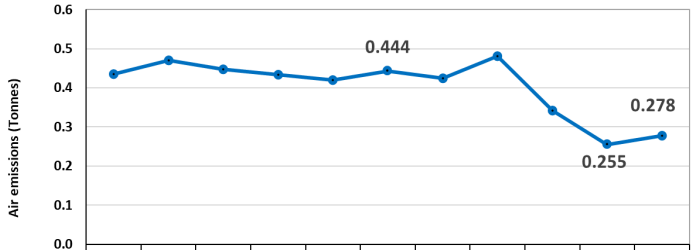
Given the stable building portfolio in the seven Houses of Europe, declared fixed assets emissions are also stable.

4.8d Non CO_2 emissions to air

Considerations are as follows at the JRC sites where calculations have been presented for several years:

At **JRC Geel**, the emissions from air pollutants (SO_2, NO_2, etc.) are rather low and relatively stable because most of the buildings are heated by natural gas and hot water. Other emissions arise from the use and testing of the emergency generators, which run less than 100 hours/year. In 2024, total air emissions increased due to extended use of emergency generators during maintenance and replacement of the electrical system.

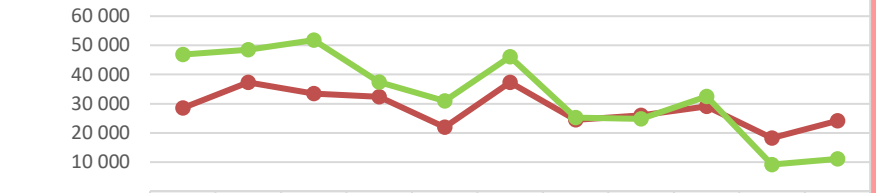
Figure 4.3 JRC Geel: Total air emissions buildings (tonnes) as minimum (SO2, NOx, PM10)



	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Total air emissions buildings	0.436	0.470	0.447	0.434	0.420	0.444	0.425	0.482	0.342	0.255	0.278

At **JRC Ispra**, **Figure 4.4** shows that total emissions of CO and NO_x from the trigeneration plant in 2024 have increased compared to last year mainly due a larger use of the engines. The yearly emission of ammonia (NH3), monitored since 2022, underwent a decrease (from 720kg to 78 kg) compared to the previous year and still remained at low absolute values.

Figure 4.4 NO_x, CO total emissions from Ispra trigeneration plant

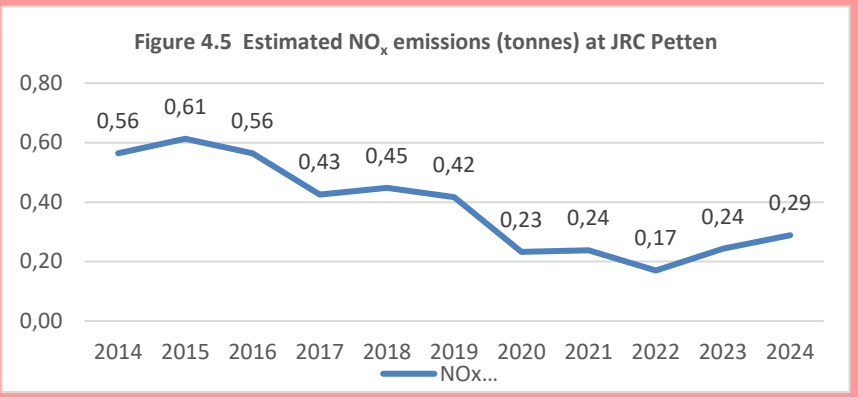


	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
NOx (kg)	28 49	37 29	33 50	32 31	21 96	37 32	24 45	26 04	29 10	18 23	24 14
CO (kg)	46 83	48 48	51 80	37 37	30 88	46 09	25 24	24 80	32 45	9 150	11 06

As agreed with the Italian authorities, the trigeneration emissions threshold values set by Region Lombardy are ensured by means of the overall emission, in terms of mass flow for CO and NOx, assuming the continuous operation of the plant for the entire year. These values were respected also during 2024 and will be communicated to the interested parties. The start-up of the new highly efficient trigeneration plant is scheduled for the first semester of 2025.

The NOx emissions in **JRC Petten** are based on calculations and are not measured. According to the calculations the NOx emissions increased in 2024 by 18.9%. The source for the NOx emisssions are heating installations in buildings.

Figure 4.5 Estimated NO_x emissions (tonnes) at JRC Petten



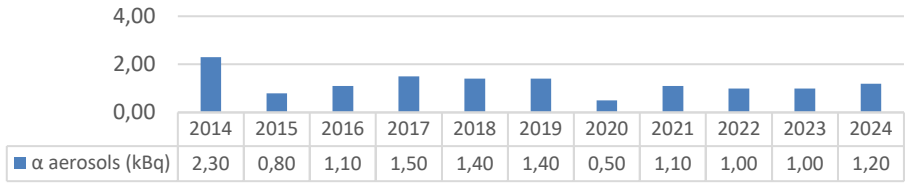
JRC Seville's non-CO_2 air emissions are mainly the result of the consumption of gas by the boilers. The calculation multiplies the gas consumption by the maximum concentration of NO_2 emissions, announced by the manufacturer (NO_x < 56mg/kWh).

Such emissions are not measured at DG SANTE at Grange or at the DG COMM's EC Representations

4.9 Nuclear emissions

JRC Geel, with its nuclear license, is strictly regulated by the Federal authorities (Fanc and BelV). In the frame of the environmental impact, besides the waste produced, one of the site's obligations is to monitor alpha emissions. As shown in the **Figure 4.6** below, these emissions are rather stable and well below the limit of 888 kBq. JRC-Geel is also mandated by nuclear regulatory authorities to measure environmental annual radiation doses at multiple locations across the two accelerators. The results consistently remain well below the prescribed annual limit of 1,000 microsieverts per year (µSv/a).

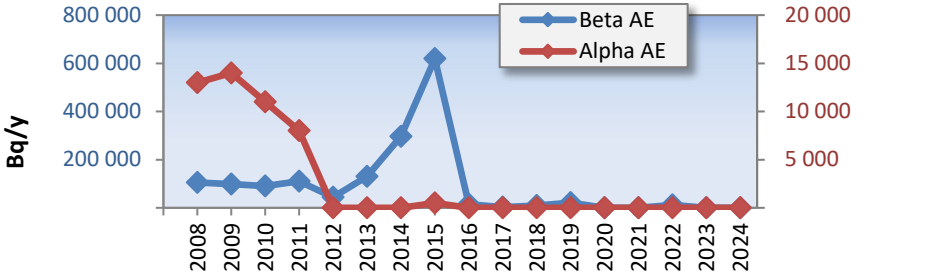
Figure 4.6 Atmospheric emissions containing α emitting aerosols at JRC Geel



	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
α aerosols (kBq)	2,30	0,80	1,10	1,50	1,40	1,40	0,50	1,10	1,00	1,00	1,20

In **JRC Karlsruhe**, for official values relating to potential radioactive emissions to the surrounding environment, the site participates in the KIT Campus Nord's surveillance program in addition to constant measurements made by JRC-Karlsruhe itself. KIT has an extensive surveillance program measuring air, soil, water, and vegetation for radioactivity and is obliged to give regular reports about these measurements to the Umweltministerium Baden-Württemberg, the supervising authority for nuclear installations in Baden-Württemberg. (**Figure 4.7**)

Figure 4.7 Exhaust air: Aerosols declaration to authorities



<u>Note:</u> The y-axis is scaled to 20% of the maximum value for beta-aerosols (4 .000 000 Bq/y) and alpha aerosols (100 000 Bq/y); the value "0" means below the detection limit.

JRC Ispra, as established in the operational provisions for nuclear installations and under Italian law, has set up a program of environmental monitoring in order to detect and record potential radioactive releases and monitor the level of radioactivity in the environment in its surroundings. This uses a network of fixed instrumentation for sampling and/or direct measurement complemented by environmental sampling made within the site and in the surrounding areas.
The site is authorised to discharge low quantities of gaseous and liquid radioactive effluents, through authorised release points, in accordance with the limits set out in operational provisions issued by the Italian Regulatory Authority (Discharge Formula). Gaseous radioactive effluents can be released from the nuclear installations after filtration and continuous radiometric control. Similarly, the release of radioactive liquid effluents is permitted only after treatment and prior radiometric control. The amount of releases is measured in activity (Bq), compared with the authorized limits and reported as a percentage of the site discharge Formula limits.
In 2022, a new discharge formula was approved by the Italian control authority, which is also valid for future decommissioning activities, and which in some cases led to a reduction in the authorized discharge threshold limits. The total activity released in 2024, both liquid and air, is of the same order of magnitude of the previous years and remains well below the authorised thresholds. The amount of gaseous radioactive releases is equal to 0.176% of the threshold limits and the amount of liquid releases are equal to 0,218% of the threshold limits (Figure below). The overall releases resulted in negligible doses for the population, quantified well under 1 microSv/year, even under conservative assumptions.

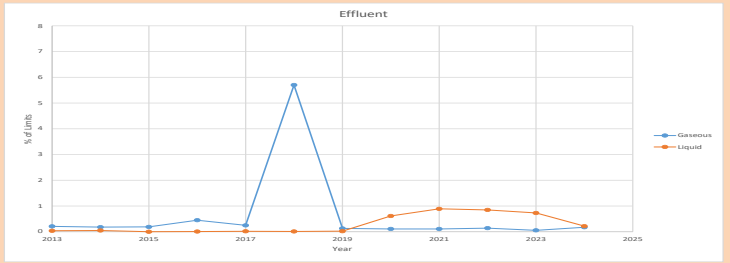


Figure 4.8 Gaseous and liquid effluent levels at JRC Ispra

The 2025 target is to keep discharges well under the authorised threshold limits, in line with the values of recent years and to keep, in any case, the dose values to the population well below the threshold of non-radiological relevance of 10 microSv/year, as defined by Italian legislation and European directives.

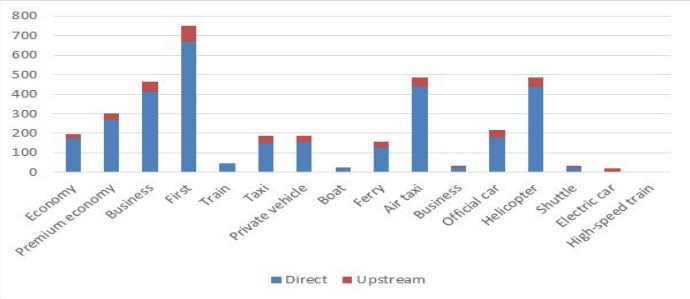
5 Reducing mobility emissions through more sustainable modes of transport

Greening The Commission: *Mobility has become one of the key enablers of the Commission to fulfil its duties. With the digitalisation of our ways of working and the development of soft or green mobility, the Commission will reduce the environmental impact linked to travels whilst ensuring that it continues to reach out to stakeholders, international partners, and the public.*

5.1 Reducing emissions from professional travel

Emissions are calculated using specific factors for the different modes of travel as shown in **Figure 5.1. Air travel is particularly important**, accounting for over 90% of missions emissions. Accordingly the difference between the factors for different classes of air travel are an significant when deciding how to reduce emissions. Flights in economy or premium economy class generate significantly lower emissions per kilometer than those in business class. The factors take into account both flight and upstream (or Well to Tank, or WTT) emissions - those associated with extracting the fuel and making it available for use.

Figure 5.1 Selected emissions factors for travel in 2024, gCO_2e/passenger.km

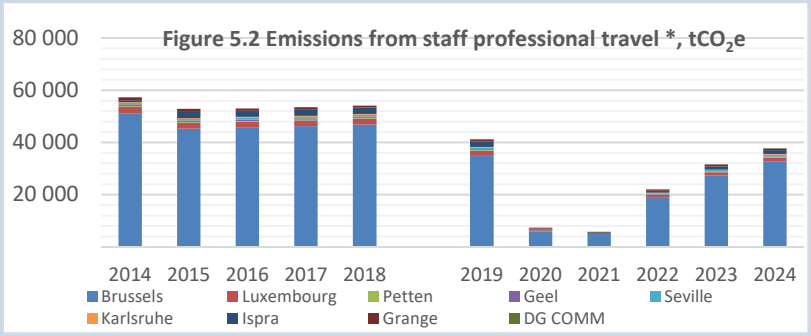


5.1a Background

Data from staff missions has been extracted from a new dashboard developed by the Paymasters Office (PMO). This uses the information encoded in the Commission's management system for professional travel (MiPS).

Staff define the geographical parameters of their travel itineraries, identifying individual travel segments and the mode of travel for each. Conversion factors (that are reviewed annually) are used to calculate the emissions based on the distance and mode of travel.

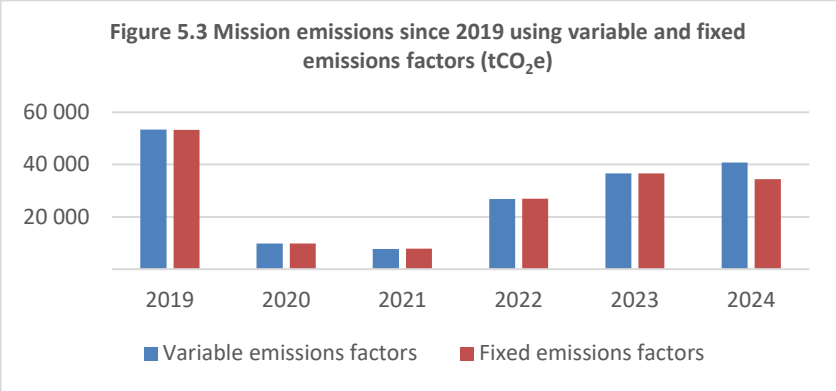
The new dashboard was used to calculate emissions back to 2019 and provides more accurate real-time output than data previously extracted from the MiPS green reporting tool; the latter already having simplified by centralising the calculation of missins emissions which had previously been processed from disparate sources.



*** NB 1) New methodology and definition of categories since 2019, 2) Emissions factors for air travel increased by nearly 20% for travel in 2024, 3) Reporting for the first time emissions for staff at all work sites, 4) Other sites - data since 2019 only**

Figure 5.2 shows a dramatic drop in professional travel emissions due to the Covid outbreak in 2020, and that continued in 2021, before a "rebound" resulting from increased staff presence at workplaces and rising mobility levels in 2022 to 2024.

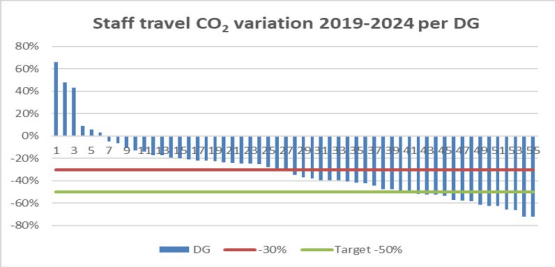
The increase in 2024 (from 2023), is partly a methodological lag effect due to lower occupancy of passenger aircraft during the Covid period. This masks the efforts made by staff over this period, as can be seen in the following figure where the emissions above are compared with emissions calculated with factors fixed since 2019. Using the latter approach it is evident that there has been a reduction in travel since 2023, although reported emissions (with variable factors) have increased. Emissions factors should fall as aircraft occupancy rates increased again.



5.1b Green Communication objective

A core component of the Commission's 2030 emissions reduction target is to **reduce staff missions emissions by 50% from 2019 to 2024**. To deliver this, 50 of 51 services pledged to reduce emissions. As shown in the figure below, **16 services met or exceeded the 2019 - 24 reduction target** while further **13 services achieved between a 30% and 50% reduction**.

Figure 5.4 Distribution of services' staff missions emissions reductions, 2019 -2024



Other tools to assist reducing missions emissions include:

- A new Guide to Missions (under finalisation in 2024), allowing train travel in certain circumstances when more costly than flying
- Display of emissions by different transport modes on the missions booking tool to increase awareness of the environmental consequences of different travel choices.

5.1c Reducing emissions from professional travel

Tables 5.1 and 5.2 provide a detailed breakdown of modal data extracted from MiPS+ and presented in **Figure 5.3**. The distinction between the two tables as summmarised above is as follows:

- **In Table 5.1** the emission factors (obtained from DEFRA) are revised annually. They usually vary little from year to year, but the factors that are applied to 2024 travel data increased much more significantly as described above.
- **In Table 5.2** the emission factors used for calculating emissions in 2019 are also applied to the following years. An additional minor adjustment is also applied to allow for the category of *travel Commission's car without a driver* since MiPS lacked a factor for the period 2019-2023. This adjustment does not affect the total missions emissions because service car emissions are accounted for using real fuel consumption. This also explains the slightly different totals for 2019 in both tables and in Figure 5.3

The reported emissions reduction from 2019 to 2024 is 23% for the first table and **35%** for the second**.** Therefore the Commission's has reduced its travel more than the calculated emissions would imply.

Table 5.1 Total professional travel emissions by mode (2019 - 2024) with EF variation, tCO_2e

Year	2019	2020	2021	2022	2023	2024
Air travel (economy)	20 851	3 051	2 451	9 583	13 070	14 713
Air travel (not economy)	28 499	4 483	2 513	14 056	20 481	23 927
Air taxi (and helicopter)	673	1 110	1 467	1 158	1 042	625
Rail	839	181	162	449	542	468
Non rail surface travel 1 –Commission vehicle fleet	977	535	598	665	613	467
Non rail surface travel 2 – hire cars, private vehicles, boat, bus, shuttle	1 516	424	518	892	898	630
Total	**53 354**	**9 784**	**7 711**	**26 803**	**36 646**	**40 830**
Change since 2019 (%)		*-82*	*-86*	*-50*	*-31*	*-23*

5.1d Carbon emissions intensity by site

Table 5.3 and **Figure 5.5** display the carbon intensity for the sites between 2019 and 2024, based on PMO dashboard data. It is evident that Luxembourg, and JRC Karlsruhe have the lowest values (below 0,2 $kgCO_2e/km$) which is indicative of a greater proportion of surface travel and or predominantly economy class travel by air.

Grange has the highest value as many of its staff are inspectors who travel widely from Ireland, and consequently largely by air.

Carbon intensity is a useful measure that should reduce as staff fly less (or in economy rather than business class), or convert to surface travel, particularly rail.

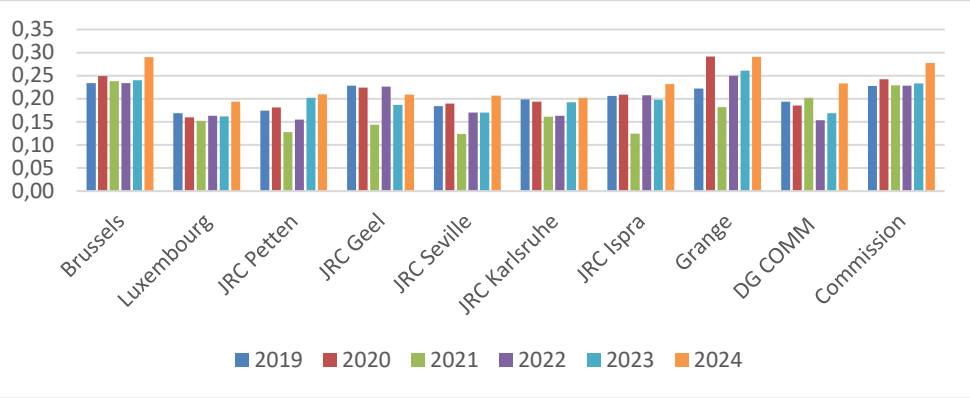
Table 5.2 Total professional travel emissions by mode (2019 - 2024) with 2019 EF, tCO_2e

	2019	2020	2021	2022	2023	2024
Air travel (economy)	20 851	3 051	2 451	9 525	12 990	12 286
Air travel (not economy)	28 499	4 483	2 513	13 983	20 228	19 664
Air taxi (and helicopter)	673	1 110	1 467	1 158	1 042	625
Rail	839	181	162	543	658	604
Non rail surface travel 1 –Commission vehicle fleet	977	535	598	665	613	467
Non rail surface travel 2 – hire cars, private vehicles, boat, bus, shuttle	1 441	459	686	1 100	1 071	757
Total	**53 279**	**9 818**	**7 879**	**26 974**	**36 602**	**34 403**
Change since 2019 (%)		*-82*	*-85*	*-49*	*-31*	*-35*

Table 5.3 Total carbon intensity by site (2019 - 2024), $kgCO_2e/km$

	2019	2020	2021	2022	2023	2024
Brussels	0,23	0,25	0,24	0,23	0,24	0,29
Luxembourg	0,17	0,16	0,15	0,16	0,16	0,19
JRC Petten	0,17	0,18	0,13	0,15	0,20	0,21
JRC Geel	0,23	0,22	0,14	0,23	0,19	0,21
JRC Seville	0,18	0,19	0,12	0,17	0,17	0,21
JRC Karlsruhe	0,20	0,19	0,16	0,16	0,19	0,20
JRC Ispra	0,21	0,21	0,12	0,21	0,20	0,23
Grange	0,22	0,29	0,18	0,25	0,26	0,29
DG COMM	0,19	0,19	0,20	0,15	0,17	0,23
Commission	**0,23**	**0,24**	**0,23**	**0,23**	**0,23**	**0,28**

Figure 5.5 Emissions intensity per site, $kgCO_2e$/passenger.km



5.2 Reducing emissions experts' travel

The Commission has included emissions for expert travel (covered by the Commission's administrative budget) since 2021, extending the calculations back to 2019.

The calculations use a database describing an expert's country of origin with mode of travel assumed based on distance. In 2024 the Commission developed a more automated approach to calculate 2023 data.

A more systematic method to allocate meetings by site is under development, so currently all experts' travel emissions are allocated to Brussels. Emissions are summarised in **Table 5.4** which suggests that emissions in 2024 reduced almost by **60%** the emissions from

Table 5.4 Total experts' missions emissions (2019-2024) by mode, tCO_2e

	2019	2020	2021	2022	2023	2024
Air	30 919	8 683	722	12 048	10 002	12 429
Rail	48	9,4	0,6	13	16	144
Car	250	38	26	81	74	84
Total	**31 216**	**8 730**	**748**	**12 141**	**10 092**	**12 657**
Change since 2019 (%)		*-72*	*-98*	*-61*	*-68*	*-59*

Case study 5.1: Making Commission's conferences and events even greener!

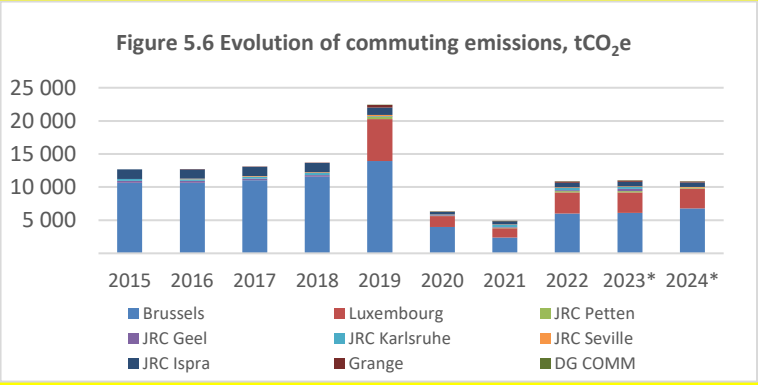
Since 2020 the Commission organises an **annual corporate competition on sustainable conferences and events**, in order to highlight and promote the successful and innovative sustainable events' practices already in place, under the aegis of **Commissioner Hahn,** responsible for Budget and Administration.
In 2024, the Commission Guidelines were updated to address virtual and hybrid events.
Under the "greening' initiative we will also investigate the possibility of developing a **common tool for the calcu\lation of the environmental impact** of conference organisation.

5.3 Greener commuting options

Figure 5.6 illustrates emissions from staff commuting by site, using data from **Table 5.5**. The values from 2019 onwards have been updated, incorporating information from a staff survey conducted in 2022 to assess emissions at various sites. These were re-evaluated using the 2023 population and attendance data, along with revised emission factors. Additionally, a new commuting survey was conducted in 2024, and the results are included in this statement for 2024, using the same approach for calculation as the latest 2022 survey results.

The calculations use a Commission wide average for the number of working days according to HR data that takes into account bank holidays, sick leave, annual leave, and other absences. Prior to 2019 not all sites reported commuting emissions.

Figure 5.6 Evolution of commuting emissions, tCO_2e



5.3a The Greening communication requires that the following **Corporate level** actions be completed:

- Revision of the mobility policy (in progress) in relation to commuting
- Facilitation of charging electric or hybrid vehicles at some Commission car parks.

5.3b Brussels COBRACE (1) compliance works were carried out as part of the extension of different buildings' environmental permits. Since 2017 the Commission has removed 4 529 parking spaces including 977 in 2023.
A parking reservation system (Where2Park) has been developed and is gradually implemented (so far in 24 buildings) to facilitate the transition to the reduction of the number of parking spaces in EC premises.
Currently around 6,000 bicycle parking spaces are available. Since 2020, almost 1 600 new bicycle parking spaces have been created, including 1 400 in 4 eco-mobility hubs.
The demand for electric bike chargers has risen substantially and OIB has steadily increased the number of chargers available. In 2024, a cargo bike has been made available to the catering unit in order to carry out small inter-site errands with it. The service bicycles fleet is composed of 284 bicycles, including 71 electric-assist bikes. Bike repair stations are available to staff in the bicycle parking areas of the following buildings: BERL, BRE2 (HUB), COVE, CSM1 (HUB), DM24, J-30, L-41 (HUB), L130 (HUB), MADO, SB34, SPA3, W910. Finally, the mobility actions organised by OIB in 2024 enabled 261 colleagues to follow Bike Repair or Safe Cycling training.
As the 2024 Mobility Survey shows, these strategies have contributed to a 10% increase in the modal share of public transport (43%) and a 3% increase for active modes (34%) since 2022. Cars now represent only 23% of the modal share.

(1) Code bruxellois de l'Air, du Climat et de la Maitrise de l'Energie

5.3c Luxembourg In March 2020, when all public transport became free of charge in Luxembourg, OIL put in place a scheme to partially reimburse the public transport ticket for staff members living abroad (Germany, France or Belgium). An increase in the cross-border pass reimbursement for all requests submitted from 1 October 2024 was announced, with a higher reimbursement of 85% of the pass price with a maximum of €500 per year. In 2024, there were 247 requests reimbursed, an increase of 92% compared to 2022 and 25% compared to 2023.

In addition, the Commission continues to offer free subscription to Vel'OH!, the self-service bike rental system of Luxembourg City.
In 2024, 75 new codes were attributed with a total of 546 active staff members.
Commission staff continues to benefit from the use of the Parliament's shuttle between Luxembourg and Brussels, with 141 one way trips in 2024.
OIL's service bike fleet has been completely renewed with 15 new bikes out of 17 in total.

5.3.d JRC Most JRC sites are located in remote areas, which makes it more difficult for staff to use sustainable modes of transportation as the sites are often not well connected by public transport. The JRC nevertheless supports sustainable commuting by organising shuttle buses or offering service bikes/e-bikes and providing showers and bike parking infrastructures. Charging stations for electric vehicles and electric/hybrid service vehicles are also available on most of the JRC sites. The JRC also performs awareness-raising activities as a strong sense of responsibility on the part of all staff is essential to achieving the ambitious Commission's target.

JRC Geel was legally required to complete the FOD Mobility Survey launched in 2024. The survey was conducted alongside other Commission sites. JRC Geel analysed the results to estimate the carbon footprint of staff commuting, considering on-site presence, return trip distances, and primary modes of transport. The survey confirmed that JRC Geel's staff primarily commute by car, due to the site's remoteness and inadequate public transport schedules.

At the **Ispra site**, commuting staff emissions (641 tCO_2e in 2024) are mostly related to the use of private cars. In 2024, there was a reduction in emissions of about 9% compared to 2023. The reduction in emissions is due to the contribution of the use of electric cars and the increase in the use of bicycles and the JRC Bus (approximately + 3% for both compared to previous data). In 2024, a Corporate Transport Survey was carried out.

This was used to calculate the JRC Ispra commuting mode split. This revealed that the car is the most commonly used mode of transport (used by 71,4% of staff+ 4,6% of electric cars) as that the site is not connected to a widespread public transport system, followed by the bicycle (11%) and the JRC bus (8.8 %).
Ispra Site Management is committed to foster a more sustainable commuting, in particular looking into creating synergies with public transport. From June 2021, following an agreement with the local public transport agency TPL, the site has a terminal stop at the main entrance for two main public bus lines, connecting the site with the city of Varese and other regional transport hubs. In 2025 a site specific transport survey will be carried out to further detail the data and obtain useful information for defining a site mobility plan.

In **JRC Karlsruhe**, the CO_2e footprint of staff commuting was estimated in 2016 with a survey conducted on site using a simple approach considering the main and potentially second modes of transport along with the distance to the workplace. The CO_2e commuting footprint resulted in approximately 273 tonnes per year. In 2022, the Commission-wide mobility survey resulted in slightly higher values. However, as this survey uses only data based on the first "main" mode of transport, these results should be looked at carefully.

In **JRC Petten**, the majority of staff reside in and around the next city, Alkmaar. JRC Petten organise three buses with different routes between Petten and Alkmaar and surroundings. One bus links Petten and Amsterdam. Furthermore, service bikes (together with showers) are provided, giving the staff the options to cycle within and beyond the site perimeter.

JRC Seville, as in other sites a mobility survey was conducted in 2024 garnered responses from approximately 40% of the staff, with over 50% indicating that they commute by bicycle, walking, or public transport. The site is encompassed by a comprehensive network of bike paths, as well as several bus lines. Furthermore, staff have access to safe bike parking and shower facilities. Lastly, five electric vehicle chargers have been installed in the building, of which two are for exclusive use of JRC staff

5.3e Grange The rural location of our site and the poor public transport network make it difficult for staff to use sustainable modes of transport. An increase staff in purchasing EVs led to a feasibility study for installation of EV chargers in 2023. Unfortunately, due to technical and resources reasons it still has not been possible to launch the procurement procedure in 2024.

DG COMM In 2024, the average response rate was 75%, hence, the surveys can be considered highly representative. Table 5.5 and Figure 5.6 show the evolution of total commuting emissions by House of Europe. In 2024, emission factors from local sources were used where available and the local electricity grid was taken into account for electric modes of transport. Overall, commuting emissions have reduced by 24% since 2019, notably thanks to the mainstreaming of teleworking. There was an increase in emissions sompared to 2023, in part due to increased office presence and activity prior to the European Elections. Compared to 2023, decreases of commuting emissions in Nicosia and Sofia can be attributed to a decrease in the use of diesel cars. Increase in emissions from Copenhagen and Valletta may be partly due to bias in the responses due to a lower response rate than last year (approximately 53% in 2024 compared to 80% in 2023). Of the responses received in Copenhagen, train and metro accounted for 83% in 2024, compared to 44% in 2023, and there was a reduction in responses from commuters by bicycle and walking. In Valletta, commuters by ferry previously selected walking as their primary mode, whereas in 2024, the category for ferry was included. In Vienna, there was an increase in electric and hybrid cars and metro use, and a decrease in the train, tram, and walking among the respondents (response rate went down from 95% to 85%). These factors further explain the increases in emissions.

Table 5.5 Total commuting emissions by site (tonnes)

	2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023*	2024*
Brussels												
Direct		10 672	10 672	10 672	11 046	11 565	11 565	3 325	1 966	5 233	5 286	5 911
Upstream							*2 351*	*676*	*400*	795	815	871
Total		10 672	10 672	10 672	11 046	11 565	13 916	4 001	2 366	6 028	6 102	6 782
Luxembourg												
Direct							5 296	1 329	1 180	2 630	2 593	2 517
Upstream							*1 077*	*270*	*240*	519	514	477
Total							6 372	1 599	1 420	3 149	3 107	2 994
JRC Petten												
Direct							256	74	74	163	162	129
Upstream							*52*	*15*	*15*	32	32	33
Total							308	89	89	195	194	162
JRC Geel												
Direct				281	251	246	256	26	58	100	176	262
Upstream												63
Total				281	251	246	256	26	58	100	176	325
JRC Karlsruhe												
Direct				273	273	273	273	78	78	277	275	226
Upstream							*55*	*16*	*16*	64	63	51
Total				273	273	273	328	94	94	341	339	277
JRC Seville												
Direct				76	82	89	155	24	30	76	76	81
Upstream							*35*	*5*	*6*	*17*	*17*	*19*
Total				76	82	89	190	29	36	93	94	100
JRC Ispra												
Direct		3 236	1 431	1 409	1 420	1 425	904	318	422	544	578	526
Upstream							*192*	*69*	*92*	*119*	*126*	*115*
Total		3 236	1 431	1 409	1 420	1 425	1 096	388	514	662	704	641
Grange												
Direct				14	14	14	303	4,00	4,00	147	136	124
Upstream							*67*	*0,81*	*0,81*	33	30	28
Total				14	14	14	370	4,81	4,81	179	167	152
DG COMM												
Direct							42	14,24	13,35	18	23	32
Upstream							*8,49*	*2,90*	*2,71*	*3,63*		
Total							50,28	17,14	16,07	21,49	23	32
Total		**13 908**	**12 103**	**12 725**	**13 086**	**13 611**	**22 887**	**6 247**	**4 597**	**10 769**	**10 904**	**11 465**

Note1: *for Bruxelles, Luxembourg, Petten, Karlsruhe, Grange 20,33% upstream emissions are included from 2019 (prior reporting included only combustion emissions)*

*** DG COMM calculations performed separately, upstream emissions to be reviewed for 2023, 2024*

Case study 5.2: Velomai - an example of staff participation

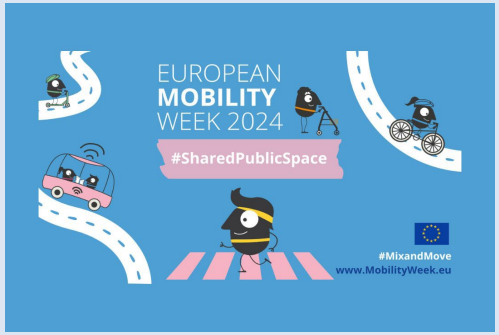
A staff wellness initiative coordinated by HR.D.2 'Be Well' team, initiated by the Executive Agencies HaDEA and EISMEA, launched the 2024 edition of Velomai, the interinstitutional cycling challenge from 1 to 31 May.

The 2024 edition's theme is **Cycling towards a Greener Europe**, focusing on building a community of cyclists. Colleagues across EU institutions, agencies, and bodies as well as delegations around the world compete by registering the rides in the VeloMai App.

Case study 5.3: EU Mobility week 2024 - an example of a staff campaign

In 2024, the promotion of soft mobility during EU Mobility Week (16-22/09) was celebrated: In Brussels, with the organisation of a bike repair workshop, four safe cycling training sessions (online and presential), and a Sustainbale Commuting Photo Competition.

Colleagues in Luxembourg were invited to go car-free on 17 September at the Cloche d'Or and Kirchberg sites. In Ispra, in collaboration with the Living Labs team, a new phase of the EV charging research project (PRISM) was launched, where staff could earn bonus credits to spend in energy for their electric vehicle, every time staff carpool with colleagues to and from work.



5.3f DG COMM

In 2024, the House of the EU in Vienna continued to use the night train connection between Vienna and Brussels for school groups visiting the institutions, with the objective of reducing CO2 emissions. Even though the train connection takes much more time and sometimes faces delays, the pupils enjoy taking the night train and see it as an adventure. In addition, the teachers who take the night train are multipliers and thus help to promote the possibility of train travel in the EU.
Left: the inauguration of a train locomotive with EU and Green Deal branding, Credit: Vertretung der Europäischen Kommission/APA-Fotoservice/Schedl.

5.4 Developing a more sustainable Commission vehicle fleet

The Commission sites have sought to rationalise their fleets, and in recent years the total number of vehicles has been below 300 (**Table 5.6**). They also seek to use more vehicles with no (or lower) tailpipe emissions, and the proportion of the total vehicle fleet comprising hybrid or electrical vehicles has risen to 68% (**Table 5.7**). The evolution in manufacturer tailpipe emissions is presented in **Table 5.8.**

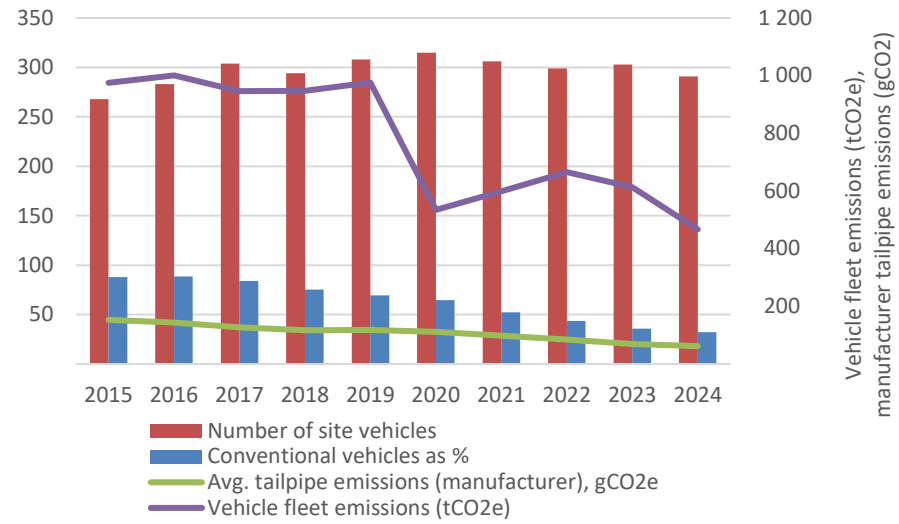
Table 5.6 Number of vehicles in site fleets	2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Brussels			117	107	129	126	131	129	125	123	127	115
Luxembourg			25	30	30	33	32	32	31	30	31	32
JRC Petten			3	3	3	4	4	4	4	4	4	4
JRC Geel			0	7	7	7	7	7	7	7	7	9
JRC Karlsruhe			0	11	12	12	12	12	12	12	11	11
JRC Seville		1	0	1	1	1	1	1	1	1	0	0
JRC Ispra		104	122	123	121	110	109	118	114	111	110	107
Grange			1	1	1	1						
DG COMM							12	12	12	11	13	13
Total		**105**	**268**	**283**	**304**	**294**	**308**	**315**	**306**	**299**	**303**	**291**

Table 5.7 Number of hybrid or electric vehicles in site vehicle fleets	2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Brussels		0	10	10	13	33	45	54	76	87	108	106
Luxembourg		0	0	0	0	2	9	12	14	15	20	22
JRC Petten		0	1	1	1	1	1	1	1	1	1	1
JRC Geel		0	0	0	0	0	1	1	1	2	2	4
JRC Karlsruhe		0	0	0	1	1	2	2	2	4	4	4
JRC Seville		0	0	0	0	0	0	0	0	0	0	0
JRC Ispra		3	21	21	34	36	36	41	50	58	55	55
Grange		0	0	0	0	0	0	0	0	0	0	0
DG COMM							0	1	2	2	5	5
Total		**3**	**32**	**32**	**49**	**73**	**94**	**112**	**146**	**169**	**195**	**197**
as % of fleet		**3**	**12**	**11**	**16**	**25**	**31**	**36**	**48**	**57**	**64**	**68**
Conventional vehicles as %		**97**	**88**	**89**	**84**	**75**	**69**	**64**	**52**	**43**	**36**	**32**

Table 5.8 Average tailpipe emissions of vehicle fleet according to manufacturer (gCO_2e/km)	2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Target* 2030
Brussels		148	145	129	118	116	119	113	94	82	53	34	*71*
Luxembourg		171	167	161	158	145	142	126	121	110	92	92	*85*
JRC Petten		168	148	148	148	148	148	148	148	148	148	148	132
JRC Geel													
JRC Karlsruhe		202	172	165	162	157	146	151	151	140	117	117	*139*
JRC Seville		136	136	136	136	136	136	136	136	136	0	0	0
JRC Ispra		186	158	157	132	111	109	104	91	71	74	74	5
Grange		174	174	174	174	174	0	0	0	0	0	0	0
DG COMM							158	155	147	140	111	111	0
Total		**185**	**153**	**143**	**127**	**117**	**118**	**112**	**99**	**84**	**69**	**62**	**50**

*Note: * 2030 target value already reached in 2024*

Figure 5.7 Evolution of Commission vehicle fleet characteristics



5.4a Brussels

Brussels has steadily increased the number of hybrid and electrical vehicles in the fleet, since 2019 it represents a majority of vehicles.

5.4b Luxembourg

All Commission fleet cars in Luxembourg are being gradually replaced by less polluting leased cars, leading to a reduction in manufacturer emissions. At the end of 2024, 22 of 32 vehicles or 69 % of the fleet, is either a full electric or a hybrid car.

5.4c JRC

Approximately half of the vehicles in use at the JRC (not only cars but also mini bus, vans, forklifts, etc.) are electric or hybrid electric vehicles. This number went up in the past years and progress is even more significant in terms of CO_2e emissions linked to the use of JRC's vehicles fleet. In addition to greening its fleet, the JRC has also taken further steps towards greener mobility. For example, via the installation of charging stations for electric vehicles or the offer of alternatives to cars such as services bikes/e-bikes (see section 5.3c).

In 2024, **JRC Geel** has increased it vehicle fleet with two small electric carts allowing, the cleaning service and staff members, the transport of some waste streams at central location (e.g the container park).

Case study 5.4 - Smart EV-Charging stations at the JRC

The JRC hosts the DES-Lab committed to testing innovative energy-related solutions in living contexts. High-tech start-ups can apply for testing their technologies upon an open call of interest, making use of a living environment such as the JRC Ispra site.
The winning applicant to last JRC open call, *Silla industries*, has signed an agreement with the JRC Ispra for a 3-year experimental project to test their technologies on-site. *Silla industries* offer a product called PRISM, an electric vehicle charger featuring an open solution for smart charging of electric cars. In particular, PRISM allows smart charging using the electricity produced instantaneously by a PV system connected to the local grid.

In cooperation with the Infrastructures department, the DES-Lab has installed nine EV charging stations by the JRC Ispra solar parking for staff usage. The information collected (availability of the chargers, instant power, total energy supplied within a session) is at disposal of staff and shown on an interactive dashboard. The Living Lab approach allows studying user behavioural implications in relation to new technologies and steering users towards more virtuous and sustainable practices.

∞ Driving forward with cleaner energy - European Commission (europa.eu)

The **Ispra** service vehicle fleet counts 107 vehicles, which support site staff in their research and other technical and operational activities, providing mostly internal mobility. The fleet includes mobile laboratories, the internal postal service, firefighting, ambulance and other work vehicles. In 2024 and 2023 the electric vehicles totaled 55 units, while combustion vehicles decreased by three units.
The 4 electric vehicles bought in 2024 will be operational in 2025. 35 recharging points for internal electric vehicles (EVs) have been installed with a monitoring system that allows the site to monitor the EV's electrical consumption (15.89 MWh in 2024 with a 7.8% increase with respect to 2022) and their indirect upstream CO_2 emissions.
In an the effort to promote sustainable mobility, JRC Ispra has also upgraded its service bicycles policy, which comprises a dedicated on-site service which manages 198 service bicycles (of which 45 are electric).

JRC Karlsruhe has a fleet of 11 vehicles, five of which are primarily or exclusively used on the premises. Four electric cars became operational since mid 2022. In 2024, the fleet emitted a combined CO_2e output of 4.3 t, once again significantly lower than the year before. The contribution of CO_2e emissions from cars to the site's carbon footprint is very low (e.g., 0.1% in 2024 or 0.2% in 2023).

JRC Petten has four site service vehicles, which are used for internal goods transport, missions, taxi support to Schiphol and Petten. One of the service vehicles is an electric car. In addition, 40 service bicycles are available, which can be used within and outside the site premises.

In **JRC Seville** no longer has a service car.

5.4d DG SANTE at Grange no longer has a service car.

5.4e DG COMM The Commission's DG COMM is greening the Representation's car fleet, aiming for a 100% zero or low emission fleet by 2027 and 100% zero emission fleet by 2030. The share of electric or hybird vehicles in the seven Representations in EMAS scope stood at 50% in 2024. In many countries, the pace of fleet electrification in hampered by the insufficient coverage of public chargers to allow cross-country missions and restrictions on the installation of chargers in garages due to fire risks.

Related procurements are fully integrating the recommended EU Green Public Procurement criteria for road transport. Larger Representations have two vehicles (an official and a service car), while smaller ones, such as Nicosia and Valletta, have only one official car. Copenhagen reported 3 vehicles in 2024, of which one is earmarked for sale, following replacement with an electric one. EPLOs do not have a vehicle fleet.

5.5 The evolution of the overall vehicle fleet

Table 5.9 shows that there is a long term downward trend in vehicle fleet emissions, although in 2022 there was a slight rise, probably due to the regularisation of office activities after the Covid pandemic.

Case study 5.5: European Research Executive Agency (REA) - reducing physical presence in evaluations

REA manages an evaluation facility in Brussels for various EU Programmes. By 2018, it had already shifted significantly towards online and hybrid evaluation meetings, rather than inviting all experts to Brussels. And in 2022 they signed the corporate pledge for reducing CO_2 emissions linked to staff and experts' travel, seeking a 50% reduction by 2024 compared to 2019.

To support this change in programme implementation, REA converted 108 of 140 meeting rooms at one facility to hybrid rooms with improved audio-visual equipment to cater for online meetings and provide more flexibility for the management of online or hybrid meetings for evaluations and reviews.

Reduced physical presence owing to these measures (and COVID), led in 2020 to REA closing the proposal printing service and saving, in addition, 3 million sheets of paper annually (equivalent to 300 trees, and with a financial saving of €135,000).

Table 5.9 Emissions from Commission vehicle fleet (tCO_2e, combustion and upstream)

	2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Commission total		965	976	1001	947	947	977	535	598	665	613	467

6 Monitoring and mitigating emissions from other sources

Greening The Commission: *The Commission plays an active part in societal changes. It is thus logic that with the Communication it commits to continue to explore options for further GHG emission reductions and to ensure that it takes into account all new operations linked to its way of working.*

6.1 Fixed asset (embodied energy) for IT fixed assets

Several actions encompass the IT domain, and a new digital strategy was created in 2022. The emissions associated with IT fixed assets are calculated using the annual inventory for 17 categories of IT equipment (see Chapter 7). Following a switch to accounting all emissions for IT equipment in the year of purchase according to the GHG protocol, the resulting Commission level emissions reduced.

The reasons for this include a reduction in the number of larger equipment items such as laptops, desktop printers as well as in some coefficients used in the calculations. The site level breakdown is included in **Annex 3**.

6.2 Emissions from teleworking

Teleworking emissions were introduced in the 2021 reporting exercise. Estimations are compiled from publicly available national data sets for energy use, combined with Commission staff survey and aggregate HR data on presence at the sites. While 2021 reporting benefitted from a small number of questions on teleworking in the Staff Environmental Awareness Survey that was addressed to a selection of staff, a more extensive dedicated teleworking survey 2023 was sent to all staff.

The breakdown in the components of teleworking emissions in 2024 is presented in **Figure 6.1** for all the sites. The largest components were space heating (55%) and equipment electricity use (30%).

Figure 6.1 - Components of total teleworking emissions in 2024

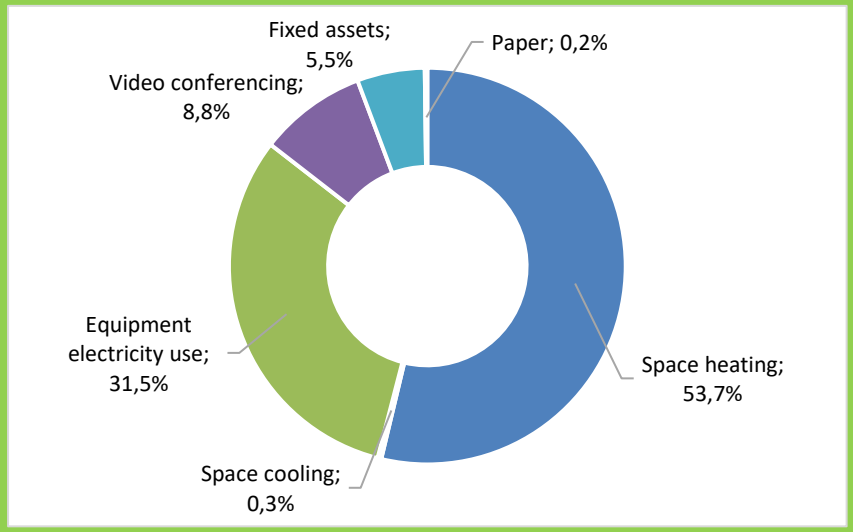
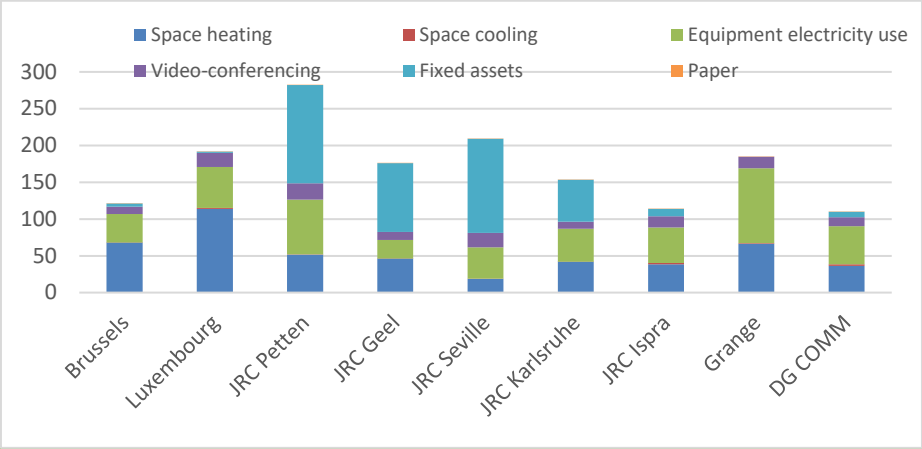


Table 6.1 Breakdown of teleworking emissions, 2024

Teleworking emissions	Total (tonnes CO_2e)	Total (%)	Per person (kg CO_2e)
Space heating	3 051	53,7%	71
Space cooling	17	0,3%	0,4
Equipment electricity use	1 786	31,5%	42
Video conferencing	498	8,8%	12
Fixed assets	313	5,5%	7
Paper	12	0,2%	0,3
Total	**5 678**	**100,0%**	**133**

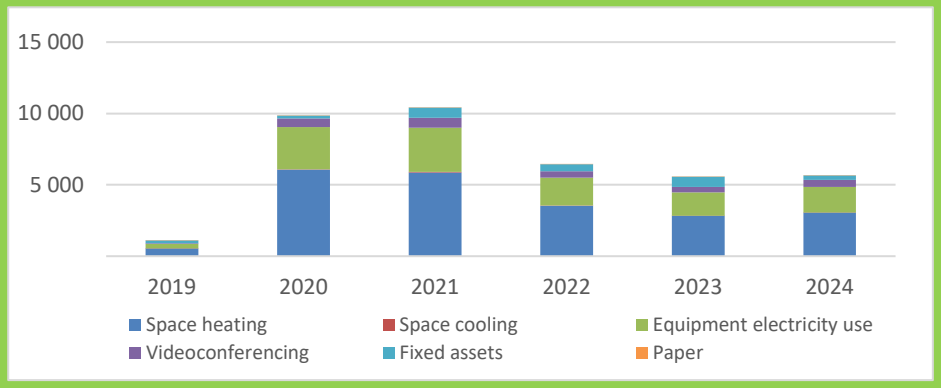
The distribution of teleworking emissions between the sites is shown in **Figure 6.2**.

Figure 6.2 Teleworking emissions at EMAS sites in 2024 ($kgCO_2e$/person)



While climate plays a role, Seville has very low heating emissions, the national energy mix is also important. The evolution of total teleworking emissions is shown below compiled with data from **Annex 8**.

Figure 6.3 Evolution of teleworking emissions, tonnes CO_2e



Teleworkers were 6% of staff in 2018, 7% in 2019 and 8% in 2020 before the lockdown. The percentage of teleworkers during the pandemic varied between 50% and 100% from site to site.

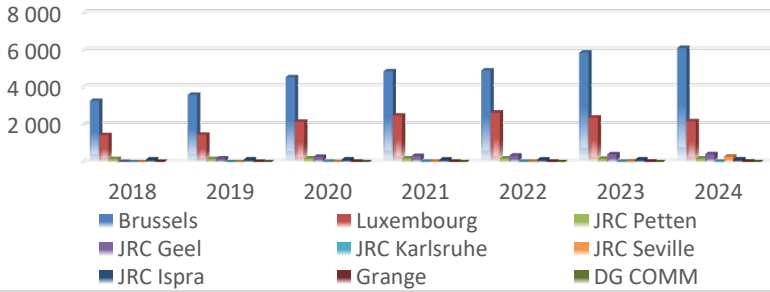
Greater emissions were observed in 2021 than in 2020 because staff were encouraged to telework for the whole year.

The Commission adopted the **Working Time and Hybrid Working Decision** in 2022 after which teleworking accounted for 40% to 60% of working time across the sites. Therefore, benefitting from more flexible working arrangements, most staff spend more time working at home than they did in 2019, but not as much as during the Covid pandemic.

6.3 Emissions generated by service contracts

Emissions generated by service contracts are shown in **Figure 6.4**. Categories include security, cleaning and, following a harmonisation exercise by all sites three further categories identified with different emission factors: iii) 'hard' service contracts: printing, advertising, architecture and engineering, multi-technical building maintenance, iv) 'soft' service contracts: service/insurance, banking services, advice, and fees and v) other heavy service contracts. The data in **Annex 5** suggest that hard service contracts are the largest contributors for most of the sites.

Figure 6.4 Emissions from service contracts (tCO_2e)



Generally higher emissions in recent years are likely in part due to more complete reporting. The reporting of emissions relating to service contracts concerning nuclear activities is under review.

6.3.a Brussels

The increase in Brussels' emissions from 2018 to 2021 is due to more complete reporting. In 2024, the increase is mainly attributable to maintenance contract. The European directive on public procurement sets threshold values by type of contract, above which a public procurement procedure must be launched**.** These thresholds are revised annually. As of January 1st, 2024, the threshold is set at 143 000 EUR. The contracts listed for Brussels therefore concern only those exceeding this threshold and related exclusively to services provided by the OIB.

6.3.b Luxembourg

In 2024, the number of full time equivalents (FTEs) for security and cleaning contracts decreased by 7% and 15% respectively compared to 2023. A total of 10% decrease in emissions from service contracts was observed even though the total amount spent increased by 997k EUR.

6.3.c JRC

In **JRC Geel**, the increase in the contract weight in kEUR in 2024 due to the price indexation for most of the large contracts (e.g. waste collection, security, catering) had a direct impact on the increase of the estimated CO_2e emissions.

At the **Ispra** site, emissions from service contracts are arbitrarily calculated based on the number of Full-Time Equivalent (FTE) staff employed under the on-site cleaning and security services contracts. In 2024 emissions accounted for 135 tonnes of CO_2e, as in 2023. It should be noted that the environmental impact of contractor staff is taken into account by general on-site emissions. The necessity and manner of reporting for other contracts is under review.

In **JRC Karlsruhe**, emissions from service contracts follow the same approach as in 2022 considering only the FTEs of cleaning and security staff, and are unchanged. Other service contracts are not considered as the used conversion factors are solely based on the contract value. As the site's operations are entirely in the nuclear area, and service contracts in this area are typically significantly more expensive than non-nuclear ones, using these factors would lead to unrepresentative values. Moreover, almost all possible virtual CO_2 emissions which might be associated to contractors are included in the normal CO_2 calcluations of the site.

The scope of the service contracts has been expanded since 2023. This can account for the approximately 60% increase in emissions in this area for **JRC Seville**.

The overall emissions for service contracts at **JRC Petten** have increased by 6% compared to 2023. In 2024 the service contract emissions for hard contracts (printing, advertising, etc.) decreased by 17% whereas the emissions for services such as banking, and insurance have increased by 206%.

6.3.d DG SANTE at Grange

No significant changes were recorded in 2024 as there is continuity in the external service contracts which haven't changed.

6.3.e DG COMM

No significant changes were recorded in 2023 as there is continuity in the external service contracts which haven't changed.

7 Supporting a green and circular economy

Greening The Commission: *The Commission contributes to the circular economy by implementing green public procurement (GPP) principles in its goods, services and work contracts and its everyday operations.*

7.1 Greening contracts

Overall: The Commission recorded the number of contracts including some additional specific environmental criteria (**Figure 7.1**) and in 2025, after using the European Court of Auditors' recommended grading scale decided to simplify the collection of data, also in line with the Greening Progress Review discussions, and monitor only the following categories:

- **Procedures with some specific greening/environmental criteria**: Tender documents with any environmental considerations or having clauses with an environmental impact on purchasing approach including **Green by nature** (where the primary purpose is "green", for example construction of a green roof, or consultancy services to improve environmental performance).

- **Procedures applying EU GPP criteria:** Tender documents applying the DG ENV GPP criteria

Under this approach, data in **Table 7.1** indicates that 11% of the total procedures applied some sort of environmental criteria in 2024.

Staff can also access the GPP helpdesk.

Table 7.2 provides an overview of the presence of 'green' products in the office supply catalogue, which has accounted for over half the expenditure since 2020, with the overall Commission trend shown in **Figure 7.2**.

Site level data is provided in **Annex 6**.

In 2026 the Commission will further develop its tool for monitoring procurement procedures to facilitate the reporting of Green Public Procurement elements.

Figure 7.1 Procedures with some green criteria (number)

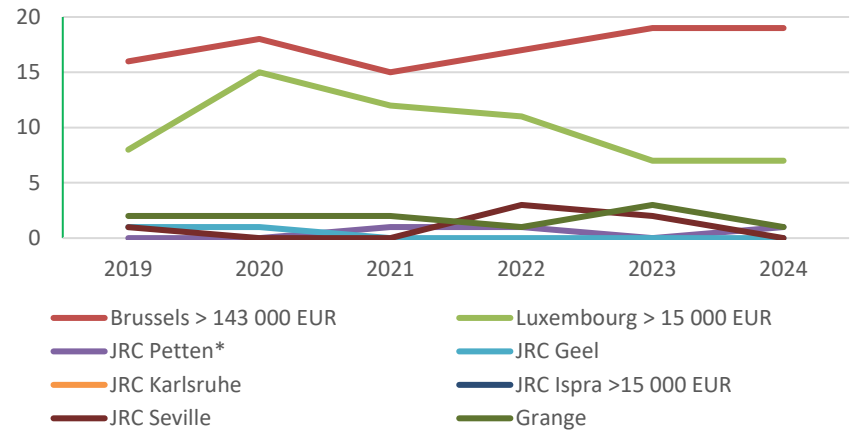


Figure 7.2 Evolution of 'green' products in office supply catalogue

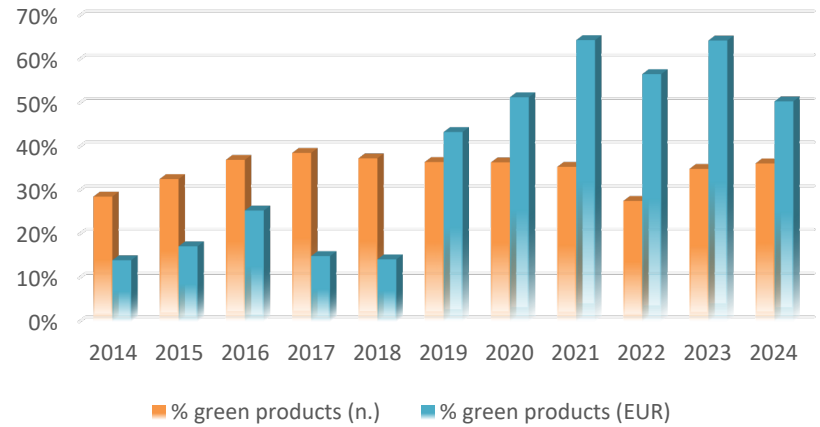
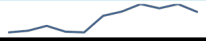


Table 7.1 'Greenness' of procurement procedures related to operations

Category	Trend 2019-24	2019	2020	2021	2022	2023	2024
Procedures with some specific greening/environmental criteria		38	45	43	55	55	48
Procedure applying EU GPP criteria		119	141	132	140	123	163
Total number of procedures completed related to operations		524	490	503	511	492	527
% number with some green criteria/total		7%	9%	9%	11%	11%	9%

Table 7.2 Total green products in the office supply catalogue

Category	Trend 2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Office supply catalogue												
Green products (no)		445	590	683	676	669	411	416	338	288	519	369
Green products (EUR)		66 729	79 429	82 402	46 415	44 522	960 374	319 217	363 416	373 504	452 099	325 240
Total products (no)		1 553	1 806	1 843	1 749	1 788	1 124	1 140	953	1 041	1 483	1 018
Total products (EUR)		473 508	459 696	323 490	308 450	311 469	2 211 184	621 127	563 705	658 906	702 269	644 597
% green products (n.)		**29%**	**33%**	**37%**	**39%**	**37%**	**37%**	**36%**	**35%**	**28%**	**35%**	**36%**
% green products (EUR)		**14%**	**17%**	**25%**	**15%**	**14%**	**43%**	**51%**	**64%**	**57%**	**64%**	**50%**

7.1a Brussels

As we are moving to more efficient and sustainable practices at the workplace, circular economy has evolved including the role of office supplies or reusing outdated furniture.
OIB took measures in 2024 to reduce the consumption of office supplies and offer almost only eco-labelled items in a new catalogue. Therefore, in 2024, out of 59 offered items, 46 are eco-labelled. In 2019, less than 50% of the items in the catalogue had such a designation. Since 2021, OIB managed to donate over 10 000 binders to schools and NGOs to give them a second life.

Circularity applies to outdated furniture in the Commission also. Upcycling initiatives, such as creating waste sorting stations or water fountains furniture from old office desktops have been developed.

OIB also supports some communities affected by natural disasters. For example, schools in Belgium (2022) and Spain (2024) received some of our unused furniture after these two countries had been heavily impacted by floods.

7.1b Luxembourg

In 2024, 5 out of 11 new contracts (over 15 000 EUR) encountered challenges in incorporating EMAS related clauses. Those include vehicle donation contracts, child insurance and a grey electricity contract, which will be complemented by a Guarantees of Origin (GoO) contract and another for Power Purchase Agreements (PPA), so that the final result will be a contract for electricity that is Green by nature in 2025.

There is a systematic consultation of the GPP helpdesk and inclusion of GPP criteria wherever possible however it was not feasible to report for tenders from 1 000 EUR to 15 000 EUR as they lack of the usual formal workflow .

7.1c JRC

Although JRC's core business (e.g. contracts for research studies, freelance services) is different than the GPP priority products – making it challenging to reduce the percentage of non-green contracts – the JRC is a pioneer in putting in place a system to flag procedures that have an environmental dimension through the Public Procurement Management Tool (PPMT). In addition, and coherent with the Green Deal, green aspects are proposed in some contracts even when no specific GPP guidance is published.

Ispra site started to green its contracts and check the application of EU GPP criteria in 2014. To extend the field of application, in 2019, additional requirements applying circular economy principles (circular procurement) were included to contracts that could potentially be "greened" further. Contracts falling in this category are called "special mention" contracts.

In 2024, GPP criteria were implemented wherever they could be applied, i.e. to 100% of the 15 contracts (>15 000 EUR). In addition, 14 other contracts were classified as "special mention" where circular economy principles were applied. These accounted for 70% of the so-called potential "special mention" contracts, i.e. those contracts where it was thought that they could be further greened. The objective in future years is to further broaden the field of application of special mention contracts, i.e. to increase the % of contracts that are actually greened further from the potential special mention contracts. In 2024, data on contracts from 1 000 EUR to 15 000 EUR were also provided, indicating which of these contracts could potentially benefit from greening practices.

To raise staff awareness, the Ispra site GPP Correspondent delivered training addressing GPP and related implementation aspects. These addressed the internal procurement networks: reaching 22 members of staff in 2024. The above-mentioned framework is complemented by the use of the Interinstitutional framework contract of the European Parliament: 'GPP helpdesk for Buying Green'.

To promote sustainable practices in catering services at **JRC Seville,** special attention has been given to greening the contracts regardless of their price, such as catering services associated to scientific (and other) events. The success of this practice stems from swift communication channels between the environmental officer and the operational units. Besides, a new framework contract for events set environmental clauses by default.

7.1d Grange

In 2023 all tenders for the Grange site incorporated GPP. The tender for the provision of facilities management services included a clause where the legal compliance aspects of EMAS will be managed by the contractor entirely, representing a significant innovation for the site.

7.1e DG COMM

Supported by training and procurement templates organised by central services, as well as by the inter-institutional GPP Helpdesk, Representations aim to apply GPP to any suitable contract where the market will support it. Examples from the seven Houses of Europe in 2024 include communication and catering services, event organisation, transportation equipment and services, consultancies, installation of LED lighting, electricity supply and office space transformation.

7.2 Evolution of IT inventory and recycling

The evolution of main categories of new IT equipment at Commission level are shown in **Table 7.3**. The categories show a reduction in all categories other than those that permit mobile working (laptops, docking stations, flat screens and routers).

The reduction in notably larger IT equipment numbers has helped to reduce the embodied emissions part of the Commission's carbon footprint that is associated with IT.

DG COMM: Where possible, Representations donate decommissioned, yet still functioning equipment to local charities or schools, occasionally contributing to international initiatives (laptops for Ukraine, furniture for schools in Gambia); only unwanted or unusable equipment is sent for recycling and reported as hazardous waste. EPLOs return obsolete equipment to their HQ for handling according to the Parliament's recycling arrangements.

Table 7.3 Evolution of the new IT inventory from 2018 to 2024 at Commission sites*

Category of equipment	Trend	2018	2019	2020	2021	2022	2023	2024	% change 2019-24
Computers and screens									
Desktop PCs		859	1 400	1 364	728	834	522	60	- 96
Laptops		458	1 758	7 601	7 052	10 784	9 712	17 344	887
Docking stations		191	18 295	4 981	7 729	5 425	5 581	6 005	- 67
Flatscreens		1 336	8 765	5 325	6 351	6 103	9 614	1 633	- 81
Printers and scanners									
Individual printers		75	205	65	27	22	23		- 100
Network printers and copiers		93	616	110	157	115	77	4	- 99
Scanners		6	17	19	42	34	4	3	- 82
Fax machines									
Telephones and faxes									
Simple (portable) phones		44	45	49	16	22	15		- 100
Smartphones		87	1 205	1 153	785	1 357	1 455	1 842	53
Fixed line telephones		765	762	770	795	1 485	925	1	- 100
Servers and switches									
Informatics server		263	1 209	621	458	567	370	533	- 56
Firewall router switch		1 382	1 783	2 141	2 077	2 087	2 726	493	- 72
Video equipment									
Projectors		41	46	41	30	30	32	6	- 87
Videoconference installations		12	116	134	43	43	22	64	- 45
Televisions		77	164	126	80	69	80	24	- 85

*data from DG DIGIT for Brussels, Luxembourg, Grange. Remaining sites from JRC and DG COMM

7.2a Recycling of IT inventory

Three framework agreements with OXFAM, Close the Gap and South Cluster have been in force since December 2023 for a maximum period of 6 years. They are inter-institutional agreements with all other major EU institutions – notably the Parliament, the Council, the Court of Justice, the Court of Auditors. Until 2021 DG DIGIT managed other contracts for the collection and recycling of IT equipment from Brussels and Luxembourg.

Temporary arrangements were introduced in 2022 and until December 2023. Historically, as indicated in **Table 7.4**, a high percentage of the equipment was sold for second hand use. The lower amount of equipment collected in 2021 compared with other years reflects a transition period during part of which no contact was in place.

Table 7.4 - Number of IT and telephony items collected and recycled in Brussels and Luxembourg

Parameter	Trend 2014-24	Year of collection										
		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Collected items		27 513	30 918	23 969	18 133	15 988	30 001	31 483	8 985	24 089	25 044	25 229
Processed items [1]		27 375	30 918	23 554	18 088	15 988	28 893	31 483	8 985	24 089	25 044	22 942
Items for second hand use		24 759	27 952	21 736	14 287	10 549	14 357	12 935	2 970	16 484	17 337	15 902
Second hand use (%)		90	90	92	79	66	49	41	33	68	69	69
Recycled or dismantled (%)		10	10	8	21	34	51	59	67	32	31	31
Weight of collected items (tonnes)		76	72	45	68	56	216	151	45	90	154	101

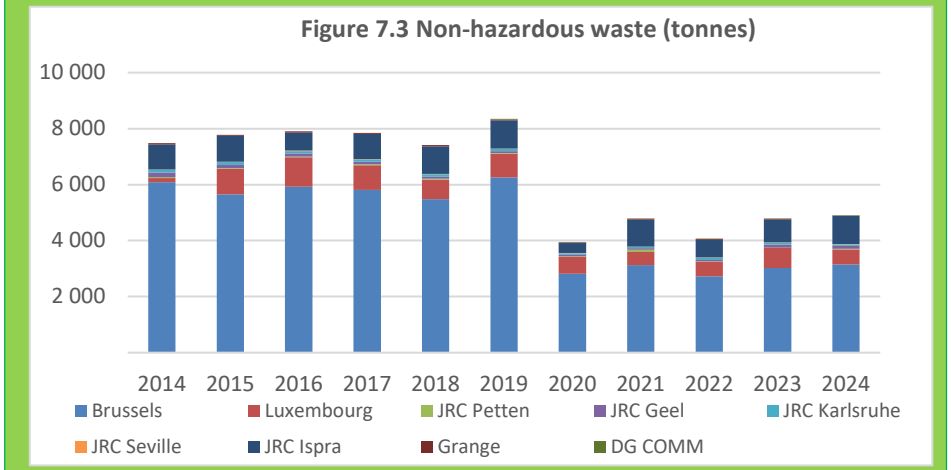
Note 1: processing could take place in following years (source DG DIGIT)

7.3 Improving waste management and sorting

Overall: One of the Commission's main objectives is to generate less waste and improve recycling.

Non-hazardous waste generation increased slightly in 2023 mainly due to a higher office presence after the Covid pandemic, and remained at a similar level in 2024 as shown in **Figure 7.3.** Since the Covid pandemic waste generation has fluctuated year to year but is at a far lower level than in pre-Covid years owing to increased teleworking**.** The 2019-30 waste reduction target has already been met **(Table 7.5)**.

The evolution in hazardous waste generation and waste sorting is presented overleaf (**Figures 7.4, 7.5** and **Tables 7.6, 7.7**). While hazardous waste generation shows a downward trend, per capita residual waste generation exhibits a small rebound but the overall longer term trends are encouraging.



7.3a Brussels

The framework contract for out works signed in 2019 applies the principles of circularity, paying special attention to:

- reusing and repairing construction products;
- improving the construction waste sorting and recycling (the 2024 result was that 81,57% of generated waste was diverted from incineration or landfills);
- using low environmental impact materials, such as products containing recycled materials (i.e. wall tiles, suspended ceiling plates, carpet tiles) and products with environmental certifications (i.e. cradle-to-cradle certified wall partitions, water based eco-labelled painting, FSC certified wood).

As a best-practice, OIB manages a stock of dismantled and recovered construction materials (mainly in DAV1, NOHE and BERL buildings). In 2024, more than 100 tonnes of construction elements have been dismantled and stored for future re-use at EC premises in Brussels. In the same period, more than 15 tonnes of construction materials have been reused in OIB fitting-out works (including partition walls, carpet tiles, glazing and bike racks), thus contributing to both avoiding waste and reducing the need for new materials.

In 2023, following the obligation to collect organic waste in the Brussels Capital Region, the Commission started a pilot project for the collection of organics in the kitchenettes of buildings L-41, CHAR,B-28. The pilot was extened in January 2024 to CSM1, L-51, L107, MO15, MERO buildings. The increase in waste volume in 2023 and 2024 is due to the return to the office following the Covid pandemic, the opening of new canteens and construction waste due to works in buildings.

In 2024, a project sought to equip each cafeteria with organic waste bins. After an in-depth analysis, a more coherent and systematic approach will be implemented from September 2025 with the deployment of new sorting stations.

Case study 7.2: JRC Ispra circular economy

JRC Ispra approaches the circular economy from a range of perspectives.
• Furniture in good condition from buildings demolition or refurbishment are collected and stored in warehouses where it is ready to replace old or damaged furniture. In 2024, 85% of desks, 75% of office cabinets and 30% of drawers removed were reused internally. On top of this, 15 laptop were donated to a nearby municipality.
• A Stationery Corner was introduced - a place for collecting unused stationery items to give them a second life.
• Finally, a group of colleagues inaugurated a collaborative space, called Repair Café, where, once a month, people gather to try to fix broken items, thus reducing waste and applying circular economy principles.

Case study 7.1: Upcycling of old furniture in Brussels: Pictures showing the process of the upcycling of old furniture




7.3b Luxembourg

In 2024 waste production decreased by 26% compared to 2023, while residual waste accounted for 24% of total waste; reaching 2030 targets.
233 empty fire extinguishers were decommissioned by a specialist contractor and added as hazardous waste for 2024.

OIL is making continuous efforts to improve waste management by undertaking 'waste visits' to all buildings and through ad hoc interventions when waste issues are detected through information from various stakeholders (staff, cleaning personnel, etc.). A waste task force will be established and begin operations in order to monitor and improve waste management in 2025.

7.3c JRC

JRC Geel: Although the total waste volume increased slightly (by 2.5%) mainly due to higher amounts of segregated recyclable materials such as metal, glass, wood, and plastics (PMD, foil, etc.)—a positive development is the decrease in residual waste, indicating improved waste sorting practices. The increase in waste is partly due to the disposal of cleared "potentially radioactive material"—such as electrical equipment, metal, wood, and similar items—that were previously stored in supervised areas and, following radiological assessment and clearance, are now processed through conventional waste streams.

JRC-Geel is highly committed to effective waste management, with a particular focus on waste segregation in line with stringent Flemish regulations. Regular awareness-raising sessions are held during monthly 'What's up?' meetings to refresh and strengthen knowledge on proper sorting practices. A mandatory hands-on waste segregation training was also organized at the end of 2024 to support this objective.

The non-hazardous waste produced at the **Ispra site** in 2024 increased by 23% compared to 2023, mainly due to the production of scrap metal (+58%) and demolition waste (+219%) coming from buildings refurbishment. Demolition waste mainly comes from the decommissioning activities of Directorate J which has recently increased significantly. It should be noted that waste deriving from demolitions fluctuates significantly in time.
Hazardous waste production decreased 7% in 2024 compared to 2023 mainly due to a reduction of asphalt mixtures (-83%) and used oil (-69%), and a minor reduction of medical waste (-22%) and paint (-12%).

In **JRC Karlsruhe**, for the category "unsorted waste" (or residual waste), the German ordinance on industrial waste (Gewerbeabfallverordnung) defines different criteria for waste separation to those applied under EMAS. This consequently leads to different values so the values presented here are for informational purposes only and are not intended for comparison with other sites.

For **JRC Petten**, the waste data is provisional as some invoices are pending for collected waste. Already since 2023 the waste company has not provided the invoices. In 2024 this problem continues with invoices missing. Therefore, hazardous and non-hazardous waste are based on "Weegbonnen", which are estimations and not based on invoices.
The site has made considerable efforts to encourage more timely and complete delivery of waste collection documentation.

In **JRC Seville**, the global per capita waste production has decreased by 64% between 2019 and 2024. However, it is important to note that this indicator is significantly influenced by the large-scale removal of items such as archival documents, furniture or IT equipment among others, which may vary from year to year.

7.3d Grange

Waste generation is an environmental aspect with significant impact. The decrease in 2024 compared to 2023 was nearly 4%. The main factor was the drop in plastic/cans waste (0,98 tonnes compared to 1,29 tonnes in 2023), as a consequence of an Irish authorities initiative plastic bottle/cans return scheme. Indeed, the Grange Social Club collects all plastic bottles and cans on site and the money collected from the scheme is donated to local charities.

7.3e DG COMM

Compared to 2023, the total non-hazardous waste decreased or was unchanged in absolute values across Houses (except in Copenhagen), but remained stable or reduced per person in most (Valletta, Nicosia, Budapest, Sofia). Overall, non-hazardous waste saw a decline in tonnes since 2019 across the Houses of Europe, with peaks mirroring office presence levels. Data from Vienna shows a steady decline in the proportion of residual waste since 2019. Past efforts such as replacing capsule coffee machines and enhancing kitchen sorting infrastructure continue to support waste management.

Hazardous waste currently monitored and reported by the Houses of Europe consists of batteries, waste from electrical and electronic equipment, printing devices consumables (toner paint and cartridges) and cleaning products. The usage of these items has decreased due to reduced office presence and progress in digitalisation. Other categories of hazardous waste could be added in the future as system improvement. Spikes in a given year could result from the disposal of waste accumulated over a Covid period, or from office decluttering.

Case study 7.3: Sustainable procurement for events in Vienna

The Representation in **Vienna** strives to reduce waste by prohibiting its contractors to offer single-use utensils at events and avoiding printing out of event programmes, flyers or other promotional material. In the run-up to the European Elections 2024, the European Parliament Liaison Office in Vienna ordered seed paper postcards and seed bookmarks with visuals of the European Election 2024 campaign for distribution during promotional events. When the Representation participated in the Vienna Pride 2024, biodegradable balloons made from natural latex were used at the parade to contribute to this large-scale event in a sustainable manner.

On the right: use of natural latex (biodegradable) balloons at Vienna Pride 2024, Credit: Grega Rogelj

Case study 7.4: Space-efficient waste separation in Valletta

An on-the-wall initiative in the office areas has made waste separation even easier by raising the bins off the ground, making them more visible at first glance to anyone passing, and more convenient to use. New bins were also purchased for the public areas and marked with what should be left where - to help visitors.

On the right: Mounted waste recycling bins at the office in Valletta

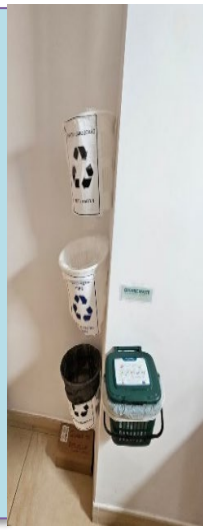


Figure 7.4 Evolution of hazardous waste generation (tonnes)

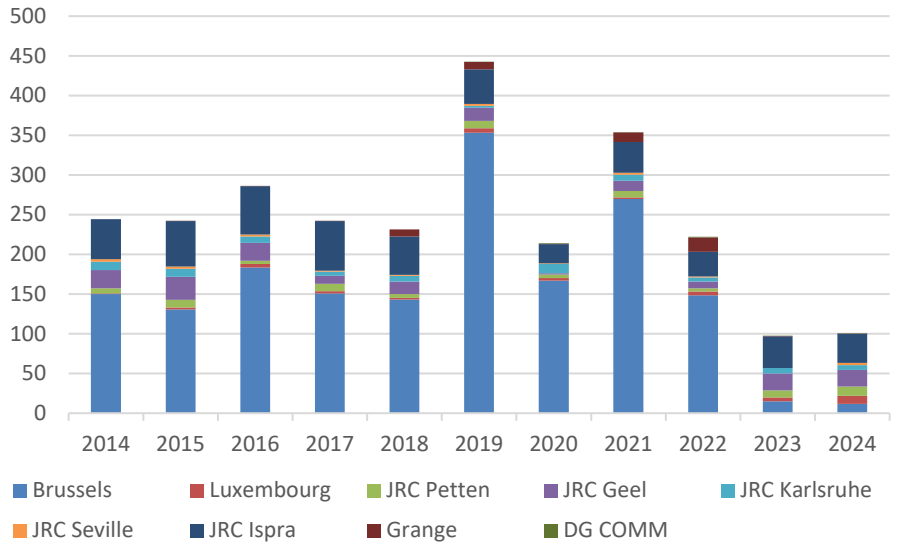
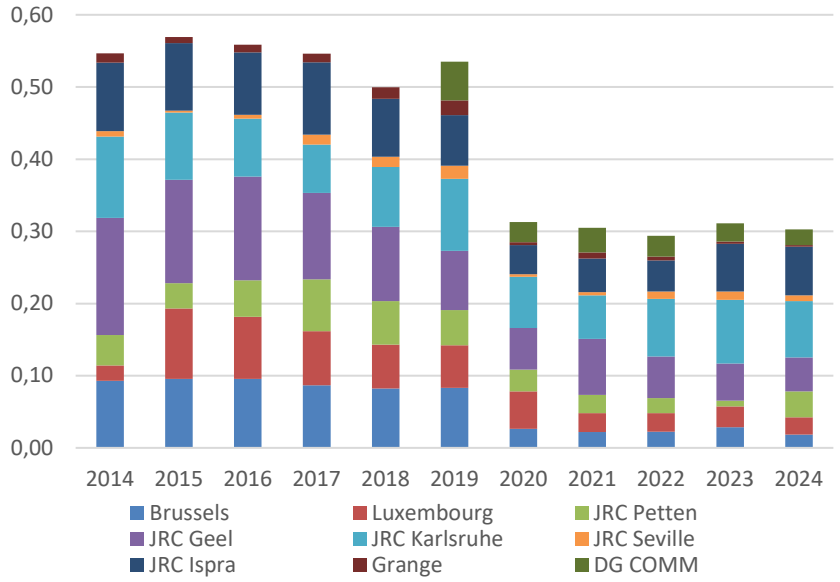


Figure 7.5 Evolution of residual waste (tonnes/person)



7.4 Emissions from waste management

The CO_2e emissions associated with waste disposal are calculated on the basis of the following main categories of waste management processes and waste types:

- Incinerated waste - 1. residual waste, 2.food
- Methanisation - food
- Composting - food
- Recycled/reused - 1. paper, 2. cardboard Recycled/reused - wood, 3. glass, 4. plastic PMC, 5. others
- Hazardous waste - all types
- Landfill - residual waste

Conversion factors are proposed by specialist carbon footprint consultants to convert the mass (by waste type described above) into emissions. The factors are derived from the ADEME Bilan Carbone database.

The evolution of total waste emissions is shown in **Figure 7.6** and shows an improvement in waste management despite the increase of total quantities.

Figure 7.6 Emissions from waste management (tonnes CO_2e)

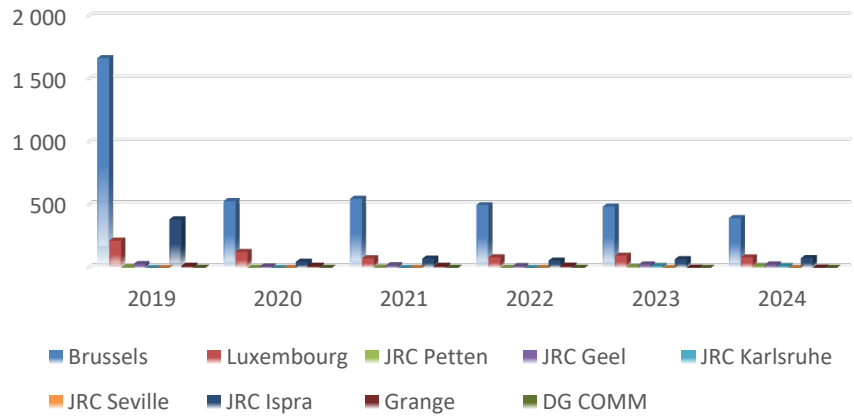


Table 7.5 - Total non-hazardous waste (tonnes, tonnes/person)

Site	Trend 2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Target *2030
Brussels		6 083	5 656	5 929	5 816	5 476	6 262	2 815	3 123	2 729	3 024	3 145	*4 462*
Brussels (t/p)		0,222	0,209	0,220	0,206	0,192	0,216	0,094	0,102	0,088	0,093	0,095	*0,137*
Luxembourg		154	907	1.043	876	702	844	619	466	526	725	537	*649*
Luxembourg (t/p)		0,038	0,194	0,224	0,183	0,140	0,164	0,118	0,084	0,092	0,129	0,095	*0,115*
JRC Petten		30	28	32	36	28	24	16	84	9	5	27	4
JRC Petten (t/p)		0,105	0,100	0,117	0,136	0,115	0,097	0,066	0,349	0,038	0,020	0,113	0,020
JRC Geel		166	115	108	95	76	65	40	59,19	47,54	99,96	102,44	49
JRC Geel (t/p)		0,479	0,351	0,364	0,358	0,292	0,249	0,151	0,225	0,180	0,379	0,388	0,190
JRC Karlsruhe		107	102	82	80	85	78	60	57	81	76	62	*68*
JRC Karlsruhe (t/p)		0,333	0,317	0,253	0,248	0,269	0,246	0,194	0,187	0,264	0,251	0,208	*0,220*
JRC Seville		6	5	18	11	11	16	5	4	11	10	7	*10*
JRC Seville (t/p)		0,022	0,019	0,060	0,035	0,031	0,044	0,014	0,010	0,027	0,024	0,016	*0,020*
JRC Ispra		888	925	641	895	989	1.001	362	958	624	814	1.005	951
JRC Ispra (t/p)		0,380	0,403	0,284	0,393	0,433	0,429	0,150	0,387	0,250	0,330	0,403	0,390
Grange		45	41	50	38	45	40	15	36	35	32	15	*25*
Grange (t/p)		0,251	0,225	0,262	0,204	0,249	0,227	0,088	0,203	0,193	0,187	0,095	*0,200*
DG COMM		0	0	0	0	0	15	9	8	8	9	7	
DG COMM (t/p)							0,121	0,078	0,329	0,282	0,226	0,113	
Commission		**7 479**	**7 779**	**7 902**	**7 846**	**7 412**	**8 344**	**3 942**	**4 795**	**4 070**	**4 794**	**4 908**	***6 218***
Commission (t/p)		**0,213**	**0,219**	**0,224**	**0,214**	**0,200**	**0,220**	**0,101**	**0,120**	**0,100**	**0,114**	**0,115**	***0,150***

*Note: * numbers in green in dicate 2030 target value already reached in 2024*

Table 7.6 - Total hazardous waste (tonnes, tonnes/person)

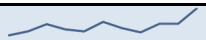
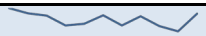
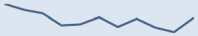
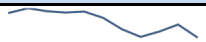
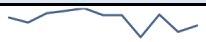
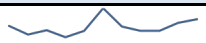
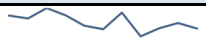
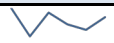
Site	Trend 2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Brussels		150	131	183	151	143	353	167	270	148	15	12
Brussels (t/p)		0,005	0,005	0,007	0,005	0,005	0,012	0,006	0,009	0,005	0,000	0,000
Luxembourg		0,92	2,27	4,56	2,93	2,23	5,40	3,31	1,96	4,71	4,70	9,91
Luxembourg (t/p)		0,0002	0,0005	0,0010	0,0006	0,0004	0,0011	0,0006	0,0004	0,0008	0,0008	0,0018
JRC Petten		6,46	9,47	4,00	9,41	4,77	9,29	4,30	8,05	4,32	8,97	11,75
JRC Petten (t/p)		0,023	0,034	0,014	0,036	0,019	0,037	0,017	0,034	0,019	0,039	0,050
JRC Geel		23	29	22	10,09	15,81	17	1,76	12,99	8,51	21,24	21,09
JRC Geel (t/p)		0,066	0,088	0,076	0,038	0,061	0,063	0,007	0,049	0,032	0,080	0,080
JRC Karlsruhe		10,51	10,26	8,23	5,07	6,96	2,59	11,37	7,56	5,17	6,87	6,12
JRC Karlsruhe (t/p)		0,033	0,032	0,025	0,016	0,022	0,008	0,037	0,025	0,017	0,023	0,020
JRC Seville		3,37	2,68	2,41	1,13	1,31	2,43	1,10	2,29	1,04	0,34	2,65
JRC Seville (t/p)		0,012	0,009	0,008	0,004	0,004	0,007	0,003	0,006	0,003	0,001	0,006
JRC Ispra		50	57	61	63	48	43	24	39	31	40	37
JRC Ispra (t/p)		0,021	0,025	0,027	0,027	0,021	0,019	0,010	0,016	0,012	0,016	0,015
Grange		0,00	0,04	0,15	0,16	9,02	9,19	0,37	12,14	18,04	0,30	0,17
Grange (t/p)		0,000	0,000	0,001	0,001	0,050	0,052	0,002	0,068	0,099	0,002	0,001
DG COMM							0,09	0,60	0,02	0,89	0,12	0,04
DG COMM (t/p)							0,001	0,005	0,110	0,144	0,002	0,001
Commission		**244**	**242**	**286**	**242**	**231**	**442**	**214**	**354**	**222**	**97**	**100**
Commission (t/p)		**0,007**	**0,007**	**0,008**	**0,007**	**0,006**	**0,012**	**0,005**	**0,009**	**0,005**	**0,002**	**0,002**

Table 7.7 - Residual waste as proportion of total waste at EMAS sites (%, tonnes/person)

Site	Trend 2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Target *2030
Brussels		41	45	42	41	42	36	26	20	24	31	19	
Brussels (t/p)		0,093	0,096	0,096	0,087	0,082	0,083	0,026	0,022	0,023	0,029	0,019	*0,058*
Luxembourg		55	50	38	41	43	36	44	31	27	22	24	
Luxembourg (t/p)		0,021	0,098	0,086	0,075	0,060	0,059	0,052	0,026	0,026	0,029	0,024	*0,041*
JRC Petten		33	26	39	42	45	36	36	6,54	37	14	22	
JRC Petten (t/p)		0,042	0,035	0,051	0,072	0,061	0,049	0,030	0,025	0,021	0,008	0,036	0,010
JRC Geel		30	33	33	30	29	26	37	28	27	11	10	
JRC Geel (t/p)		0,162	0,143	0,143	0,120	0,103	0,082	0,058	0,078	0,057	0,051	0,047	*0,060*
JRC Karlsruhe		31	27	29	25	28	39	31	28	28	32	34	
JRC Karlsruhe (t/p)		0,113	0,093	0,080	0,067	0,083	0,100	0,071	0,060	0,080	0,088	0,078	*0,090*
JRC Seville		22	9,12	7,83	36	41	36	23	29	34	46	38	
JRC Seville (t/p)		0,008	0,003	0,005	0,014	0,014	0,018	0,004	0,005	0,010	0,012	0,008	0,010
JRC Ispra		24	22	28	24	17,69	15,65	25	12	16	19	16	
JRC Ispra (t/p)		0,095	0,093	0,087	0,100	0,080	0,070	0,040	0,046	0,043	0,066	0,067	0,060
Grange		5,14	3,71	4,02	5,82	5,29	7,42	4,19	3,17	1,95	1,56	2,12	
Grange (t/p)		0,013	0,008	0,011	0,012	0,016	0,021	0,004	0,009	0,006	0,003	0,002	*0,020*
DG COMM							48,73	33,55	46,26	39,96	37,10	43,83	
DG COMM (t/p)							0,054	0,028	0,034	0,029	0,025	0,022	
Commission (%)		**38%**	**42%**	**40%**	**38%**	**38%**	**34%**	**29%**	**19%**	**23%**	**27%**	**19%**	***- 34***
Commission (t/p)		**0,084**	**0,095**	**0,093**	**0,085**	**0,078**	**0,078**	**0,031**	**0,024**	**0,025**	**0,031**	**0,023**	***0,060***

8 Biodiversity and food supply

8.1 Preserving and restoring nature and biodiversity

Greening The Commission

•*The Commission considers preserving biodiversity as a key element of its greening activities and has already launched several ecosystem and biodiversity programmes, in particular in its non-urban sites*

•*The Commission will continue to develop and implement these initiatives to preserve and restore ecosystems and their biodiversity, including protected habitat and species, and in particular in Natura 2000 protected areas close to its rural and urban sites.*

Overall: **Figure 8.1** shows sealed and natural surface areas on a per capita basis at the sites, indicating that JRC Geel is the most sparsely populated site, followed by JRCs Karlsruhe, Ispra and Petten. Each of these sites offers several hundred square meters of land per person, although not necessarily all accessible. Brussels, Luxembourg and Seville are all located within the city and therefore have less space. Data on total use of land, total sealed area, nature oriented areas offsite/onsite are included in **Annex 5.**

8.1a Brussels

OIB management implemented a new approach to biodiversity for the European Commission's buildings and surroundings in Brussels in October 2022. In 2022 the OIB also launched projects in the BERL and BRE2. In 2023 pilot projects targeted the inner courtyards of B-28 and L-41 to support measures enhancing the quality of office buildings. Green roofs were installed in CHAR and ORBN in 2024 (260m^2).

In 2024, a project was launched on the BERL esplanade which will be effective in 2025. Its aim is to illuminate the outdoor space through a colourful plant palette inspired by dry environments across Europe. This seasonal tapestry, located at the base of the Berlaymont, will be designed to attract insects, birds, and passersby, offering shelter and habitat for wildlife while enhancing local biodiversity in the heart of the European capital.

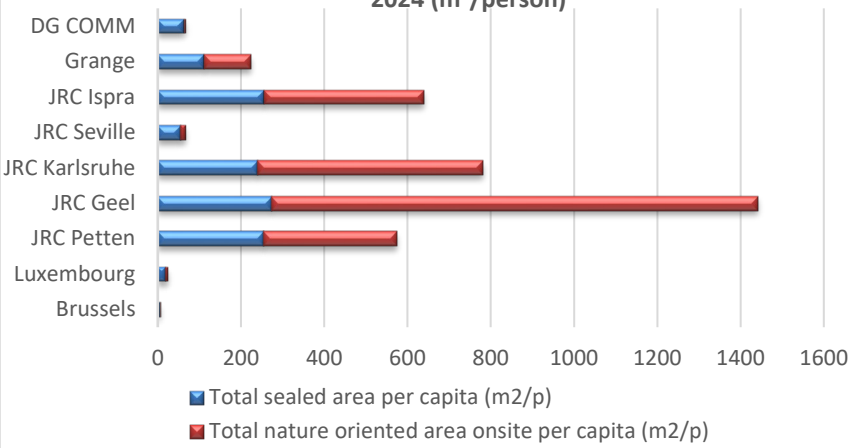
Two more projects (CSM1/MERO and CLOV) were identified in 2024 and studied in 2025.

8.1b Luxembourg

In 2024, bird-houses and differentiated mowing were introduced to the green spaces in Commission buildings.

Several environmental education projects were carried out at the CPEs such as “From seed to plate”, and a vegetable garden was set up at the CPE and the inauguration of the greenhouse at the CPE Mamer.

Figure 8.1 Sealed and natural space at the EMAS sites in 2024 (m^2/person)



Different outdoor activities have been organised for the children like “Discovering the nature and the biodiversity”, an exhibition on the insects and different trainings on education for sustainable development.

A 1761 sq.m. green roof was installed on the new Mercier Post building, acting as a water management measure and at the same time contributing positively to the microclimate of the city of Luxembourg.

OIL restauration organised an organic week on luxembourgish organic products and a bees’ animation.

The OIL EMAS team has followed events on biodiversity in Luxembourg, and contacted the organiser of the LUGA (Luxembourg Urban Garden) exhibition 2025, and analysed the possibility of organising a Fresk on Biodiversity. It has also continued its contacts who help define indicators allowing for monitoring biodiversity on the Commission’ sites and set up a biodiversity garden in front of the Euroforum cantine.

The future Jean Monnet 2 (JMO2) building will benefit from spaces promoting biodiversity as part of the BREEAM Certification. In 2024 OIL continued to analyse the possibility how the biodiversity project for the JMO2 coiuld be improved.

8.1c JRC

Due to their geographical remoteness (mostly "non-urban" sites), there is plenty of room for nature at the JRC, which contributes a great deal to preserving biodiversity. The actions taken are coupled with awareness-raising.

In 2024, JRC-Geel contracted NatuurPunt to conduct a multi-species biodiversity study. Wild bees, mushrooms, and amphibians were selected for assessment to establish a baseline of the biodiversity status. The findings include: **102 species of wild bees identified**, of which 4 are very rare (*Andrena batava;* Blackthorn Mining Bee – *Andrena varians*; *Lasioglossum monstrificum*; Trimmer's Mining Bee – *Andrena trimmerana*), 10 are rare, 42 are relatively common, and 46 are common.

192 mushroom species recorded, including 1 very rare species (*Chrysomphalina grossula*), 2 rare species (*Entoloma turbidum; Lyophyllum confusum*), 38 relatively common species, and 151 common species.
The amphibian study is ongoing and the findings will be reported in 2025.

Each year, **JRC-Geel** supports the safe migration of toads during mating season by helping them cross roads and avoid traffic hazards on their way to the nearby ponds.

The **Ispra site** features 34 hectares and 8 habitats of conservation concern covered by the Habitat Directive, including 2 classified as priority habitats (3140, 6230*, 6510b, 6510c, 91E0*, 9160, 9190, 9260) and 1 additional habitat included in the "Red list" of the habitat extinction list. The latest habitat monitoring plan was carried out in 2022 and the pertinent documents were completed in 2023.

All this work made it possible to both study and put in place specific conservation measures to enhance biodiversity over time. Projects to restore and protect habitats are ongoing to improve conservation and develop the site's natural heritage, such as removing invasive flora, planting native trees and shrubs (120 in 2024), and selective maintenance to improve grass habitats conservation.

Additionally, to further assess and enhance understanding of its biodiversity, **JRC-Geel** launched a **2024 'Bioblitz' project**. This initiative encourages staff to photograph local fauna and flora using the ObsIdentify app and upload their observations to the online platform **Waarnemingen.be**. The platform logs the location of each sighting, includes photos, and indicates the rarity status of the identified species.

With active staff participation, this tool contributes to expanding the site's biodiversity knowledge. For example, in 2024, the Bioblitz helped document additional species such as plants and butterflies, and notably recorded **22 species of flies**, including 3 rare species (*Conops vesicularis*, Dark-knobbed Lucent – *Didea intermedia*, Ragwort Blacklet – *Cheilosia bergenstammi*), 10 relatively common species, and 9 common species.

Case study 8.1: JRC Geel's biodiversity activities

Case study 8.2: JRC Ispra's biodiversity enhancing activities

JRC Ispra has a valuable naturalistic character. The site hosts many interesting wildlife species and habitats. It aspires to protect and enhance biodiversity and aims to be regarded as a hot spot of biodiversity within the regional area. The most recent on-site activities that implement the EU Biodiversity strategy 2030 are listed below.

As a symbolic gesture to preserve the site's green areas and to engage staff, a yearly JRC Tree day was established. During the 2024 event, 120 native trees and shrubs were planted.

In 2016 a standardised annual programme was established for monitoring the Rana latastei population, using a capture-mark-recapture methodology, to evaluate if any protective additional actions are needed. In 2016-2017 the population size was estimated of being about 87 breeding frogs and grew up to 176 in 2019. The monitoring had a new start in 2023 after a pause due to the Covid pandemic. Monitoring in 2024 was influenced by the anomalous weather patterns that made it difficult to identify the best period and to provide a new reliable population size estimate.

However in 2024, the occupancy increased to 33%, since an improvement of habitat and water condition in the pond behind the cogeneration plant allowed the species to colonize it again. On the other side, the detectability of the species dropped from 83% in 2023 to 75% in 2024, showing that, when present, the species is easily detected, especially when suitable habitat proportion occupied by the species decreases. Actions to improve habitat quality were established, including a containment plan to remove exotic predator fauna.

In the context of the European Butterfly Monitoring Scheme (EBMS), JRC Ispra has conducted, since 2022, a weekly butterfly monitoring program within its territory, named “butterfly transect”, as part of the efforts to monitor and conserve butterfly populations across Europe. During 2024, 22 species were identified, including for the first time a rather rare one, the Lopinga Achine, which is part of the Red List of the International Union for Conservation of Nature (IUCN).

In **JRC Karlsruhe** almost 70% of the site is unsurfaced "natural" area. A large part is natural forest, similar to the surrounding forests, which provide a natural habitat for different species. The glass walls of one of the site's bike racks was fitted with opaque film strips in a test project to prevent bird strikes (the other bike rack remains with concrete walls).

JRC Petten is one of the greenest Commission sites, with more than 80% of the site left for wildlife to roam free. Part of the site is a Natura 2000 "dry heath" habitat. The site is implementing an advanced scenario for nature preservation and restoration in order to sustain biodiversity on site.

Despite the challenges of working in an urban area, **JRC Seville** has installed interpretative signage on the trees in the building's courtyard.

8.1d Grange

Grange is continuing to grow its meadows, in order to allow plants and flowers to provide nectar for insects such as bees, butterflies and hoverflies, and managing the growth of its 5,160 new trees planted in 2023.

8.2 Promoting a fair, healthy, sustainable and good food system

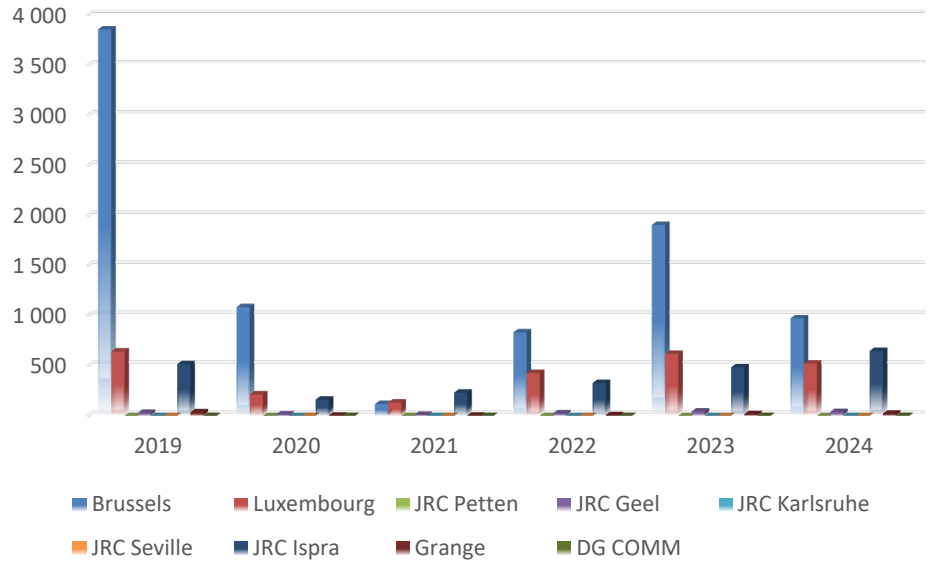
Greening The Commission: *The Commission will study and implement actions to further reduce or remove single-use items, particularly from catering, meetings and conferences. More generally, it will update its internal approach to food and catering, through embedding GPP criteria such as labels certifying sustainable food for the canteens.*

Overall: The Covid pandemic severely disrupted catering services, with many restaurants and cafeterias closing. In 2023 the rebound in catering activity since Covid continued.

This is reflected in **Table 8.1** which shows the quantities of 14 food types consumed at Commission sites' canteens since 2019. New categories (lamb, veal, fruits, vegetables, bread, pasta and rice) were introduced for reporting in 2023 to have a more complete picture. Although 2023 saw a recovery, total consumption remained less than half the 2019 value. One reason for this is the reduction of the number of canteens after the Covid crises and the new ways of working.

Data in **Table 8.1** show that lamb and beef are the most carbon intensive food group and the proportion of both on the total has decreased from 11% in 2019 to 7% in 2024. The emissions generated by these food groups is illustrated below in **Figure 8.2**. Data is not reported for sites lacking a dedicated canteen (JRCs Petten, Karlsruhe, Seville).

Figure 8.2 Annual emissions of selected food groups (tonnes CO_2e)*



Note * incomplete reporting for Brussels in 2024 for technical reasons

Table 8.1 Annual consumption of selected food groups in Commission cafeterias (tonnes)

Food item	Factor kg CO_2e/t	2019	2020	2021	2022	2023	2024
i) Beef	33 770	82	24	4,1	21	25	22
ii) Pork	9 350	104	30	8,7	29	32	21
iii) Chicken	4 470	134	37	10	35	31	32
iv) Fish	10 970	90	27	11	26	41	40
v) Milk	1 490	75	25	10	26	85	28
vi) Other dairy*	8 960	37	12	8,8	20	58	39
vii) Coffee	9 400	19	8,7	8,6	6,6	21	7,3
viii) Lamb	40 204	15	16	4,1	5,6	36	24
ix) Veal	17 092	123	70	21	19	61	52
x) Fruits	589	32	30	8,7	8,8	19	70
xi) Vegetables	846	82	71	21	26	95	195
xii) Bread	689	11	8,2	3,1	3,5	8,7	40
xiii) Pasta	2 145	31	28	5,4	14	29	80
xiv) Rice	2 754	14	12	3,7	5,7	14	39
Total		848	399	128	245	556	692

* Average of yoghurt/butter

8.2a Brussels

The current focus is to redevelop the cantine service with a new post pandemic delivery model. Improvements continue towards delivering a more sustainable service in the spirit of Brussels Capital Region's 'Good Food' label.

Given the quantities requested, the supply of organic or short circuit produce cannot be guaranteed within the framework of current supply contracts.

Restaurant management aims to minimise the production of food waste for example, vegetable leftovers are reused for soups or to produce chips for cafeterias. Friday dishes are designed at the last minute to empty the fridges. Environmental management of kitchens therefore remains an OIB priority.

For 2024, we could not export data from the invoice system (SUMMA) and the order system (Easylis) provided only partial data. Therefore, the supplied information will be revised in 2025.

8.2b Luxembourg

A new contract features a dynamic purchasing system that encourages locally produced foodstuff to be used for catering in Luxembourg. The main supplier of fresh fruits and vegetables is a Luxembourgish company and the main fresh meat supplier is also based in Luxembourg. Within the terms of the framework contracts, OIL.04 selects as many organic ingredients as possible for preparing meals.

Given the increasing demand from clients, there are ongoing reflections on the way forward with a view of increasing the plant-based offer, in addition to the vegetarian dish which is offered daily in the canteens.

Throughout 2024, OIL.04's dietician staged onsite events that for example, promoted healthier products, vitamins or demonstrated how to reduce food waste, while aiming to improve eating habits by proposing meals with low environmental impact. An organic week was also organised.

In 2024, OIL catering continued its participation in ECOBOX, a multi purpose deposit-return scheme developed in Luxembourg for transporting meals (take-away, leftovers, etc.). This initiative reduces waste volume, by reducing not only the number of packages but also the quantity of food waste.

Continuous efforts were made to replace single use items with ceramic cups and glasses. However, for some large events, the weight of such equipment and the difficulties related to its handling make it difficult to use only 'environmental friendly' catering equipment.

8.2c JRC

Sustainable catering services have been offered at the JRC for a couple of years, when appropriate (in Ispra, the canteen is managed by the OIB and there is no canteen in Seville). For the sites without a canteen/cafeteria, efforts are mostly made for organised events.

JRC Geel's catering contract includes measures for a fair, healthy and sustainable food system. For instance, the caterer has a "biogarantie" certificate for a significant proportion of the products used, that should also be seasonal. JRC Geel proceeds with the sustainable food measures (water "fountains", glass bottles for beverages, provision of vegan, organic and fair trade desserts, 25% meat portion reduction, take-away available to reduce food waste, etc).

It also continues to offer two dishes daily (one vegetarian, the other either fish or meat) instead of three from pre Covid times. The CO_2e emissions from catering at JRC Geel significantly increased in 2023 (75 menus/day) compared with 2022 (50 menus/day) or 2019 (80 menus/day). In 2024, a 10% reduction of CO_2e emissions/2023 was observed (for around 85-90 menus/day).

OIB manages the **Ispra site's** social infrastructures for staff: children's facilities, temporary lodgings for EC staff, a clubhouse, as well as two canteens, a cafeteria, a restaurant and the banqueting service for conferences and events. In 2017 the process of eliminating single use plastic and single-serve food started. Water dispensers were installed and water jugs were provided to customers free of charge. In 2018, plastic was banned from take-aways and coffee breaks, containers and cutlery were replaced with compostable, biodegradable alternatives or reusable tableware where feasible. However, during Covid times, plastic takeaway had to be reintroduced. To reduce the impact of the whole catering services, there were some changes in the service set-up. At the same time, a greater number of plant-based meals has been implemented in the canteens: in 2024 more than 40% of the daily food served at the canteens did not contain any meat.

JRC Karlsruhe operates a small cafeteria on its premises, but mainly uses the restaurant facilities of the surrounding research campus (KIT Campus Nord) whose catering practices it cannot influence directly.

JRC Petten shares the canteen with neighbouring companies. Although JRC Petten participates financially in the catering contract, it is not possible to retrieve the data for JRC Petten staff. Therefore, JRC Petten is not reporting the data for catering/food.

In **JRC Seville**, when setting up a catering service for events, service providers are systematically asked to include a declaration or statement on the sustainability of their services (see section 7.1.c).

8.2d Grange

The contractor is yet to provide the 2023 figures for food consumption. In 2022 the contractor, for IT reasons, also provided no data, so consumption was therefore estimated reproportioning the 2019 food consumption according to the staff's average monthly site presence on site in 2022 (24%).

Case study 8.3: Sustainable catering in Vienna

Vienna requires external caterers to follow high standards on sustainability. One catering contractor is EMAS-certified.

These standards mean that only seasonal and regional products are used with a majority of vegetarian and vegan options. Single-use utensils are prohibited, and caterers are requested to provide paper take-away containers for leftovers or to distribute leftovers among staff to prevent

9 Staff participation and communication

9.1 Staff participation as EU Citizens - Setting a good example

Greening The Commission

- *For the Communication to succeed, staff engagement to implement the actions is key. This also goes hand in hand with adopting sustainable ways of working and behaviour, with which many are already familiar. The Commission recognises and encourages its staff to be innovative and embrace changes in ways of working with the ambition of setting a good example in implementing new innovative green solutions.*
- *Greening the Commission and achieving corporate climate neutrality by 2030 is intended to set a good example and raise awareness of the need for ambitious climate action at all levels. The Commission's green actions are also fully part of the Human Resources strategy as a key priority to increase further the attractiveness of the Commission as an employer.*

9.1a Leadership and commitment

During 2024 the Commission's senior management took once again an active role demonstrating leadership and commitment to the environmental management system and environmental issues in general. Examples of Commission support for Europe-wide and Commission initiatives are presented below.

EU Green Week 2024 (29-30/05): Towards a water resilient Europe

The 2024 EU Green Week was part of a wider communication campaign dedicated to the topic of water resilience. The objective is to stimulate an EU-wide conversation around the EU's water, present and future, with an emphasis on fostering awareness and promoting positive, collaborative solutions. **Virginijus Sinkevičius, Commissioner for Environment, Oceans and Fisheries** noted ahead of the event: *"We need it, we take it for granted – but right now, Europe's water needs our attention. The EU faces challenges with water quality and quantity, and things will only get worse with climate change. It's a limited resource and we keep on increasing our demand. If we don't address these issues today, we're creating bigger problems for the future. So, Green Week will help start a broad, society-wide conversation about water, making people more aware of the challenges, and of the immense advantages there are in building up our water resilience with concrete solutions".*

***EU Mobility Week (16-22/09):* Shared Public Space**.

In 2024, the EUROPEAN**MOBILITY**WEEK's theme was "Shared Public Space" and how it brings many benefits to society. A place where people, transport modes and activities all have their own space, with more social equity, more road safety, less noise and air pollution, and a better quality of life.

Commissioner for Climate Action and responsible for Transport, Wopke Hoekstra, said: *"Europe's urban population is rising, and with it our need to move around in a safe and sustainable way. The European Mobility Week, starting today across over 2 500 cities in 42 countries, is an opportunity to engage with people and businesses, city planners and politicians to help improve the way we all benefit from the public spaces in our cities.*

Events across Europe will promote safer school streets, better and more welcoming public places, adequate parking for alternative modes of transports and much more. Let's continue to lead by example and – for all of us who can - chose those transport modes that can not only improve urban air quality, but also contribute to making our cities more enjoyable to live in". The Commission participated as usual with events during the week.

Sustainable Events Awards rewards innovative, green Commission events

Following the success of the previous four editions, the award ceremony of the 5th corporate competition on sustainable conferences and events was held, in the presence of **Commissioner Hahn for Budget and Administration and the Directors General of DG Human Resources and Security (DG HR), Stephen Quest and DG Interpretation (DG SCIC), Genoveva Ruiz Calavera,** with special awards presented to the first two Commission Representations to achieve EMAS registration: the Vienna and Valletta Representations.

In his opening speech, **Commissioner Hahn** said: *"I am quite happy and proud to witness the fifth edition of this competition! And I am convinced that the path is now set: our services will continue to organise events that are not only environmentally sustainable but also financially sustainable, that use resources efficiently and, very importantly: events that keep us close to people and make us engage better and wider. I congratulate all participants of this competition for their commitment to making our events more sustainable. I am impressed by the great creativity colleagues showed in their entries. Well done to all!"*

9.1b Communication to staff

Corporate seasonal communication campaigns

i. The EMAS spring campaign 2024: ACT NOW Challenge

For the first time, the Commission created, in collaboration with AWorld (creator of the UN ACT NOW App) and the EU Climate Pact, an **'ACT NOW - Greening the Commission Spring Challenge'**, especially targeting Commission staff to help them keep track of daily green actions, understand their environmental impact, and further reflect on future even greener steps. We invited staff to join our challenge: and we successfully achieved more than 5 000 'green actions' together from Earth Day (22/04) until Environment Day (5/06). The EMAS spring campaign rich program also included: a webinar on *Greening the Commission success stories*, such as the new missions dashboard tool, the guidelines for sustainable events, and an online game on renewable energy communities developed by the JRC. There were opportunities to participate in brand new Climate Fresk workshops, including the first one ever in Luxembourg.

There were also guided tours of high energy efficiency buildings in Brussels, the REaCYCLING clothing sale and charity action, sustainable and healthy diets webinar by LIFE EU-funded projects, sustainable cooking workshops, collection of old electrical appliances in collaboration with Recupel (coordinated by JRC) and plenty of local activities, e.g. planting seeds in new flowerbeds.

ii. End-of-year greening campaign marks milestones and mobilises staff

Colleagues were invited to join three thematic webinars, organised by DG HR's EMAS coordination team, to learn about where the institution stands two and a half years after the adoption of the Greening the Commission action plan. Beyond the webinars, colleagues had the chance to actively participate in a varied selection of green actions. In Brussels, for example, the six Executive Agencies united for the third consecutive year to present **Executive Agencies' Green Week 2024**, held across all three EA buildings for the first time. In DG BUDG, an art exhibition titled *From Trash to Treasure: The Art of Recycling* by artist Nathan Chikoto featured upcycled artworks made from discarded materials. Colleagues were also invited to participate in a guided tour to explore the **Parcours du Berlaymont project**, a practical embodiment of the New European Bauhaus principles of sustainability, aesthetics, and inclusivity within the Berlaymont.

The week also included 'Climate Fresk' workshops and sustainable eating demonstrations organised by the sustainable eating community. Additionally, DGT colleagues organised a sustainable decoration workshop and a clothes swap, while DG SCIC coordinated a collection of old clothes, textiles and sporting gear in 10 buildings across Brussels, giving these items a second life. Lastly, there was an online greening quiz competition, and the **'Return IT, Reuse IT, Recycle IT' action** by DIGIT, which provides an opportunity for staff to return their no-longer-used electronic devices.

9.1c Green Week by the 6 Executive Agencies!

In Brussels, the six Executive Agencies united for the third consecutive year to present **Executive Agencies' Green Week 2024**, held across all three EA buildings for the first time. The week-long celebration featured over **10 info-sessions and workshops** on topics ranging from the environmental benefits of tap water to digital frugality and sustainable eating practices. Activities included the Climate Fresk game to deepen understanding of climate change, walks in nature, sound baths and initiatives like the 'Against Fast Fashion' recycled clothes fair, toy exchanges and meat/fish-free days at the North Light building.

Moreover, to promote sustainable choices they set up two meat/fish-free days in the SB34 (North Light) on Monday 2 and Tuesday 3 December. With just 500 colleagues (in presence) abstaining from meat and fish one day per week for five years, the estimated impact includes greenhouse gases reduced equivalent to driving 160000 km. The flagship initiatives is the well-received "Toys, toys, toys" action, where second-hand toys are donated by colleagues in the 6 Executive Agencies and offered once again as **sustainable second-hand gifts** for children and make a meaningful impact!

9.1d Dialogue with internal stakeholders

The Commission has a corporate register of internal questions and suggestions submitted via the EMAS in EC functional mailbox and Staff Fora (MyIntracomm: Commission's intranet, Viva Engage and Climate Fresk workshops), which recorded **984 entries** (compared to approx. 300 entries during 2021-2019) all of which received responses.

This tremendous increase over the last years demonstrates the effectiveness of the EMAS internal communication campaigns and the transparent and open staff dialogue.

Moreover, in 2024, the **biannual Staff environmental awareness and behaviour survey** (from November 2023) was analysed. The survey addressed 7 000 participants with 21% response rate and more than 900 suggestions; and revealed **an all-times high** of the staff environmental awareness of Commission staff reaching **89%** (+4% in relation to 2021), as well as actual staff's eco-conscious behaviour reaching **75%** taking regular green actions at work (+3% in relation to 2021).
Concerning appropriate communication tools, the involvement of Commission's senior management as "Greening Ambassadors" has been considered as the most efficient. For the first time, questions addressing the progress of the "greening" action plan have been added, noting positive progress on Greener buildings and Grener Travel topics and need for further efforts on staff engagement (50%), communication to external stakeholders (43%) and sustainbale food choices (37%).

In addition, another **GREEN Transition Multipliers' Community Workshop** took place on 22/02/2024, bringing together representatives from more than 20 Commission's internal "greening" networks reflecting upon the upcoming Greening Progress Review during 2024/2025. Ongoing bottom-up projects include: the Sustainable Eating Community, the Greening project management in research and higher education, a carpooling plaform, Climate Fresk workshops, a Mindset Change Working-Group and the Earth Society environmental association (comprised of ex-Blue Blue Trainees).

Communication among EMAS correspondents and site coordinators
Overall, **36 of 47 EMAS teams** demonstrated a performance above average (with a score of 6 or more out of 10), representing **85%** of the total Commission population (the same as in 2023). This is mainly the result of (i) the environmental awareness support by the local volunteer groups, currently active in 6/9 sites and in 20 DGs/services (in relation to 20 in 2023), (ii) the large number of local EMAS action plans in all 9 sites and 20 DGs/services (the same as in 2023), (iii) the setting up of local environmental actions in all 9 sites and 30 DGs/services (in relation to 28 in 2023), (iv) EMAS team contacts with senior management currently in all 9 sites and 28 DGs/services (compared to 31 in 2023).

This resulted once again in a slightly higher average performances of **7.1 out of 10** for the EMAS teams in all DGs/services/sites (in relation to 6.9 out of 10 in 2023) and the outstanding high average of **9.7 out of 10** for the 6 Executive Agencies (REA, ERCEA, EISMEA, EACEA, HaDEA and CINEA) (in relation to 8.3 out of 10 in 2023), as a result of their strong and consolidated collaboration, e.g. common Green Week of the 6 Executive Agencies.

9.1e Additional campaigns

The **corporate energy saving campaign**, as a contribution to European solidarity in times of energy scarcity, in alliance with the EU member states commitment to a voluntary 15% reduction in gas consumption across the bloc over the until March 2024. This included:

- **Buildings Energy Saving Together (BEST) actions** help further reduce the Commission's energy consumption and maintenance during a period of low office presence (during the summer and at the end of the year), through the closing of several buildings. Electricity, ventilation, and air conditioning are switched off in the closed buildings and colleagues are able to work from one of the designated building hubs.
- The **greening your summer** action
- Communication to staff on the **EMAS highlights** (via the **Greening Online Quiz Game**)
- The **"Keep it Green this Christmas"** campaign

Other corporate communication included:

- Six articles published in the Commission's on-line news portal "Commission en Direct"; Six articles published on the new "People First" section on Commission's intranet (My IntraComm); Several announcements on the Commission's intranet under "Practical Information" and "Events"; 10 Staff Matters e-Newsletters, with **100 000 page views.**
- Revisions to the overall structure and further improvement of the internal EMAS webpages with **nearly 13 000 known webpage visits.**
- 15 Viva Engage posts with nearly **20 000 post views.**
- The **Inter-institutional Green Public Procurement (GPP) helpdes**k two events on sustainable construction and renovation and sustainable catering facilities.
- **VeloMai 2024:** the popular month-long celebration of cycling, was held between 1 and 31 May with the participation of 21 EU institutions, agencies and bodies, along with nine Delegations. Under the motto 'Cycling towards a greener Europe', colleagues pedalled more than 430 000 kilometres in total, the equivalent of more than 10 times around the Earth!

Communication actions initiated by the EMAS Correspondents

EMAS Correspondents organised local environmental actions in the **30 DGs/services** (in relation to 28 in 2023) and in **all 6 Executive Agencies**. Typical examples included:

(a) **Waste reduction actions:** including waste collection and recycling events, collection of textiles, household appliances, technical devices and bottle caps, collecting toys and all kinds of items for charity, book exchanges, clothes swaps, second-hand toys' exchanges, plogging activities, installing waste sorting stations, anti-food waste trainings, internal campaigns to avoid paper cups (bring your cup and distribution of porcelain cups).

(b) **Sustainable mobility initiatives** (targeted communication and training actions on sustainable commuting during EU mobility week and VéloMai corporate events)

(d) Internal communication and training actions to raise **staff environmental awareness** and promote staff engagement related to various topics, such as: EMAS related corporate trainings, events, campaigns, and greening policies (e.g. reduction of emissions from professional travel, digital waste, energy savings, biodiversity -creation of local herd and pollinators gardens- and adopting a greener lifestyle (e.g. sustainable food choices).

Other actions across EC-sites coordinated by the EMAS site coordinators

In Brussels, the OIB participated in most of the activities promoted by DG HR and organised dedicated training sessions for specific targets, namely the EMAS Correspondents in the DGs, on subjects such as energy saving actions, waste and data collection. Moreover, it promoted cycling and sustainable commuting as part of EU Mobility Week / VeloMai (via guided cycling tours and repair cafés), organised guided visits of high energy efficiency buildings in Brussels and actively participated in the Interistitutional EMAS Days, presenting best practices on: Environmental impact of the new ways of working – Greener buildings and workspaces, New strategies and supporting tools towards sustainable mobility and Species conservation and fostering biodiversity in an urban setting.

In Luxembourg, OIL organized a very succesful ''zero-waste'' cooking event hosted by Anne Faber, known for her cooking shows on RTL TV. During the EMAS Spring campaign a ''Green Coffee'' at the Foyer Européen brought together local ECORs, offering them the opportunity to participate in Luxembourg's first Climate Fresk workshop. This interactive workshop provided a fun and collaborative environment to deepen participants' understanding of climate change dynamics. In total, three Climate Fresk workshops were held for 2024 with a total of 20 participants. OIL and the CPEs participated in Velomai. On 'Car-free Day' of 11 and 17 September, colleagues were encouraged to use alternative modes of transport, capture their experiences in photos, and join a photo competition.

During the "End-of-year campaign" OIL's EMAS coordination team, along with local EMAS teams and support from various DGs, organised waste-sorting quiz games. The activities engaged several dozen participants with the goal of raising awareness of proper waste disposal and encouraging staff to improve their waste-sorting habits. A clothes swap event was organized at the Fête Internationale in the EUFO building canteen.

At JRC Ispra, around 30 volunteers participated in a plogging (picking up rubbish while jogging) event on 29 November, collecting 200kg of waste from the local area. The initiative, a collaboration between Ispra site management, Italian environmental organisation Legambiente and local communities, emphasised the importance of community involvement in environmental sustainability. Colleagues in Ispra also held their first electronic and electrical appliances collection to promote responsible disposal and recycling of electronic waste.

At **JRC Seville** colleagues focused on the environmental impact of textiles by organising a successful collection of textiles for donation to Bioalverde-Caritas, a local charity; and arranged two-day session bike workshops to cycling.

Case study 9.1: Innovative communication actions in Petten

At JRC Petten every first Thursday of the month a **"Lunch walk"** was organized. The walk starting from the site and ending in the dunes or beach of Petten promotes a health and environmental awareness as during the walk waste is collected. To increase the motivation also goodie bags were awarded to colleagues participating regularly to the walks.

To **promote eco-friendly and natural cleaning products** a workshop was organized at JRC Petten. Colleagues had the opportunity to create their own beeswax wraps, all-purpose household cleaner and toilet tabs.

In November 2024 a **Kintsugi workshop** was organized in Petten. Kintsugi is a Japanese art form where broken ceramics are mended with gold, silver or platina. Instead of hiding the fracture, it is emphasized and accentuated, so it becomes part of a stronger design. The philosophy of Kintsugi is based on the principles of Wabi-sabi: the beauty of imperfection and embracing transience. Awareness amongst colleagues on the topic of Upcycling was promoted during this interesting workshop.

9.2 Trainings

9.2a Corporate level EMAS training organised during 2024 included:

EMAS training for all staff

The virtually delivered on-line *EMAS basics for all* course continued with great success in 2024, reaching out to a all-times high of **1 205 participants** (in 10 sessions, compared to 729 in 2023, 935 in 2022 in relation to 517 in 2021) from all EC-sites. The training addressed for the first time the environmental impact of teleworking and how to be "greener" at home.

Environmental Management System (EMS) Training

There have been: (i) four (4) online introductory training sessions for new EMAS Correspondents (ECORs) and EMAS site coordination teams with a total of 39 participants (22/03, 14/05, 10/09 and 24/09), ii) One 3-days online EMAS Regulation training course (8 hours each, between 10-12/06) with a total of 21 participants and 2 online "Preparing for EMAS Internal or External Audits" training courses (4 hours each, on 10/04 and 11/09) with a total of 32 participants, iii) three (3) online training sessions on EMAS internal audits and external verification audits with a total of 17 participants and (iv) one info-session on the compilation of the *Sound Environmental Management* section in Management Plans 2024 with 40 participants. In total, **149 members of the EMAS teams** (compared to 147 in 2023 and 91 in 2022) have attended an introductory and/or specialised EMAS training.

Table 9.1 No. of different trainings on offer by EMAS site coordinators (for local staff with high environmental impact potential)

Site	Trend 2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Brussels		3	3	3	3	3	2	2	2	5	3	17
Luxembourg		0	0	NR	3	4	3	4	6	2	3	3
JRC Petten		3	7	6	3	3	3	3	4	5	5	6
JRC Geel		3	3	3	9	6	11	10	8	20	29	58
JRC Karlsruhe		1	1	2	2	2	2	2	2	2	2	2
JRC Seville		5	5	27	30	35	15	15	16	2	2	2
JRC Ispra		2	1	3	4	6	5	2	7	7	5	5
Grange		NA	NA	NA	NA	NA	NA	NA	NA			
DG COMM							6	6	14	31	41	52
Commission		**17**	**20**	**44**	**54**	**59**	**47**	**44**	**59**	**74**	**90**	**145**

Table 9.2 No of training beneficiaries (among local staff with high environmental impact potential)

Site	Trend 2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Brussels		1 648	1 648	1 648	1 648	1 648	1 648	1 648	100	50	196	405
Luxembourg				NR	100	85	56	50	45	61	68	122
JRC Petten		62	43	50	55	52	54	6	40	31	30	44
JRC Geel		49	49	28	31	42	54	26	85	178	143	210
JRC Karlsruhe		320	322	324	322	317	315	309	305	306	304	300
JRC Seville		36	54	54	117	150	76	107	94	64	41	36
JRC Ispra		340	243	350	347	349	378	66	76	190	179	117
Grange		NA	NA	NA	NA	NA	NA	NA	NA			
DG COMM							0	5	36	61	125	136
Commission		**2 455**	**2 359**	**2 454**	**2 620**	**2 643**	**2 581**	**2 217**	**781**	**941**	**1 086**	**1 370**

Table 9.3 Staff benefiting from training (%) offered by EMAS site coordinators

Site	Trend 2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Brussels		6,02	6,08	6,12	5,84	5,78	5,69	5,50	0,33	0,16	0,60	1,23
Luxembourg		0,00	0,00	NR	2,09	1,69	1,09	0,95	0,81	1,07	1,21	2,16
JRC Petten		22	15,47	18,12	21	21	22	2,43	17	13	13	19
JRC Geel		14,16	14,94	9,46	11,70	16,22	21	9,77	32	67	54	80
JRC Karlsruhe		100	100	100	100	100	100	100	100	100	100	100
JRC Seville		12,46	19,08	18,00	36	44	21	28	24	15,88	10,05	8,39
JRC Ispra		14,55	10,59	15,50	15,24	15,27	16,21	2,74	3,07	7,62	7,25	4,69
Grange		NA	NA	NA	NA	NA	NA	NA	NA	0,00	0,00	0,00
DG COMM							0,00	4,24	32,73	48,80	89,29	100,00
Commission		**7%**	**7%**	**7%**	**7%**	**7%**	**7%**	**6%**	**2%**	**2%**	**3%**	**3%**

NR - Not recorded NA - Not applicable

9.2b Brussels

Well trained EMAS staff: Two EMAS team members at OIB are Energy Building Performance (EBP) public buildings registered certifiers and EBP advisers. Another member of the team has successfully completed the IRCAAs in previous years, the EMAS team at OIB welcomed a trainee under the Blue Book Program in the European Commission with 27 training in ISO 14001 lead audits, while another completed a Master's degree in Environmental Sciences and Management at the Université Libre de Bruxelles (ULB).

9.2c Luxembourg

Well trained EMAS staff: A team member has successfully completed a course certified by the CQI and IRCA scheme for Auditing: ISO 14001:2015 Lead Auditor.

Training sessions for newcomers at the Commission are held by DG HR in full cooperation with OIL. There were 10 sessions with a total of 20 participants in 2024. 11 Commission drivers received **training about eco-driving** as usual every year. In addition, 91 security agents received an **'EMAS in a nutshell' training** during their continuous yearly training for all agents organised by an external contractor. A **training session on the use of dangerous chemical products, their storage and proper disposal** was organized by SST and followed by the EMAS team and OIL.04 colleagues.

9.2d JRC

Besides the *EMAS basics for newcomers* and the trainings organised for the EMAS Site Coordinators by the EMAS Corporate Team at DG HR, the JRC provides additional training to their staff in addition to several communication activities to raise awareness about EMAS (e.g. move to SharePoint online and redesign of the *JRC Environment* page).

JRC Geel organises a series of legally required courses related to safety and emergency preparedness, including laboratory and chemical safety, biosafety, and fire brigade training. Additionally, newcomers to JRC-Geel are encouraged to take the "EMAS Basics" training, in addition to the site introduction, which covers safety, security, and Environment/EMAS.
JRC Geel also supports communication and actions from DG HR. The JRC-Geel Site Director hosts monthly online meetings (Whtats'up), during which awareness-raising sessions on various topics related to JRC-Geel, including EMAS and safety, are held. JRC-Geel communicates relevant environmental actions internally to staff and stakeholders, such as changes in legal requirements, biodiversity initiatives, waste management, and more. In 2024, a mandatory hands-on training session on waste sorting was held for JRC-Geel staff and contractors, led by an expert from the municipal waste collection service.

JRC Ispra organised numerous environmental trainings in 2024. Two waste management environmental training courses (35 participants) were held for staff. Green Public Procurement (GPP) was also addressed in the procurement and contract management training (4 session and 22 Ispra staff members). Moreover, an environmental training for Environmental Figures was held with 6 participants. Lastly, three newcomers' sessions were held on how to reduce one's environmental impact at the Ispra site; 54 staff participated.

9.2e Grange

Staff were informed, via email, of a new eco-friendly deposit and return scheme for reusable cups. The scheme is 2GoCup, its objective is to reduce the use of single-use disposable cups by giving customers the option to get their take-away drink in a reusable cup. A specific EMAS course was organised for the members of the DG SANTE FM team plus members of the FM and security contractors.

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JRC Karlsruhe developed an information sheet "Introduction to EMAS for newcomer at JRC Karlsruhe", which was included in the set of documents given to all newcomers to the site. Internal training partially includes also external staff working on the premises. There were no specific EMAS trainings in 2024 on site but several other training courses also included environmental aspects, for example Newcomer training for hazardous substances and lab work and Annual radiation protection and safety instructions. In addition, there is a yearly workshop "Legal updates Arbeitssicherheit und Umweltschutz" for staff in relevant functions.

JRC Petten regularly organizes trainings for Newcomers. In 2024, 6 newcomer sessions with a total of 44 participants were given. The trainings have the purpose to inform the newly joined colleagues on the Environmental management of the site. Additionally, Occupational Health and Safety trainings are implemented on site and consist of a set of general and job-related training courses. Staff members receive the training depending on their roles and responsibilities.

JRC Seville encourages newcomers to attend the training on First things you need to know about Security, Environment, Health and Safety and use of the infrastructure as well as, to participate in the corporate EMAS basics training. The site put together a group of environmental volunteers in 2022.

9.2f DG COMM

For internal communication and staff participation, Houses of Europe use emails (from dedicated mailboxes), newsletters, intranets, notice boards, suggestion boxes, EMAS posters, among other tools. Staff meetings, team-building events, and informal exchanges are also very effective. Centrally organised initiatives were also implemented in 2024 to foster interinstitutional staff engagement for sustainability in the Houses, such as the successful **Eco Champions initiative**: inviting colleagues to nominate exceptional eco-conscious colleagues from their respective Houses of Europe.

9.3 Communicating on green actions

Greening The Commission

- *Greening the Commission and achieving corporate climate neutrality by 2030 is intended to set a good example and raise awareness of the need for ambitious climate action at all levels. The Commission's green actions are also fully part of the Human Resources strategy as a key priority to increase further the attractiveness of the Commission as an employer.*

9.3a External communication

Environmental Statement and websites

This is the main reference document for responding to most questions. It contains information for all the EMAS sites and is subject to external verification. It is published on DG ENV's EMAS website under **EMAS in EU Institutions sub-section**. Moreover, it is also accessible **via the "Greening the European Commission" webpage** under the New HR Strategy webpages on Europa, including the communication documents and factsheets.

Press announcements and Parliamentary questions

The highlights of the Commission's environmental performance, as well the Interinstitutional EMAS Days 2024, have all been promoted through the EMAS in EU Institutions section of **the official EMAS website** and **EMAS e-Newsletter** on Europa that is managed by DG ENV.

The EMAS coordination team (HR.D.7) responded to 1 Parliamentary question in 2024, related to the Commission's buildings refurbishment processes in line with the rules applicable to EU Member States.

Communication with external stakeholders

HR.D.7 responded to all **114 external queries** recorded during 2024 via the EMAS in EC functional mailbox and the GIME Teams Channel (compared to approx. 70 during 2023- 2021 and approx. 30-40 during the previous years). The significant increase in the Commission's EMAS team outreach is due its more visible role as coordinator of the interinstitutional EMAS communication workgroup, in the framework of the *Group Interinstitutional de Management Environnemental* (GIME) and its highly appreciated supporting role to the Greening Network of Decentralised Agencies.

Interinstitutional Online EMAS Days 2024

Between 5 and 8 November, an international audience of **more than 900 participants** were engaged in fruitful exchanges, representing more than 30 EU Institutions and international organisations such as the UN, including all EMAS-registered EU Institutions and agencies. A solid proof that the EMAS Days are a platform of environmental excellence, in support of our common climate neutrality and net zero targets.

The **8 sessions** covered a wide spectrum of topics, from: Environmental impact of the new ways of working – Greener buildings and workspaces, Sustainable conferences and events in the EU institutions, Sustainable finances: tools for mitigating climate-related risks, Transitioning traditional food offers in canteens to a plant-based, organic and local offer, New strategies and supporting tools towards sustainable mobility, Adapting for tomorrow: EU strategies and some tools and examples in climate adaptation, Species conservation and fostering biodiversity in an urban setting to Lessons learnt from the covid and energy crises.

In addition, the following external communication activities took place in 2024:

- Chairing the **Interinstitutional Group on Environmental Management (GIME)** (2 meetings)
- Supporting the **interinstitutional reflection group on greening and missions** in the frame of CCA (Collège des chefs d'administration)
- Collaborating with the **UN Sustainability Group** – *UN Greening the Blue*
- Participating in the virtual **Inter-agency Greening Network** and providing technical support
- Setting up a "greener" **EU Open Day 2024** in collaboration with DG COMM and hosting for the first time an **"Greening the Commission" EMAS stand,** successfully animated by interactive games and eco-prizes for the winners.

Information for suppliers and subcontractors

In 2024, the Commission continued to (i) disseminate information about its environmental management system (EMAS) and its climate neutrality objective to its main suppliers and subcontractors; (ii) as well as promote and implement the main principles of Green Public Procurement (GPP) in its own tenders/contracts via the support of the **Inter-institutional Green Public Procurement Helpdesk** coordinated by the European Parliament.

Greening Government Initiative (GGI) and Net Zero Government Initiative (NZGI)

GREENING GOVERNMENT INITIATIVE

The Commission followed the activities initiated by the USA and Canada governments to create a global community of administrations to share information on greening.

The Commission committed to joining the NZGI for which government administrations require a long-term carbon reduction target and must publish the roadmap showing how they will achieve it.

9.3b Additional note-worthy external actions by the EMAS site coordinators

Ispra site management organised the annual **"EMAS Round Table"** with the objective of:

- enhancing the dialogue with key local, regional and national stakeholders over JRC Ispra's environmental performance and to follow-up over stakeholder's expectations;
- promoting JRC Ispra's ambitions to promote a more sustainable environment and lead by example;
- demonstrating the transparency that is required under the EMAS umbrella;
- granting to all stakeholders that there are no impediments towards JRC Ispra's EMAS registration.

Due to several circumstances, including Covid-19 pandemic, there was no event between 2021 and 2023. A new edition, the seventh, was held in 2024 and saw the participation of over 50 national, regional and local authorities relevant for environmental aspects, including representatives of Lombardy Region, Province of Varese, Municipalities, the Italian EMAS Competent Body, i.e. the Ecolabel-Ecoaudit Committee, the regional environmental protection agency ARPA, University of Insubria, Legambiente, Confindustria, Carabinieri, Green School. The focus of the meeting was the promotion of biodiversity. According to this theme, during the meeting the memorandum of understanding between JRC and the Biosphere Reserve Ticino Val Grande Verbano to enhance the collaboration between the parties.

Luxembourg OIL actively engages with the Luxembourgish authorities, particularly the Ministry of Environment, Climate and Sustainable Development and the Ministry of Mobility and Public Works. In addition, OIL maintains regular communication with key associations like IMS and LUGA that play an important role in the field of waste management, energy efficiency, biodiversity and mobility.

OIL also fosters strong partnerships with other EU institutions based in Luxembourg and chairs **EcoNet**, the Interinstitutional Green Working Group (5 meetings in 2024).

OIL continues to be involved with **the Interinstitutional Repair cafe**, a highly succesful event organized 2 times per year where colleagues can bring broken items to be fixed by volunteer repairers.

DG COMM Representations in EU members-states

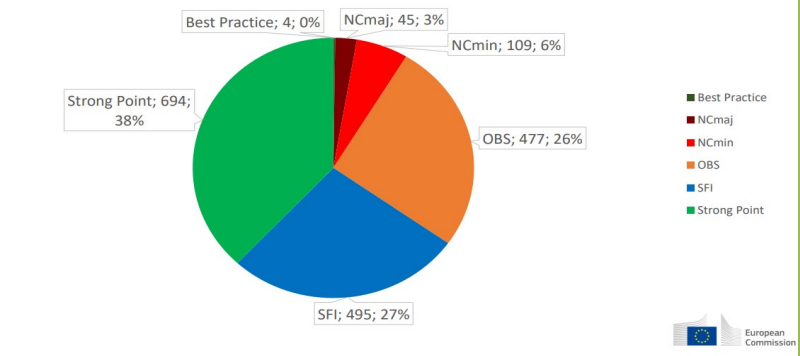
Communication with national stakeholders can be considered the prime vocation of the Houses of Europe, notwithstanding differences in institutional prerogatives and organisational contexts between the Commission and the Parliament. The protection of the environment has always been amongst the key EU policies communicated, and with the adoption of the European Green Deal, it has risen to front-centre. Based on their country-specific knowledge, Representations identify the most relevant topics for promotion in annual country strategies, adapted to local concerns and target groups. EPLOs, adopt a similar approach, serving as platform for communication with elected Members of the European Parliament and engaging citizens to vote in European Parliament elections. It is worth mentioning that several EC Representations have been among **the winners of the Sustainable Events Awards**, for their innovative and highly successful citizen engagement actions in EU member-states. For example, staff engagement award to COMM-Representation in Slovenia for the **first Zero Waste Europe Day**.

10 Demonstrating legal compliance and emergency preparedness

10.1 Legal compliance

Overall: Under EMAS, the sites are each responsible for legal compliance, as described below. But the Corporate coordination team organises the internal and external audits that are required at the sites under EMAS including ensuring that there is adequate follow up and resolution of audit findings, particularly those related to legal compliance. The audit results show that the Commission complies with the environmental legislation applicable to its activities.
The status of legal compliance is reported to the EMAS Steering Committee twice yearly, including statistics generated by the workflow tool (JIRA) that is used for audit follow up. **Figure 10.1** shows a summary of audit findings.

Figure 10.1 - Audit findings by type for 2020-2024



The Commission adopts a **sampling method** for the verification audits of its premises in Brussels, Luxembourg, and for the Houses of Europe in Member States according to provisions of the EMAS Users Guide. Sampling is required at these sites because each building has its own environmental permit and there are too many to audit annually.

The Commission has around 70 operational buildings in Brussels and Luxembourg. These are controlled and managed centrally by the Infrastructure Offices in Brussels (OIB) and Luxembourg (OIL) which ensure their compliance with environmental legislation and contacts with the national and regional authorities. The Offices manage the licences and permits needed for building operation. The Commission's real estate portfolio varies from year to year. The buildings are listed in Annex 9.
The environmental impacts of these buildings are generally similar and with no highly impacting environmental aspect requiring a specific approach. Therefore, all the buildings are subject to the sampling method for auditing.

The Commission uses sampling to select **5 to 6 buildings per year** (listed in Annex 9), more than required in the User's Guide, to provide greater confidence in audit results.

The sampling method ensures that each building entering in the scope is audited and that all buildings are audited in the same period. The audit sample is discussed and agreed with the verifier each year. In addition to audits carried out under the sampling method, additional visits (or audits) may be planned to buldings where a non-conformity was detected to verify that the remedial action was correctly executed.

10.1a Brussels

In Brussels, each building has a licence called "permis environmental" containing the applicable environmental legislation for the building, including specificities when appropriate. In addition, general environmental legislation like the COBRACE is also implemented.

Several units within the OIB are registered users of the Regulation Monitoring contract REMO, launched by the European Parliament, for legislation relating to EMAS, technical equipment and persons with reduced mobility. This monitors new regulations, and enables the OIB (through emails and links to designated users) to be up-to-date on relevant legislation. The EMAS team at OIB performs an analysis of the new legislation and highlights its potential impacts, suggesting the course of action necessary to guarantee compliance. As a consequence, the Brussels site complies with the relevant environmental legislation.

10.1b Luxembourg

Environmental Permits:
Procedure "OIL Bâtiments 04: Documentation OIL des autorisations d'exploitation des bâtiments - Version 2023" outlines the management of operating permits for classified facilities (commodo/incommodo) by OIL. Originally initiated in 2015, the procedure aimed to establish a centralized registry of operating permits for buildings occupied by the European Commission in Luxembourg, ensuring compliance with environmental requirements.

Procedure "OIL EMAS 01: Veille réglementaire environnementale - Version 2024" provides a framework for ensuring that property management aligns with environmental legislation by integrating new legal provisions. The regulatory monitoring concerning environmental, health, and safety laws, as well as accessibility for disabled individuals (PMR), for the European Commission in Luxembourg, is currently managed through framework contract HR/2023/LVP/0113 with Luxcontrol S.A., valid until 25/05/2027.
The contractor provides OIL with relevant environmental information and legislative updates monthly. Additionally, joint workshops with DG HR, OIL, and the contractor are held several times annually to review new legislation and decide on its inclusion in the regulatory monitoring. These sessions also explore potential actions in response to legislative changes. Environmental legislation is routinely reviewed using available official sources in Luxembourg. Information is systematically recorded by the OIL legal assistant with the use of an Excel register.

Luxembourg mini-audit procedure:
Procedure OIL EMAS 05 (2024 version) on documenting mini internal audits and regulatory compliance was initially introduced in 2022 to manage additional internal audits for legal compliance. These audits are based on documentary analyses of operating permits and recurring non-compliance issues. The initial procedure established a registry of operating permits for the Commission's buildings to ensure legal compliance. The 2024 version introduces a new audit schedule for upcoming years.

In 2024, buildings such as the DRB medical service, Mercier-Post, BECH technical installations, and DRB-E-2, which contain hazardous materials, have been mini-audited. Furthermore, a mini-audit on waste management was conducted for most buildings in January 2024, including DRB, EUFO, BECH offices, waste kitchens, T2, and CPEs Kirchberg and DRB-A.

Other procedures exist, for example for waste management (under revision) and for accidents and environmental incidents. Consequently, the Luxembourg site complies with the relevant environmental legislation.

10.1c JRC

JRC Geel is a class 1 nuclear facility, subject to strict legislation from both the federal (Federal Agency for Nuclear Control - FANC) and Flemish (*Openbare Afvalstoffen Maatschappij* - OVAM; *Vlaamse Milieu Maatschappij* - VMM) authorities. To operate, JRC Geel holds both a nuclear and an environmental license, which define the legal framework for its activities. To stay compliant with legal requirements and track legislative changes, the site has established a nuclear registry (PHARIUS) and an environmental registry (ARCALEX), managed by the Health and Physics service (HPS) and the EMAS Site Coordinator, respectively. Each registry outlines the legal obligations for relevant site activities and is regularly updated. Environmental legal compliance is ensured through the procedure I*MS-GEE-S6.6-PRO-0007 Management of Environmental Legal Compliance JRC-Geel*. Changes in legislation are communicated to all stakeholders (staff, contractors, etc.) before they take effect. Environmental control measures, including inspections and both internal and external audits, are implemented to verify and ensure ongoing compliance with legal requirements ate the JRC Geel site. The environmental authorities also conduct occasional legal inspections, such as the one carried out in 2024 on the cooling installation.

10.1c JRC

According to the Site Agreement, Italian Law 906/1960, **Ispra site** is fully implementing the Italian legislation regarding nuclear prescriptions and is applying under a voluntary basis (and under its own responsibility) environmental prescriptions to its other activities. JRC Ispra has developed a dedicated strategy to issue internal environmental authorisations that are technically equivalent to those issued by Italian Authorities (e.g., water treatment plant, old and new trigeneration plant).
This approach has been shared with the Italian EMAS Competent Body. The site maintains a transparent official communication with all relevant stakeholders, for example regarding tri-generation emissions' threshold values, which was ensured by means of the overall emission in terms of mass flow for CO and NOx, assuming the continuous operation of the plant for the entire year. Several actions were carried out to limit the trigeneration plant emissions and the construction of a new one has been completed. In 2025, the new plant will be switched on, and simultaneously the old one will be shut down.

A formal agreement was signed with Ispra Municipality, ATO and Alfa srl in 2024 to regulate the treatment of wastewater coming from Ispra territory within the JRC Ispra site wastewater treatment plant. This agreement will last until the end of 2027 and foresees a reimbursement for the expenses incurred by the JRC. Several tools are currently in place to ensure appropriate legal compliance; checks are performed continuously throughout the Ispra site. The EMAS team on site performs an annual analysis of the new legislations and highlights its potential impacts, suggesting the course of action necessary to guarantee compliance. As a consequence, JRC Ispra complies with the environmental legislation applicable to its activities.

JRC Karlsruhe is a nuclear installation under German legislation and as such is bound by a tight regulatory framework under the Atomic Energy Act (*Atomgesetz*, last updated in July 2018), the Radiation Protection Act (*Strahlenschutzgesetz*, last updated in December 2019) and the respective Radiation Protection Ordinance (*Strahlenschutzverordnung,* latest version December 2018).

The nuclear licences and amendments governing JRC Karlsruhe's operations are publicly available on the internet pages of the Ministerium für Umwelt, Klima und Energiewirtschaft Baden Württemberg (Ministry of the Environment, Climate Protection and Energy Sector). Applicable regulations are listed and assessed in the Legal Register IMS-KRU-S6.5-RGS-0007-DE, which was created in cooperation with an external company, who also provide an update twice a year (most recently in February 2025).

In order to assess legal compliance, the site commissioned an external company to undertake legal compliance audits annually. The latest internal audit encompassing legal compliance took place in November 2024. Due to this, and owing to constant surveillance by the authorities, JRC Karlsruhe is compliant to all relevant legislation. There have been no legal proceedings against the site and consequently neither penalties nor fines since operations started.

JRC Petten is complying with the dutch Activities Decree (*Activiteitenbesluit*) and the Activities Regulations (*Activiteitenregeling*) containing environmental regulations. The Activities Decree has different rules for different types of businesses and makes a distinction between companies of types A, B and C. JRC Petten is a type C business, requiring an All-in-one Permit for physical aspects. The Environmental Permit was obtained on 24 June 2016. Permit compliance is checked annually. The site has a contract with an external legal consultancy filtering the applicable legislation in an online tool. JRC Petten is compliant with the relevant environmental legislation.

JRC Seville legal compliance is regularly checked against a legal register provided by a specialised Company. Based on this register, the activity of the JRC Seville is excluded from the obligation of obtaining an environmental permit according to the relevant regulation “Ordenanza Reguladora de Obras y Actividades del Ayuntamiento de Sevilla. Nevertheless, the site is compliant with all the relevant environmental legislation such as the “Real Decreto 390/2021” on energy labelling for buildings and “Ley 7/2022” on waste management.

Through the above measures, the JRC sites comply with the environmental legislation.

10.1e DG COMM

The Representations, acting on behalf of the respective House of Europe, have outsourced the setup and maintenance of the environmental legal compliance register to local external consultants, who conduct a compliance assessment.

Embarking on the journey towards EMAS certification often reveals initial legal gaps for the Houses of Europe. Due to their embassy-like status, routine local inspections may be less frequent. However, EMAS participation implies a commitment to full legal compliance. While achieving this goal may take time, depending on the issue, experience shows that full compliance is attainable within a few years. An initial hurdle that Houses of Europe may encounter is securing the advice of a qualified legal expert.

10.1d Grange

As Grange operates as office premises there are no specific licences or permits required (see more information at http://www.pointofsinglecontact.ie/licensing/licences%20-%20permits/)

A procedure for maintaining the legal register has been in place since late 2014. The Register of Environmental Legislation is reviewed and updated continually by an external consultancy. The responsible DG SANTE personnel receive automatic email updates relating to new or changing legislation and ensure that there is appropriate follow up.

As a consequence, the Grange site complies with the relevant environmental legislation.

10.2 Prevention and risk management

10.2a Brussels

OIB records statistics relating to the findings of buildings inspections for health, safety and environment. These audits and inspections are based on permits and legal requirements for each building and technical installation.

Out of 1 816 reports issued in 2024, 680 (37%) had no remarks (OK status), while 649 (36%) stated minor (urgent to address) and 487 (27%) major non-conformities (urgent to address as soon as possible).

10.2b Luxembourg

The procedure "OIL 01 EMAS 04 Environmental Accidents and Incidents – 2022 Version" details the process through which the EC identifies and responds to environmental emergencies and incidents. Its goal is to ensure the execution of proper measures and to investigate any potential adverse environmental impacts. In 2024, this procedure began undergoing revisions to align with new environmental legislation in Luxembourg. This update includes the creation of a register for minor incidents, such as oil leaks in parking lots. Additionally, OIL has developed "Instruction OIL SST 23: Weather Vigilance and Alerts," which focuses on flood risk management and is currently under review.

10.2c JRC

At **JRC Geel**, prevention and risk management are overseen by HPS. The site operates under an Occupational Health & Safety Management System certified to ISO 45001 standards. As a Class 1 nuclear facility, JRC-Geel also meets the legal requirement by maintaining a voluntary on-site fire brigade for first response, supported by the local fire department. This internal brigade conducts monthly training exercises on-site and undergoes annual training at a professional firefighting center. To ensure the reliability of all critical systems and equipment, the site implements comprehensive preventive and risk management measures, along with a full maintenance and inspection program. Regular nuclear and EMAS inspections are conducted to assess and ensure legal compliance.

The **Ispra site**, is covered by relevant emergency procedures and the site's Emergency and Business Continuity Plan and associated procedures and instructions, providing the framework for both nuclear and conventional emergencies, including incidents that could have a negative impact on the environment (both on and off site).

The procedure for the management of emergency exercises and the planning of emergency exercises and drills has been updated in 2021 to account for all the applicable environmental scenarios, including spillage and release of hazardous substances.

In 2013, JRC Ispra detected the presence of fuel oil in the ground close to Via Esperia during one of its periodical checks. This originated from a leak from two old underground storage tanks that had been used to store fuel oil for heating the residences within the JRC social area. The tanks and surrounding layers of the soil were removed. However, a minor presence of fuel oil was detected in the neighbouring areas both under Via Esperia, and in the premises of a JRC Ispra car park. The Italian authorities were informed about this legacy and regularly updated, including through the JRC Ispra EMAS Round Table meetings.

Although JRC Ispra's risk analysis indicated that the residual presence of fuel oil was under the mandatory intervention threshold, the site opted for the best environmental approach and initiated the corresponding soil removal procedure in 2022, including supplying preliminary information to the competent authorities.
At the end of 2023 the Municipality of Ispra called a Conferenza dei Servizi to approve the removal plan (best solution for the clearance). JRC duly carried this out in 2024. At the time of writing, documentation expected by the competent bodies is close to finalization.

In **JRC Karlsruhe**, as an installation subject to German nuclear legislation, the entire site and its activities are conceived and operated with a focus on prevention, risk management and emergency preparedness. The applicable legislation requires these topics explicitly. Procedures are therefore based on and tailored to this legislation. Significant procedures have to be approved by the supervising authority (Ministry of the Environment, Climate Protection and Energy Sector of Baden-Württemberg) before becoming effective. The supervisor undertakes inspection visits regularly.

JRC Petten applies risk-based management for safety and environmental aspects, work place assessments, general risk inventories and risk assessments for specific tasks.

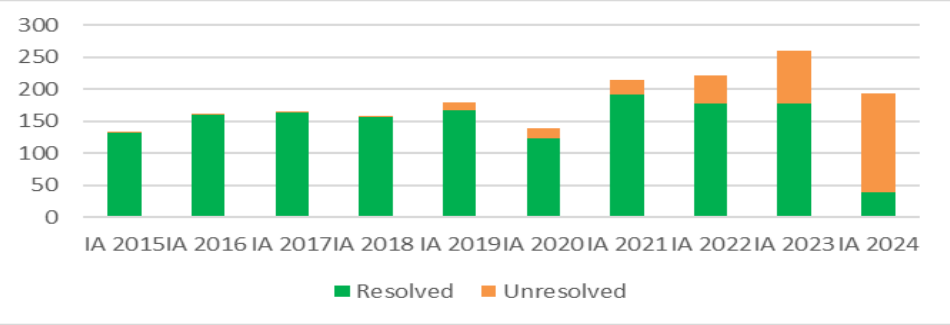
Since 2010, **JRC Seville** has not recorded any health, safety or environmental incidents. An external prevention service maintains an occupational safety and health (OHS) register.

10.2d Grange

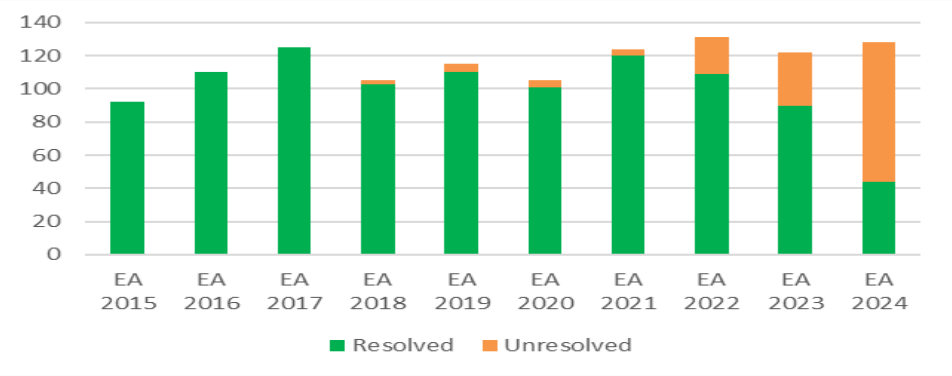
The site implements a programme of environmental incident prevention based on its evaluation of environmental aspects and impacts, and on the identification of potential emergency conditions or abnormal incidents related to each aspect.

Case study 10.1 Workflow software for managing audit findings

The EMAS staff have been tracking and presenting to management the status of audit findings in the EMAS Steering Committee meetings. The graphics below show separately the status of internal audit and external audit findings as presented in February 2025.



The greater number of unresolved findings in the external audit in 2024 was due to slightly later than usual auditing schedule in 2024.



10.2e DG COMM

The Representations are responsible for managing the emergency preparedness and response processes within the Houses of Europe. They develop annual local contingency and business continuity plans, which take into account potential aspects that can eventually lead to emergency situations, including environmental impacts. These plans are aligned with the corporate guidelines and national regulations. They are integrated as part of the local security and safety plans. The Representations also contribute to an annual health and safety report prepared by DG COMM.

Physical tests and exercises, such as fire emergency drills, as well as business continuity tests are conducted on a regular basis in the Houses of Europe. At a central level, the Commission's DG COMM (sector COMM.D.2.001 - Security and Business Continuity) and the Parliament's DG SAFE coordinate safety and security procedures in Representations and EPLOs, respectively. No emergency situation occurred in 2024 in the seven Houses of Europe.

10.3 Emergency preparedness

10.3a Brussels

Beyond the procedures and services in place at the European Commission concerning emergency preparedness and response related to health, safety and security incidents at work (24/7 helpdesk line 22222), the OIB monitors the application of the legislation on well-being at work, in particular the evaluation of risks and corrective measures with an impact on the environment. Summary data for 2024 includes:

- number of evacuation exercises: 50
- training and recycling SIN (sécuriste industriel): 135 people received training and 856 colleagues completed their recycling training
- training and recycling ECI (équipiers chefs d'intervention): 239
- training and recycling STE (stewards): 449

Given the growing demand, the SIPP (Service interne de prévention et protection) department aims to increase the number of SIN training sessions, with the goal of training 225 people per year compared to the current 150. Basic Prevention Advisor training sessions are also planned for colleagues, along with information sessions on evacuation procedures, which have already been conducted in several buildings.

10.3b Luxembourg

OIL.02_SST ensures the coordination and proper implementation of the fire prevention policy in buildings and the health and safety of its employees in all aspects related to their work. Summary data for 2024 includes:

- 16 evacuation exercises were carried out on all buildings in Luxembourg.
- 47 sessions (23 theory + 24 practical) of EPI and ECI training for 412 (203 theory + 209 practical) participants.
- 12 sessions of fire prevention training for 76 participants.
- 9 sessions of first aid training for 77 participants.

10.3c JRC

In **JRC Geel**, emergency preparedness and response is managed by HPS according to the procedure *IMS-GEE-S6.5-MAN-0002 JRC-Geel Site Internal Emergency Plan* and the JRC Geel incident response plan. As a class 1 nuclear facility, JRC Geel has, besides its fire brigade team, 24 hour on call teams (Technical and Nuclear Intervention Groups (TIG, NIG) who answer and act in case of alarms on potential incidents.

In 2024, mandatory nuclear emergency exercises and building evacuation tests for the **Ispra site** were duly carried out. The preparedness of the Ispra site and the Italian authorities to respond to nuclear emergencies, the annual nuclear full-scale emergency exercise was tested in February 2024 in the presence of local and national authorities. An emergency exercise was held to test the emergency preparedness in Area 40. The outcome of each exercises was positive.

In **JRC Karlsruhe**, some practical examples demonstrating the rigour with which legal compliance and emergency preparedness are addressed:

- All safety and security relevant equipment and installations are subject to stringent recurring check programs, which are also under the supervision of the commissioned experts of the supervising authority;
- The site operates its own semi-professional firefighting team and cooperates with the professional fire brigade of the surrounding research site (Karlsruhe Institute of Technology, (KIT);
- Firefighting and evacuation exercises are regularly carried out, partially in cooperation with the fire brigade of the KIT;
- Most technical works are subject to a working permit procedure;
- The admission to the site is strictly limited.

In **JRC Petten**, the organisation's emergency plans are based on emergency scenarios. They are based risk management methodologies and also cover environmental risks. In 2024, 10 Emergency Drills took place in order to practice and test all elements of the emergency plans. Contacts with the local quick response team (QRT, formerly fire brigade, operated by the neighbour organisation NRG) have been established in order to identify environmental risks.

In **JRC Seville**, the site has a specific emergency procedure describing the methodology used at local level to identify and respond to potential accidents and emergencies that could affect staff, facilities and the environment. A fire drill is organised every year and an Environmental accident drill was performed in 2024.

10.3d Grange

Last update of the Emergency Plan was in June 2023, but a fire drill took place in June 2024.

10.3e DG COMM

The Representations are responsible for managing the emergency preparedness and response processes within the Houses of Europe. They develop annual local contingency and business continuity plans, which take into account potential aspects that can eventually lead to emergency situations, including environmental impacts. These plans are aligned with the corporate guidelines and national regulations. They are integrated as part of the local security and safety plans. The Representations also contribute to an annual health and safety report prepared by DG COMM.

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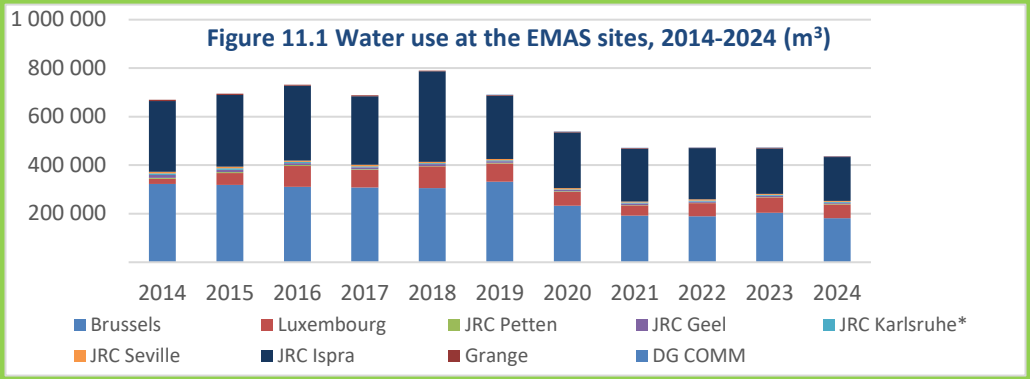
No emergency situation occurred in 2024 in the seven Houses of Europe

11 Water, paper consumption and costs

11.1 Water use

Figure 11.1 shows that Brussels and JRC Ispra account for most of the water used. the Commission has reduced its total water consumption by 3% since 2022, and 32% since 2019. The reduction in water use is partly a by-product of some actions to reduce energy consumption, for example prolonged office closures when humidification of air is not required.



11.1a Brussels

Water saving measures undertaken since 2015 include more proactive water management, installation of leak detection systems and loss prevention. Water saving devices (tap aerators) have been installed in most of the remaining buildings. Warmer temperatures during summer months may require more water for cooling and humidification.

11.1b Luxembourg

Data for 2023 were corrected to replace estimations made for BECH, FISCHER and MERP with accurate data from invoices. Data for 2024 include estimations based on 2023 data as some invoices are not yet available. Late invoicing is a challenge for Luxembourg buildings especially for water; since January 2025 an alternative solution to record water consumption directly from water meters in order to have data on time, is being tested. The move to JMO2 will address this problem.

Water consumption shows a big decrease compared to 2023 values (8.3%) mainly due to vacating the MERCIER POST and LACCOLITH buildings. Target 2019-2030 for water use has been revised to a 40% reduction as previous target of 15% had already been reached. Measures to save drinking water include smart taps installed in most buildings while BECH and the new Mercier Post building have a rainwater collection system connected to sanitary infrastructure for flushing toilets etc.

11.1c JRC

JRC Geel decreased its water use by around 30 % in 2024 compared to 2023.

At the **Ispra site**, the use of "drinking water" decreased by about 39% between 2014 and 2024 and 4,4% between 2023 and 2024. Last year's improvements are due to having corrected some specific situations where drinking water was used for cooling purposes and also to the identification and consequent repair of various leaks in the network. In 2024, modernization works began on the main water cycle facilities (pumping station, filtration and chlorination system) which in the coming years will lead to a further improvement in water management and a possible reduction in consumption. The action of increasing the metering devices, to have a better understanding of water flows, is on-going.

In JRC Karlsruhe, a significant part of the water is used for the humidifying incoming air in the laboratory wings and the quantity depends on weather conditions. Cold and dry weather requires more humidification whereas other weather conditions may not require humidification at all.
Weather conditions since autumn 2019 often did not require significant humidification, which might be a result of climate change. Floor space is the main indicator for water use, which is largely determined by technical requirements and scientific activities.

At JRC Petten, the water usage in 2024 increased by nearly 10%, and is heavily related to the scientific activities on site.

In **JRC Seville**, the water trend remains steady. The decrease observed in 2023 can be partly attributed to a reduction in demand from the HVAC facility. The complexity and age of the installation make it difficult to control effectively. In addition, the building was not operational for approximately four days while major electrical infrastructure was replaced.

11.1d DG SANTE at Grange

Water consumption in 2024 increased 22% compared to 2023. The main reason is the daily flushing of the whole water system, in order to control the presence of legionella (following a risk assessment and eradication measures introduced).
The low daily presence of staff and the age of the building and systems seem also contribute to the problem.

11.1e DG COMM

Total water use across all HoE sites shows a notable decrease from 3,048 m³ in 2019 to 2,143 m³ in 2024, reflecting improved efficiency or reduced occupancy.

Key observations:- Valletta, Vienna, and Sofia consistently show the highest water consumption.
- Copenhagen and The Hague have the lowest usage throughout the period.

- Most sites show a downward trend in both per person (m³/p) and per area (l/m²) consumption, indicating stronger water efficiency practices.
- Notable reductions are seen in Budapest and Nicosia, with per area consumption dropping significantly.
- Sofia is the exception, with water usage rising again after 2021.

Overall, the trend suggests a collective effort to reduce water consumption across EU representation sites, with variations depending on local conditions and occupancy.

Table 11.1 Total water use (m^3/p, and l/m^2)

Site	Trend 2014-23	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Target 2019-30
Brussels		322 527	318 692	310 234	308 439	305 889	331 577	232 891	192 045	189 178	203 795	180 919	
m^3/p		**12,57**	**12,40**	**11,68**	**11,36**	**11,22**	**11,53**	**7,78**	**6,28**	**6,12**	**6,43**	**5,91**	9,22
l/m^2		**300**	**299**	**290**	**286**	**294**	**301**	**212**	**176**	**187**	**198**	**186**	256
Luxembourg		21 604	49 016	86 589	72 669	89 175	75 446	56 877	42 941	54 682	63 230	57 929	
m^3/p		**5,34**	**10,50**	**18,61**	**15,18**	**17,78**	**14,68**	**10,85**	**7,72**	**9,60**	**11,21**	**10,24**	8,81
l/m^2		**108,67**	**218,82**	**359,25**	**301,50**	**492,89**	**415,40**	**313,19**	**236,45**	**302,65**	**330,02**	**335,77**	290,78
JRC Petten		3 141	3 250	3 877	2 950	1 984	2 449	2 221	1 343	1 499	1 345	1 478	
m^3/p		**11,14**	**11,69**	**14,05**	**11,22**	**8,00**	**9,83**	**8,99**	**5,60**	**6,52**	**5,90**	**6,26**	8,85
l/m^2		**161**	**152**	**189**	**142**	**99**	**122**	**111**	**67**	**75**	**67**	**74**	110
JRC Geel		12 023	9 861	7 950	7 142	7 503	7 495	6 049	6 143	5 039	5 630	3 941	
m^3/p		**34,7**	**30,1**	**26,9**	**27,0**	**29,0**	**28,6**	**22,7**	**23,4**	**19,1**	**21,3**	**14,9**	**26**
l/m^2		**246**	**195**	**157**	**142**	**149**	**148**	**119**	**121**	**99**	**111**	**78**	**136**
JRC Karlsruhe*		6 730	6 717	4 838	4 570	4 176	3 289	2 765	3 370	3 669	3 965	4 012	
m^3/p		**21,0**	**20,9**	**14,93**	**14,19**	**13,17**	**10,44**	**8,95**	**11,05**	**11,99**	**13,04**	**13,37**	10,02
l/m^2		**161**	**161**	**112**	**106**	**97**	**76**	**64**	**78**	**84**	**91**	**92**	72,4
JRC Seville		6 281	5 963	5 356	6 474	5 013	4 849	4 981	4 603	5 017	3 568	5 137	
m^3/p		**22**	**21**	**17,85**	**20**	**14,66**	**13,18**	**13,04**	**11,80**	**12,45**	**8,75**	**11,97**	**10**
l/m^2		**895**	**832**	**748**	**854**	**661**	**630**	**642**	**573**	**624**	**444**	**639**	**488**
JRC Ispra		292 866	295 838	309 077	282 182	373 192	261 344	229 855	217 181	211 027	188 014	179 669	
m^3/p		**125**	**129**	**137**	**124**	**163**	**112**	**95**	**88**	**85**	**76**	**72**	80
l/m^2		**1 144**	**1 167**	**1 215**	**1 086**	**1 426**	**1 011**	**889**	**818**	**795**	**708**	**680**	718
Grange		4 956	5 069	3 754	3 219	3 241	2 870	1 989	2 296	2 266	2 480	3 026	
m^3/p		**28**	**28**	**19,76**	**17,12**	**18,11**	**16,31**	**11,50**	**12,90**	**12,45**	**14,67**	**18,68**	**8**
l/m^2		**400**	**409**	**303**	**260**	**261**	**231**	**160**	**185**	**183**	**200**	**244**	**120**
DG COMM							1 829	1 134	1 188	1 046	1 120	1 286	
m^3/p							**14,75**	**9,61**	**10,80**	**8,37**	**8,00**	**9,45**	**7**
l/m^2							**120**	**75**	**78**	**69**	**74**	**85**	**63**
Commission		**670 128**	**694 406**	**731 675**	**687 645**	**790 173**	**691 148**	**538 762**	**471 109**	**473 422**	**473 147**	**437 396**	
m^3/p		**20**	**20**	**21**	**19,33**	**22**	**18,32**	**13,79**	**11,74**	**11,65**	**11,45**	**10,86**	**14**
l/m^2		**439**	**447**	**458**	**425**	**498**	**416**	**324**	**284**	**299**	**296**	**282**	**336**

**values since 2016 revised in 2024 following internal procedural review*

11.2 Drainage and wastewater disposal

The sites comprising mostly offices are in urban locations have drainage and connection to the municipal sewerage system. There are challenges for the more rural sites and particularly the research sites where some particular wastewater streams, especially from laboratories, are very strictly

11.2a Brussels

Drainage and wastewater is managed within the urban collection and treatment facilities of the Brussels region.

11.2b Luxembourg

DG ENER manages a radiation protection laboratory, requiring particular attention to wastewater disposal. DG ENER did not discharge any wastewater in 2024.
Otherwise, drainage and wastewater for the Luxembourg buildings is managed by the urban collection and treatment facilities of the Luxembourg region.
The installation of a green roof in the new Mercier Post building improves water management and reduces flood risk.

11.2c JRC

JRC Geel is legally required to monitor its wastewater for both quantity and quality. Samples are analysed twice per year to ensure that concentrations of special parameters (including for example heavy metals,) do not exceed the legally defined thresholds. Potentially nuclear-contaminated water is treated and disposed as hazardous waste. The update of the site's environmental license resulted in stricter thresholds for special parameters (for example, it is ten times lower for mercury).

The **Ispra site** wastewaters include discharges produced by flush toilets (both from the internal JRC area and the social areas outside the fence) and discharges produced by the canteens, laboratory sinks, etc. On top of this, the JRC Ispra's wastewater treatment plant receives part of the urban wastewater from the Municipality of Ispra (about 23% of the overall amount in 2024). The treatment process includes a primary sedimentation phase followed by biological biodisc, secondary sedimentation and treatment by Ultra Violet (UV) rays. Treated wastewater is monitored to ensure compliance with the Italian threshold limits for water quality (during 2024 all the parameters are well below the Italian mandatory threshold limits) and is finally discharged in the Novellino stream (about 3,9 million cubic meters in 2024). A secondary sewer discharging system collects only rainwater and soil drainage and conveys them to the Acquanegra torrent, without the need for any preventive treatment processes.

In **JRC Karlsruhe**, all wastewater is treated in the wastewater treatment plant belonging to the KIT Campus Nord before being released.

In **JRC Petten**, wastewater discharge and quality is measured yearly during a week determined by the authorities and during which the discharge volume is measured along with concentration of heavy metals, organic solvents and chlorides. The data collected is used as a basis for taxation.
For monitoring purposes, the site carries out two separate sampling campaigns a year at four emission points, each located in different laboratories. The results give an indication of whether concentrations comply with legal limits for end of pipe discharge for the site. JRC Petten discharges comply with the legal discharge limits.

JRC Seville is hosted in a rented office building in an urban area. The wastewater installation is managed by the landlord in accordance with local legislation.

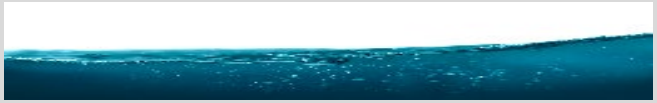
11.2d Grange

Until 2010 the site had its own sewage treatment plant, but due to technical issues it was decided to connect to the local sewage scheme.
Discharges to water: Polluted discharges to ground and surface water are prevented by primary and secondary containment of all hazardous wastes and materials and substances on site. Discharges to sewer are from sanitary and cooking facilities. The kitchen sinks drain through a grease trap which is regularly serviced and emptied. Cleaning chemicals are low or non-hazardous and are diluted when applied.

11.2e DG COMM The Houses of Europe are located in urban areas, where they have regular drainage and connection to the municipal sewerage system and wastewater disposal.

Case study 11.1: Water use in JRC Ispra

The water used at the site comes entirely from Lake Maggiore. It then undergoes a series of treatments such as disinfection and filtration and is finally distributed either as "cooling water" (for cooling buildings, facilities and other technical purposes) or, after a second filtration and disinfection, as "drinking water" (water dispensers, canteens, social and sport areas, sanitary use, etc.).
The site's objective is to maximise the use of “cooling water”, since it is a renewable energy source, while reducing the water used for “drinking purposes”.

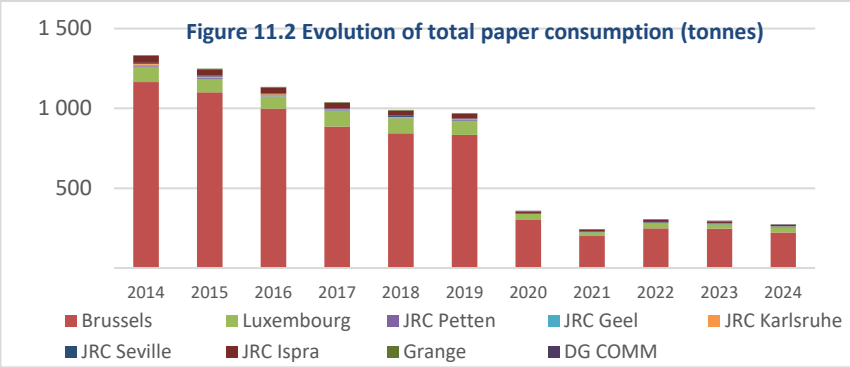


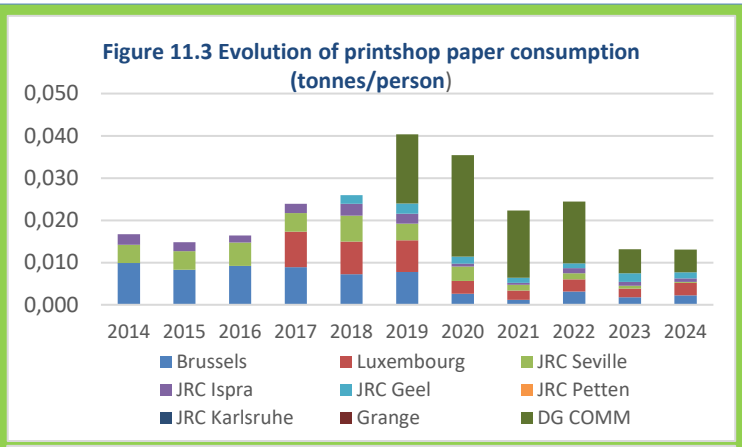
In 2024, works for the implementation of numerous improvements to the water system started. These works aimed to improve all water cycle system starting from pumping station to the wastewater treatment plant.

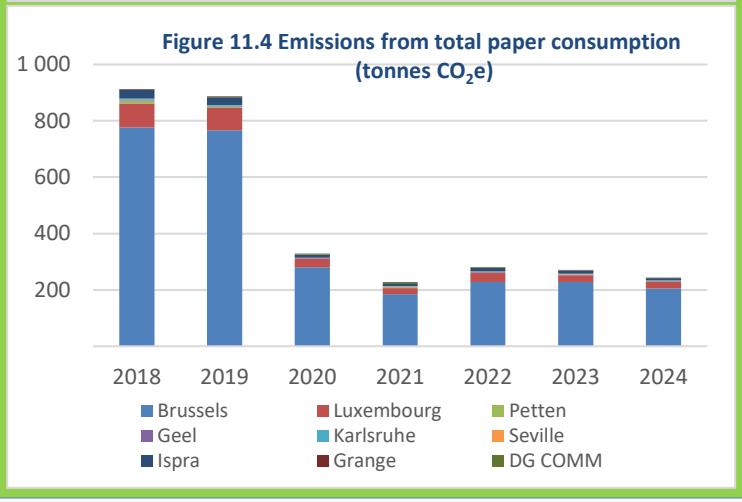
11.3 Paper consumption

The Commission measures the consumption of paper in the office, and also in the printshops. Currently printshops are present only in Brussels, Luxembourg, Seville, Geel and Ispra. Total paper consumption has reduced considerably as shown below as a result of campaigns over the years including the introduction of digital signature circuits, the removal of individual printers and installation of 'smart' network printers, and the ability to work together on electronic documents.

A new digital strategy was launched in 2022. Mass printing of poster scale calendars has reduced and circulation of paper publicity materials is almost phased out. Nonetheless an increase in total paper consumption was observed in 2022 (**Figure 11.2**, **Table 11.2**) accounted for by higher printshop consumption, as office paper consumption continued to fall (**Figure 11.3**). Commission Office paper consumption has been 5 sheets/person/day or less since 2021 and nearly reached 4.2 sheets/person/day in 2021. Emissions due to paper consumption are presented in **Figure 11.4**.







11.3a Brussels

In 2024 Paper consumption in Brussels remains stable and has significantly decreased since 2019, notably thanks to the transition of buildings to dynamic collaborative space (DCS) layout, the removal of individual printers, and the introduction of badge-secured printing. The paper used is EFC-certified, and its weight has been reduced by up to 70% (75g/m²).

In addition, the printshop's operations have also evolved. Until 2023, printing was done using offset presses, which rely on ink containing numerous additives that penetrate the paper fibers, making the recycling process more complex. Since 2024, printing is carried out using a digital press with water-based ink, which is more environmentally friendly and healthier for users. Paper offcuts are also collected and returned to the supplier to be reintegrated into the recycling loop and transformed into pulp.

Before Covid, the workshop reached up to 44 million prints per year. Today, the average is around 17 million. Beyond digitalisation, this reduction is also the result of a broader reflection by colleagues on the usefulness of certain printed products and printing methods. This includes the suppression of mass printing and of specific items such as notepads and paper calendars.

11.3b Luxembourg

The quantity of paper printed by the printshop in Luxembourg for externals and other Institutions has been deducted from total print jobs. The values from 2019-2024 concerning printshop paper consumption have been corrected to include in-house print jobs for Commission use only. Target 2019-2030 for office paper use has been revised to 70% reduction as previous target of 55% had been reached. New target already reached, with one of the lowest indicators between Commission sites.

Table 11.2 Total paper consumption (tonnes)

Site	Trend 2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Brussels		1 166	1 100	998	886	845	834	304	201	248	247	223
Luxembourg		96	86	77	99	93	87	34	23	32	27	30
JRC Petten		4,71	5,76	2,42	3,03	2,35	4,76	1,15	1,07	1,48	0,95	3,71
JRC Geel		7,44	3,57	5,93	3,15	3,62	4,04	1,39	1,68	1,81	1,64	2,05
JRC Karlsruhe		6,00	4,80	4,80	3,60	3,60	2,10	0,00	1,05	2,24	2,10	2,24
JRC Seville		4,82	5,00	4,96	5,13	6,41	4,96	2,51	1,45	3,70	1,49	1,27
JRC Ispra		47	41	35	36	34	29	11,52	10,99	13,05	12,73	8,49
Grange		1,84	3,54	6,25	3,74	3,30	2,87	1,16	1,06	0,94	0,90	0,83
DG COMM		0,00	0,00	0,00	0,00	0,00	3,76	3,35	2,49	2,61	1,61	1,57
Commission		**1 333**	**1 249**	**1 134**	**1 039**	**991**	**972**	**360**	**244**	**306**	**296**	**273**

Table 11.3 Office paper consumption (sheets/person/day*)

Site	Trend 2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Target 2019-30
Brussels		33	33	28	23	23	21	7,67	5,50	4,91	5,88	4,56	9
Luxembourg		24,06	18,60	16,77	12,35	10,91	9,55	3,58	2,02	2,77	2,77	2,39	3
JRC Petten		15,85	21	8,88	11,67	9,60	19,36	4,73	4,53	6,54	4,21	15,93	10
JRC Geel		20	10,33	19,04	11,30	11,32	12,39	3,62	5,27	5,79	4,26	6,38	4
JRC Karlsruhe		17,81	14,16	14,07	10,62	10,79	7,22	0,00	3,74	7,42	7,00	7,56	6
JRC Seville		12,55	13,48	11,11	11,74	12,77	9,67	3,21	2,39	7,79	3,03	2,74	8
JRC Ispra		16,55	15,84	14,15	13,55	12,22	11,02	4,39	4,26	4,37	4,59	2,81	2
Grange		9,93	20	33	20	19	17	6,8	6,0	5,2	5,4	5,2	12
DG COMM		0,00	0,00	0,00	0,00	0,00	14,09	4,44	6,80	6,27	5,86	6,20	11
Commission		**29**	**29**	**25**	**20**	**20**	**18,62**	**6,73**	**4,85**	**4,61**	**5,31**	**4,23**	**7**

* Based on 211 working days

11.4 EMAS system costs (staff and contracts)

Mindful of that some staff were critical in the past of the perceived effort of implementing EMAS, the coordination team has for several years estimated its cost to the taxpayer in terms of staff time and the value of costs of related contracts for example for audits, and for expertise (Table 11.4).

The overall cost for the Commission has usually fluctuated between 67 and 91 EUR per staff member since the calculations were initiated. The cost is higher at smaller sites and very low in Brussels, where most staff are based.

Table 11.4 EMAS system costs (staff and contracts)

Trend 2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Total Direct EMAS Cost (EUR)											
HR COORD + ECOR Network	1 007 252	1 021 252	1 021 252	1 049 252	1 119 252	1 133 252	1 147 252	1 182 252	1 366 480	1 961 000	1 965 300
EUR/employee	**29**	**29**	**29**	**29**	**30**	**30**	**29**	**29**	**34**	**47**	**46**
Brussels total	132 000	134 000	134 000	138 000	148 000	150 000	152 000	157 000	342 000	284 800	284 800
EUR/employee	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**11**	**9**	**9**
Luxembourg total	462 000	469 000	469 000	483 000	370 000	375 000	380 000	392 500	427 500	445 000	445 000
EUR/employee	**114**	**100**	**101**	**101**	**74**	**73**	**73**	**71**	**75**	**79**	**79**
JRC Petten total	66 000	67 000	67 000	69 000	74 000	75 000	76 000	78 500	171 000	178 000	178 000
EUR/employee	**234**	**241**	**243**	**262**	**298**	**301**	**308**	**327**	**743**	**781**	**754**
JRC Geel total	66 000	67 000	67 000	69 000	74 000	75 000	76 000	78 500	85 500	89 000	89 000
EUR/employee	**191**	**204**	**226**	**260**	**286**	**286**	**286**	**298**	**324**	**337**	**337**
JRC Karlsruhe total	71 000	72 000	72 000	74 000	79 000	80 000	81 000	83 500	90 500	94 000	94 000
EUR/employee	**222**	**224**	**222**	**230**	**249**	**254**	**262**	**274**	**296**	**309**	**313**
JRC Seville total	132 000	134 000	134 000	138 000	148 000	150 000	152 000	157 000	171 000	178 000	143 300
EUR/employee	**457**	**473**	**447**	**429**	**433**	**408**	**398**	**403**	**424**	**436**	**334**
JRC Ispra total	383 760	368 168	446 200	486 945	491 928	473 595	476 515	475 175	484 605	667 320	693 575
EUR/employee	**164**	**160**	**198**	**214**	**215**	**203**	**198**	**192**	**194**	**270**	**278**
Grange total	47 400	47 900	48 356	49 356	51 856	56 100	56 600	57 850	42 750	121 063	121 063
EUR/employee	**265**	**266**	**255**	**263**	**290**	**319**	**327**	**325**	**235**	**716**	**747**
DG COMM total							21 280	33 860	109 855	156 940	114 220
EUR/employee						**0**	**180**	**308**	**879**	**1.121**	**840**
Commission total	**2 367 411**	**2 380 319**	**2 458 808**	**2 556 553**	**2 556 035**	**2 567 947**	**2 618 647**	**2 696 137**	**3 291 190**	**4 175 123**	**4 128 258**
EUR/employee	**67**	**67**	**70**	**70**	**69**	**68**	**67**	**67**	**81**	**99**	**97**

11.5 Resource costs - energy

Under EMAS, the cost of energy, water, and waste disposal have also been monitored at all the sites to show, over time, that efforts to reduce consumption translate into significant economic savings for the Commission and hence the European taxpayer.

Energy represents by far the largest cost on a per capita basis Table 11.5.Total buildings' energy costs almost doubled in 2022 following Russia's illegal invasion of Ukraine, and they remained high in 2023, before reducing considerably in 2024.

Table 11.5 Resource costs (energy) at EMAS sites (EUR; EUR/person)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Total buildings energy cost (Eur)	**22 042 873**	**22 106 105**	**20 102 952**	**19 735 558**	**19 801 344**	**21 419 416**	**18 317 171**	**25 926 838**	**50 509 938**	**47 889 181**	**27 746 871**
Total buildings energy costs/perso	**626**	**624**	**571**	**539**	**533**	**565**	**469**	**646**	**1243**	**1136**	**650**

12 Lessons learned and the way forward

12.1 Lessons learned

System Developments

a) This report summarises the Commission's overall performance using data from the eight largest Commission sites, plus aggregated data from DG COMM for seven of the Commission's representations in Member States. The detail for these representations is presented in a separate standalone annex for the Houses of Europe that also considers the impact of the European Parliament's Liaison Offices.

b) The report therefore consolidates the recent expansion of an EMAS system that started with Brussels in 2005, incorporated Luxembourg in 2012, and then the five experimental JRC sites and DG SANTE at Grange in Ireland by 2014. It then started to include the EC Representations in Member States beginning with Vienna, and Valletta in 2021, Nicosia and Budapest in 2022, and the Hague, Copenhagen and Sofia in 2023. The Commission's six Executive Agencies, all located in Brussels, are also included within the registration.

c) Following specialist advice, the Commission continues to improve on measures introduced for reporting the carbon footprint in order to be more fully aligned with the Greenhouse Gas (GHG) Protocol which has become the most commonly recognised approach globally. This includes additional food categories that were added in 2023, along with annualised accounting of some categories of fixed assets that were previously amortised over several years. To ensure consistency, methodological changes are incorporated back to 2019, the baseline year for the 2030 target for emissions reduction. In addition to the inclusion of the EC Representations as a ninth site, another novelty is the inclusion of mission emissions for all Commission staff, not just those based at the EMAS registered sites.

d) Management of infrastructure aspects of the EC Representations in Member States has been transferred from Directorate for Communication to the Office of Infrastructure in Brussels (OIB).

Incorporating a more political focus for reducing a carbon emissions target

e) In April 2022 the Commission adopted, along with a new HR Strategy, its **Communication on Greening**. Its main focus is to ensure that the **Commission becomes carbon neutral in its operations by 2030**. It will reduce emissions as much as possible (and by at least 38% from its 2019 baseline (60% from 2005)) and will apply carbon removals to the unavoidable emissions in order to achieve net zero GHG emissions by 2030.

f) A **Progress Review** of the Commission's Communication on Greening should be published in late 2025/ early 2026. Following consultation of six thematic focus groups with experts from relevant services in late 2024 and early 2025, guided by a Steering Panel reporting to the EMAS Steering Committee, the Corporate Management Board in May 2025, and the EMAS Steering Committee in February and June 2025, a formal Commission wide Interservice Consultation was launched in October 2025.

g) To better monitor progress on reducing staff mission emissions, probably the most challenging target, the Commission expanded the scope of reporting to include all Commission staff thus making EMAS reporting more coherent with Directorate and Service level strategic and annual planning, including the setting of service level mission emissions reduction targets.

Main results achieved

i) The Commission reduced the carbon footprint by 31% between 2019 and 2024, and is therefore 'on track' to meet its 2030 objective of a 38% reduction.

j) The Commission reduced emissions from staff missions, representing nearly a quarter of total emissions, by 23% between 2019 and 2024, and is committed to achieving a 50% reduction as soon as possible, and at the latest by 2030. Having reduced by 86% in 2021 owing to the COVID pandemic, mission emissions had rebounded to a 31% reduction in 2023. The increase of reported emissions since 2023 is due largely to an increase in the factors for calculating mission emissions, but this is likely to be short-lived, as the factors have decreased for 2025. Although calculated staff mission emissions increased from 2023 to 2024, mission activity actually decreased in 2024. The recently adopted new Guide to Missions will further help decrease the missions' emissions, inter alia by promoting more train travel in cases where it can be a reasonable alternative to flying.

i) Overall, mobility related emissions including those from staff missions, experts' travel, and staff commuting have reduced by **39%** since 2019.

l) In 2024, buildings related emissions accounted for nearly half the carbon footprint, comprising i) ongoing energy use and refrigerant losses, and ii) fixed assets (embodied energy) from construction.

m) The Commission continues to reduce the core parameters measuring environmental impact that have been reported for several years. These relate, inter alia, to buildings' energy consumption, water use, non-hazardous waste generation, buildings' energy emissions, and office paper consumption. Several of the 2019-30 targets have already been achieved in 2024 (see **Table 2.2**).

n) In 2024 the Commission sold 23 buildings in Brussels (to be vacated, and/or re-leased in stages before 2030), and continued to reduce the number of buildings it occupied, reducing by six at JRC Ispra and three in Brussels. This contributed to improved environmental performance, particularly regarding energy consumption together with efforts by site management and staff on energy-saving measures.

o) Four soft mobility hubs have become operational in Brussels, greatly improving access to safe parking facilities for bikes, along with showering and locker facilities. Improving the office landscape has also been the result of efforts in Brussels and other sites to improve biodiversity through a number of projects.

Staff communication and participation

p) In 2024 the publication of the Environmental Statement (reporting for 2023) as an interactive and easily accessible html page represented a major step forward in communicating Commission results.

q) Numerous communication campaigns continue to spread the message to staff about the need to engage in environmentally responsible behaviour. Increasingly active local networks develop a focus of activity and interact with, and support, the efforts of EMAS correspondents in Directorates and Services Commission-wide, including Executive Agencies and Representations in Member States.

r) Joining forces with "greening" networks beyond internal EMAS practitioners through the Green Transition Multipliers Community, as well as promoting the Commission's leading position among EU Institutions and Agencies on issues of environmental excellence through the Inter institutional environmental management group and events like the Interinstitutional EMAS Days, have proven efficient in enhancing outreach and collaboration towards a climate-neutral Commission by 2030.

12.2 Way forward: The Commission will:

a) adopt the greening progress review by late 2025/early 2026 having :

- engaged relevant services through thematic groups and a formal inter-service consultations;
- incorporated new Commission priorities and assessed progress up to and including 2024; and
- developed an action plan to ensure the Commission reaches climate neutrality by 2030 and beyond.

b) continue to develop its management system to incorporate and deliver the actions of the Greening Communication with particular focus on reducing the carbon footprint. Special attention will be given to implementing two important mobility related actions:

- the new guide to missions that seeks to green professional travel, and
- the new mobility plan to encourage more sustainable commuting.

c) encourage more Directorates and Services to develop quantitative targets for reducing emissions from professional travel.

d) improve its application of Green Public Procurement (GPP), for example by developing its existing tendering dashboard to collect more information on the application of GPP in individual procedures.

e) continue developing its carbon footprint methodology, and in particular, consider methodological improvements to ensure consistency of approach between sites on certain scope 3 emissions.

f) continue to work with the European Parliament to maintain EMAS in the seven Houses of Europe

g) continue the development of the new IT tool to facilitate:

- data collection, reporting, and publishing
- managing follow up of audit actions
- recording and updating actions to achieve long term targets

h) strive to reach a greater audience through the online version of the environmental statement.

i) continue to rationalise its use of real estate by moving to new more energy efficient buildings when necessary to replace older ones. In addition, the following will also help reduce the overall footprint from buildings:
   - In Brussels, the clustering of related services will help achieve the greening objectives by reducing mobility needs.
   - In Luxembourg, the completion of the JMO2 building will eventually also help contribute to the greening objectives.
   - The continued implementation of dynamic collaborative space layout will further reduce office space requirements.

j) ensure that engaging staff at all levels remains a high priority to deliver the "Greening the Commission" commitments. Specifically, opening up to a larger audience by joining internal greening networks through the Green transition Multipliers Community and the new Climate Fresk group of facilitators will help mainstream greening practices across all Commission sites.

k) avoid staff "communication fatigue" by organising more focused communication campaigns on the main topics of significant environmental impact (e.g. Greener Buildings and Greener Travel) over a longer period of time, to facilitate the active participation of interested parties/internal stakeholders. Involve Commission management representatives as EMAS Ambassadors to "lead by example" and inspire further staff engagement in the green transition.

l) communicate its achievements to the EU general public through targeted external communication actions (e.g. 20 years of EMAS in Commission in 2025) and via staff advocacy as part of large-scale EU campaigns through social media (e.g. EU Climate Pact, through the Directorate for Climate and #ForOurPlanet initiative, of the Environment Directorate).

m) continue to play a leading role among other EU Institutions and bodies on environmental and climate neutrality topics by participating in interinstitutional and international networks such as the EU inter-institutional environment group meetings (GIME), the Greening Network of Decentralised Agencies, and the PACE programme managed by DG REFORM

ANNEXES

Environmental Statement 2025
(data to 2024)

Annex 1 - Buildings energy consumption and emissions

Table 1 Electricity supplied to sites (MWh)

Site	Trend 2014-24	2018	2019	2020	2021	2022	2023	2024
Brussels		105 816	105 375	90 523	81 079	74 053	68 598	64 755
Luxembourg		30 847	31 574	30 543	28 776	29 412	29 683	32 416
JRC Petten		2 906	2 724	2 444	2 345	2 227	2 163	2 241
JRC Geel		9 809	9 202	8 096	8 015	7 581	6 692	5 983
JRC Karlsruhe		12 260	12 300	10 650	11 360	11 632	11250	10957
JRC Seville		1 822	1 943	1 798	2 106	2 292	2 092	2 125
JRC Ispra		4 480	2 165	5 390	5 163	10 953	13 418	11 197
Grange		795	852	641	565	560	568	562
DG COMM			841	723	729	726	702	680
Commission		**168 734**	**166 136**	**150 085**	**139 409**	**138 711**	**134 463**	**130 236**
Electricity (% of total electricity supply covered by 'renewable certificates')								
BX		99	99	99	99	98	98	98
LX		89	90	89	90	90	96	90
PE		100	100	100	100	100	100	100
GE		95	100	100	100	100	100	100
KA		46	51	53	35	31	32	29
SE		27	16	100	100	100	100	100
IS		44	100	100	100	100	100	100
GR		38	35	38	38	65	77	77
Commission		**90**	**92**	**93**	**92**	**91**	**92**	**90**

Table 2 Non electricity supplied fuel (MWh), *and emissions (tCO_2e)*

Site	Trend 2014-24	2018	2019	2020	2021	2022	2023	2024
Mains supplied gas								
Brussels		78 024	78 309	71 465	80 276	58 705	50 341	48 463
emissions (combustion)		***14 060***	***14 464***	***13 221***	***14 851***	***10 860***	***9 286***	***8 949***
emissions (upstream)		***2 812***	***2 752***	***2 509***	***2 818***	***2 061***	***1 763***	***1 698***
Luxembourg		13 345	13 710	14 406	15 346	13 262	10 758	7 279
emissions (combustion)		***2 405***	***2 532***	***2 665***	***2 839***	***2 454***	***1 984***	***1 344***
emissions (upstream)		***481***	***482***	***506***	***539***	***466***	***377***	***255***
JRC Petten		3 427	3 105	2 271	2 482	1 904	1 852	2 190
emissions (combustion)		***618***	***574***	***420***	***459***	***352***	***342***	***404***
emissions (upstream)		***124***	***109***	***80***	***87***	***67***	***65***	***77***
JRC Geel		1 718	1 827	1 812	2 007	1 403	1 033	1 129
emissions (combustion)		***310***	***337***	***335***	***371***	***260***	***191***	***208***
emissions (upstream)		***62***	***64***	***64***	***70***	***49***	***36***	***40***
JRC Seville		529	372	461	449	394	180	215
emissions (combustion)		***95***	***69***	***85***	***83***	***73***	***33***	***40***
emissions (upstream)		***19***	***13***	***16***	***16***	***14***	***6,3***	***7,5***
JRC Ispra		87 071	89 895	78 010	85 012	60 675	48 324	50 279
emissions (combustion)		***17 533***	***18 101***	***14 432***	***15 727***	***11 225***	***8 914***	***9 285***
emissions (upstream)		***3 138***	***3 159***	***2 739***	***2 984***	***2 130***	***1 692***	***1 762***
DG COMM			146	116	151	138	101	113
emissions (combustion)			***27***	***22***	***28***	***26***	***19***	***21***
emissions (upstream)			***5,1***	***4,1***	***5,3***	***4,9***	***3,5***	***3,9***
Commission (MWh)		***184 115***	***187 245***	***168 445***	***185 600***	***136 369***	***112 506***	***109 576***
Commission (tCO_2e)		***41 656***	***42 688***	***37 097***	***40 878***	***30 040***	***24 710***	***24 095***
Tank supplied gas								
Grange		41	51	27	2,3	4,1	5,5	6,5
emissions (combustion)		***0,0***	***0,0***	***6,2***	***0,5***	***0,9***	***1,3***	***1,5***
emissions (upstream)		***0,0***	***0,0***	***1,1***	***0,1***	***0,2***	***0,2***	***0,2***
Commission (MWh)		**41**	**51**	**27**	**2,3**	**4,1**	**5,5**	**6,5**
Commission (tCO_2e)		***0,0***	***0,0***	***7,2***	***0,6***	***1,1***	***1,5***	***1,7***
Diesel (used at all sites to check emergency generators)								
Brussels		0,0	0,0	0,0	0,0	97	252	19
emissions (combustion)		***0,0***	***0,0***	***0,0***	***0,0***	***26***	***67***	***5,0***
emissions (upstream)		***0,0***	***0,0***	***0,0***	***0,0***	***5,6***	***15***	***1,1***
Luxembourg		1,5	6,1	3,5	3,3	3,3	7,8	4,4
emissions (combustion)		***0,4***	***1,6***	***0,9***	***0,9***	***0,9***	***2,1***	***1,2***
emissions (upstream)		***0,1***	***0,4***	***0,2***	***0,2***	***0,2***	***0,5***	***0,3***
JRC Petten		0,0	0,0	0,0	0,0	0,0	8,6	3,4
emissions (combustion)		***0,0***	***0,0***	***0,0***	***0,0***	***0,0***	***2,3***	***0,9***
emissions (upstream)		***0,0***	***0,0***	***0,0***	***0,0***	***0,0***	***0,5***	***0,2***
JRC Geel		36	33	8,6	28	28	26	27
emissions (combustion)		***9,6***	***8,9***	***2,3***	***7,4***	***7,4***	***6,8***	***7,3***
emissions (upstream)		***2,1***	***1,9***	***0,5***	***1,6***	***1,6***	***1,5***	***1,6***
JRC Karlsruhe		10	10	10	10	10	10	10
emissions (combustion)		***2,8***	***2,8***	***2,8***	***2,8***	***2,7***	***2,8***	***2,8***
emissions (upstream)		***0,6***	***0,6***	***0,6***	***0,6***	***0,6***	***0,6***	***0,6***
JRC Seville		0,0	0,0	0,0	0,0	4,8	3,2	15,4
emissions (combustion)		***0,0***	***0,0***	***0,0***	***0,0***	***1,3***	***0,9***	***4,1***
emissions (upstream)		***0,0***	***0,0***	***0,0***	***0,0***	***0,3***	***0,2***	***0,9***
JRC Ispra		91	115	88	77	45	55	44
emissions (combustion)		***25***	***31***	***23***	***20***	***12***	***15***	***12***
emissions (upstream)		***5,5***	***6,7***	***5,1***	***4,5***	***2,6***	***3,2***	***2,5***
Grange		1 089	1 131	1 041	958	938	841	998
emissions (combustion)		***294***	***301***	***277***	***255***	***249***	***224***	***265***
emissions (upstream)		***65***	***66***	***60***	***56***	***54***	***49***	***57***
DG COMM			0,0	0,0	0,2	0,0	1,6	3,3
emissions (combustion)			***0,0***	***0,0***	***0,0***	***0,0***	***0,4***	***0,9***
emissions (upstream)			***0,0***	***0,0***	***0,0***	***0,0***	***0,1***	***0,2***
Commission, (MWh)		***1 228***	***1 296***	***1 152***	***1 077***	***1 126***	***1 206***	***1 125***
Commission (tCO_2e)		***405***	***420***	***373***	***349***	***365***	***390***	***364***
District heating and cooling (MWh)								
Luxembourg		16 445	14 585	13 770	10 465	9087	7422	3872
emissions (combustion)		***2 943***	***2 528***	***2 484***	***2 023***	***1 794***	***1 440***	***492***
emissions (upstream + heat dist'n)		***465***	***399***	***392***	***320***	***348***	***298***	***102***
JRC Geel		2 113	1 913	1 779	2 414	921	371	1.549
emissions (combustion)		***564***	***511***	***475***	***644***	***246***	***99***	***414***
emissions (upstream + heat dist'n)		***89***	***81***	***75***	***102***	***48***	***20***	***86***
JRC Karlsruhe		10 888	11 912	9 826	11 607	9 724	7 354	8 271
emissions (combustion)		***2 319***	***2 537***	***2 093***	***2 472***	***2 071***	***1 566***	***1 762***
emissions (upstream + heat dist'n)		***366***	***401***	***331***	***391***	***402***	***324***	***365***
DG COMM			448	430	502	434	434	444
emissions (combustion)			***73***	***68***	***74***	***71***	***65***	***53***
emissions (upstream + heat dist'n)			***11***	***11***	***12***	***14***	***13***	***11***
Commission, (MWh)		***29 446***	***28 857***	***25 805***	***24 987***	***20 166***	***15 581***	***14 137***
Commission (tCO_2e)		***6 746***	***6 542***	***5 928***	***6 039***	***4 994***	***3 826***	***3 283***

(District heating not currently contributing to renewable energy at the above sites)

Table 3 Site generated renewable energy (MWh), *and emissions tCO_2e*

Site	Trend 2014-24	2018	2019	2020	2021	2022	2023	2024
Site geothermal pumps								
JRC Petten		0,5	1,1	1,3	1,3	0,0	0,0	0,0
emissions (upstream)		***0,0***	***0,0***	***0,1***	***0,1***	***0,0***	***0,0***	***0,0***
JRC Geel		74	74	101	86	30	39	46
emissions (upstream)		***3,3***	***3,3***	***4,6***	***3,9***	***1,4***	***1,8***	***2,1***
JRC Ispra		0,0	0,0	0,0	688,0	0,0	0,0	0,0
emissions (upstream)		***0,0***	***0,0***	***0,0***	***31,0***	***0,0***	***0,0***	***0,0***
Commission (MWh)		***75***	***75***	***102***	***776***	***30***	***39***	***46***
Commission (tCO_2e)		***3,4***	***3,4***	***4,6***	***34,9***	***1,4***	***1,8***	***2,1***
Site biomass								
Luxembourg		267	264	519	528	591	573	356
emissions (combustion)		***0,0***	***0,0***	***8,0***	***8,2***	***6,2***	***6,2***	***4,0***

emissions (upstream)	*5,1*	*5,0*	*9,9*	*10*	*11*	*11*	*6,9*
Commission, MWh	*267*	*264*	*519*	*528*	*591*	*573*	*356*
Commission (tCO $_2$ e)	*5,1*	*5,0*	*18*	*18*	*18*	*17*	*11*
Site photovoltaique panels (PVs) (production)							
Brussels	28	23	23	26	24	103	1 069
emissions (upstream)	*1,5*	*1,3*	*1,3*	*1,4*	*1,1*	*4,5*	*47*
JRC Petten	217	205	201	186	240	190	186
emissions (upstream)	*11,9*	*11,3*	*11,1*	*10,2*	*10,5*	*8,4*	*8,2*
JRC Ispra	541	713	727	824	974	1 266	1 529
emissions (upstream)	*30*	*39*	*40*	*45*	*43*	*56*	*67*
Commission, MWh	*786*	*941*	*951*	*1 036*	*1 238*	*1 559*	*2 784*
Commission, (tCO $_2$ e)	*43*	*52*	*52*	*57*	*54*	*68*	*122*
Lake water heat exchange							
JRC Ispra	3 616	2 917	2 372	2 474	2 591	3 816	3 905
emissions (upstream)	*163*	*131*	*107*	*111*	*117*	*172*	*176*
Commission, MWh	*3 616*	*2 917*	*2 372*	*2 474*	*2 591*	*3 816*	*3 905*
Commission, (tCO $_2$ e)	*163*	*131*	*107*	*111*	*117*	*172*	*176*
Cooling energy produced by heat pump in bld. 59x							
JRC Ispra	2 819	1 440	1 527	2 608	2 155	3 843	3 429
emissions (upstream)	*127*	*65*	*69*	*117*	*97*	*173*	*154*
Commission, MWh	*2 819*	*1 440*	*1 527*	*2 608*	*2 155*	*3 843*	*3 429*
Commission, (tCO $_2$ e)	*127*	*65*	*69*	*117*	*97*	*173*	*154*
Other supply							
JRC Ispra	4 304	2 605	2 370	3 919	2 842	4 577	3 773
emissions (upstream)	*194*	*117*	*107*	*176*	*128*	*206*	*170*
Commission, MWh	*4 304*	*2 605*	*2 370*	*3 919*	*2 842*	*4 577*	*3 773*
Commission, (tCO $_2$ e)	*194*	*117*	*107*	*176*	*128*	*206*	*170*
Solar panel (for heating water)							
JRC Ispra	0,0	0,0	0,0	0,0	0,0	0,0	0,0
emissions (upstream)	*0,0*	*0,0*	*0,0*	*0,0*	*0,0*	*0,0*	*0,0*
Commission, MWh	*0,0*	*0,0*	*0,0*	*0,0*	*0,0*	*0,0*	*0,0*
Commission, (tCO $_2$ e)	*0,0*	*0,0*	*0,0*	*0,0*	*0,0*	*0,0*	*0,0*
Emissions from renewable DG COMM							
emissions (upstream)		*0,0*	*0,0*	*0,0*	*0,0*	*0,0*	*0,0*
Total site generated, MWh	*9 047*	*6 802*	*6 314*	*8 732*	*7 292*	*10 564*	*10 864*
Total site generated, (tCO $_2$ e)	*408*	*309*	*288*	*398*	*318*	*465*	*481*

Table 4a Electricity emissions (market based, using supplier emission factor, Scope 2 only) plus upstream and line (T&D) losses, tCO_2e*

	2018	2019	2020	2021	2022	2023	2024
Brussels combustion	*434*	*277*	*260*	*170*	*178*	*201*	*165*
Brussels upstream	*75*	*61*	*60*	*44*	*47*	*46*	*48*
Brussels line (T&D) losses	*13*	*9*	*7*	*5*	*6*	*6*	*6*
Luxembourg combustion	*1 402*	*1 416*	*1 503*	*1 153*	*393*	*0*	*0*
Luxembourg upstream	*184*	*151*	*169*	*134*	*136*	*57*	*158*
Luxembourg line (T&D) losses	*10*	*9*	*7*	*6*	*5*	*2*	*6*
JRC Petten combustion	*0,0*	*0,0*	*0,0*	*0,0*	*0,0*	*0,0*	*0,0*
JRC Petten upstream	*0,0*	*0,0*	*0,0*	*0,0*	*0,0*	*0,0*	*0,0*
JRC Petten line (T&D) losses	*0,0*	*0,0*	*0,0*	*0,0*	*0,0*	*0,0*	*0,0*
JRC Geel combustion	*140*	*0,0*	*0,0*	*0,0*	*0,0*	*0,0*	*0,0*
JRC Geel upstream	*23*	*0,0*	*0,0*	*0,0*	*0,0*	*0,0*	*0,0*
JRC Geel line (T&D) losses	*4,0*	*0,0*	*0,0*	*0,0*	*0,0*	*0,0*	*0,0*
JRC Karlsruhe combustion	*3 837*	*3 260*	*2 556*	*2 454*	*2 920*	*3 071*	*2 991*
JRC Karlsruhe upstream	*685*	*674*	*594*	*626*	*641*	*620*	*604*
JRC Karlsruhe line (T&D) losses	*207*	*192*	*151*	*170*	*187*	*181*	*176*
JRC Seville combustion	*454*	*440*	*0,0*	*0,0*	*0,0*	*0,0*	*0,0*
JRC Seville upstream	*96*	*112*	*0,0*	*0,0*	*0,0*	*0,0*	*0,0*
JRC Seville line (T&D) losses	*30*	*29*	*0,0*	*0,0*	*0,0*	*0,0*	*0,0*
JRC Ispra	*511*	*0,0*	*0,0*	*0,0*	*0,0*	*0,0*	*0,0*
JRC Ispra upstream	*247*	*0,0*	*0,0*	*0,0*	*0,0*	*0,0*	*0,0*
JRC line (T&D) losses	*43*	*0,0*	*0,0*	*0,0*	*0,0*	*0,0*	*0,0*
Grange combustion	*168*	*165*	*120*	*106*	*35*	*13*	*29*
Grange upstream	*42*	*45*	*33*	*33*	*18*	*12*	*12*
Grange line (T&D) losses	*12*	*11*	*7*	*8*	*4*	*3*	*3*
DG COMM combustion		*113*	*89*	*89*	*78*	*79*	*61*
DG COMM upstream		*14*	*11*	*11*	*12*	*11*	*10*
DG COMM line (T&D) losses		*6,5*	*5,5*	*5,3*	*3,2*	*3,0*	*2,6*
Total	*8 619*	*6 983*	*5 574*	*5 012*	*4 662*	*4 305*	*4 270*

*Note * Emissions factors for upstream and line losses provided by CO2logic back to 2018*

Table 4b Electricity emissions (location based, using national emission factor) plus upstream and line (T&D) losses, tCO_2e*

	2018	2019	2020	2021	2022	2023	2024
Brussels combustion	*24 073*	*19 926*	*17 172*	*13 783*	*12 589*	*11 662*	*11 008*
Brussels upstream	*5 047*	*4 352*	*4 300*	*3 113*	*2 844*	*2 634*	*2 487*
Brussels line (T&D) losses	*868*	*622*	*525*	*357*	*341*	*316*	*298*
Luxembourg combustion	*12 289*	*9 965*	*8 711*	*8 253*	*8 435*	*8 513*	*9 297*
Luxembourg upstream	*1 613*	*1 509*	*1 539*	*1 344*	*1 374*	*1 386*	*1 514*
Luxembourg line (T&D) losses	*86*	*85*	*61*	*58*	*50*	*50*	*55*
JRC Petten combustion	*1 306*	*1 068*	*780*	*776*	*737*	*716*	*742*
JRC Petten upstream	*244*	*230*	*192*	*177*	*168*	*163*	*169*
JRC Petten line (T&D) losses	*47*	*37*	*25*	*25*	*22*	*22*	*23*
JRC Geel combustion	*2 231*	*1 740*	*1 536*	*1 363*	*1 289*	*1 138*	*1 017*
JRC Geel upstream	*468*	*380*	*385*	*308*	*291*	*257*	*230*
JRC Geel line (T&D) losses	*80*	*54*	*47*	*35*	*35*	*31*	*28*
JRC Karlsruhe combustion	*5 566*	*4 758*	*3 664*	*4 355*	*4 460*	*4 313*	*4 201*
JRC Karlsruhe upstream	*685*	*674*	*594*	*626*	*641*	*620*	*604*
JRC Karlsruhe line (T&D) losses	*207*	*192*	*151*	*170*	*187*	*181*	*176*
JRC Seville combustion	*552*	*452*	*330*	*369*	*402*	*367*	*372*
JRC Seville upstream	*132*	*133*	*111*	*129*	*140*	*128*	*130*
JRC Seville line (T&D) losses	*41*	*34*	*26*	*30*	*34*	*31*	*32*
JRC Ispra	*1 365*	*615*	*1 458*	*1 471*	*3 122*	*3 824*	*3 191*
JRC Ispra upstream	*439*	*212*	*527*	*508*	*1 077*	*1 319*	*1 101*
JRC line (T&D) losses	*76*	*34*	*80*	*84*	*204*	*250*	*208*
Grange combustion	*289*	*272*	*187*	*197*	*195*	*198*	*196*
Grange upstream	*67*	*70*	*54*	*53*	*52*	*53*	*52*
Grange line (T&D) losses	*19*	*18*	*12*	*13*	*12*	*12*	*12*
DG COMM combustion		*186*	*135*	*141*	*141*	*137*	*131*
DG COMM upstream		*33*	*29*	*28*	*29*	*28*	*26*
DG COMM line (T&D) losses		*7,5*	*6,3*	*6,1*	*5,4*	*5,3*	*5,3*
Total	*57 792*	*47 659*	*42 636*	*37 772*	*38 875*	*38 352*	*37 304*

*Note * Emissions factors provided by CO2logic back to 2018*

Table 4c Reduction in Commission electricity emissions owing to contracting approach (%)

	2018	2019	2020	2021	2022	2023	2024
Reduction tCO $_2$ e	*46 105*	*37 741*	*33 514*	*29 138*	*30 321*	*27 049*	*28 579*
Reduction due to contracting approach (%)	80	79	79	77	78	71	77
Reduction as % of reported buildings emissions (Table 4.4)	77	63	63	52	68	66	77

Source - Annex 1 tables 4a, 4b, 5i; Chapter 4 Table 4.4

Tables 5a to 5i Electricity from 'renewable energy' contracts, sources of electricity (fraction), and emissions (tCO_2e)

5a

		2018	2019	2020	2021	2022	2023	2024
Brussels								
Offshore wind	fraction of renewable energy	0,07	0,07	0,07	0,07	0,25	0,35	0,17
Energy used	MW	**7 297**	**7 273**	**5 801**	**5 196**	**17 842**	**23 427**	**11 056**
Upstream emissions	tCO_2e	**108**	**108**	**86**	**77**	**278**	**365**	**172**
Line (T&D) losses*	tCO_2e	**60**	**43**	**34**	**23**	**82**	**108**	**51**
Onshore wind	fraction of renewable energy	0,07	0,07	0,07	0,07	0,25	0,46	0,78
Energy used	MW	**7 297**	**7 273**	**5 801**	**5 196**	**17 842**	**30 806**	**49 433**
Upstream emissions	tCO_2e	**93**	**92**	**74**	**66**	**252**	**434**	**697**
Line (T&D) losses*	tCO_2e	**60**	**43**	**34**	**23**	**82**	**142**	**227**
Photovoltaics (PVs)	fraction of renewable energy	0,01	0,01	0,02	0,02	0,02	0,07	0,03
Energy (MW)	MW	**1 042**	**1 039**	**1 785**	**1 599**	**1 456**	**4 590**	**2 121**
Upstream emissions	tCO_2e	**57**	**57**	**98**	**88**	**64**	**201**	**93**
Line (T&D) losses	tCO_2e	**8,5**	**6,1**	**10**	**7,0**	**6,7**	**21**	**10**
Hydro	fraction of renewable energy	0,85	0,85	0,85	0,85	0,49	0,13	0,01
Energy (MW)	MW	**81 095**	**82 650**	**71 830**	**63 104**	**33 055**	**8 066**	**825**
Upstream emissions	tCO_2e	**487**	**496**	**431**	**379**	**198**	**48**	**5,0**
Line (T&D) losses*	tCO_2e	**665**	**488**	**417**	**278**	**152**	**37**	**3,8**
Biomass	fraction of renewable energy	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Energy (MW)	MW	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Combustion emissions	tCO_2e	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
Upstream emissions	tCO_2e	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
Line (T&D) losses*	tCO_2e	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
Other	fraction of renewable energy	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Energy (MW)	MW							
Upstream emissions	tCO_2e							
Line (T&D) losses*	tCO_2e							
Total of fractions		1,00	1,00	1,00	1,00	1,00	1,00	1,00
Total tCO_2e		***2 572***	***2 365***	***2 958***	***2 532***	***2 565***	***5 926***	***3 371***

**Applying national emissions factor for Belgium*

5b

		2018	2019	2020	2021	2022	2023	2024
Luxembourg								
Offshore wind	fraction of renewable energy	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Energy used	MW	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Upstream emissions	tCO_2e	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Line (T&D) losses*	tCO_2e	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Onshore wind	fraction of renewable energy	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Energy used	MW	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Upstream emissions	tCO_2e	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
Line (T&D) losses*	tCO_2e	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
Hydro	fraction of renewable energy	1,00	1,00	1,00	0,44	0,44	0,59	0,56
Energy used	MW	27 330	28 423	27 199	11 343	11 750	16 720	16 388
Upstream emissions	tCO_2e	**164**	**171**	**163**	**68**	**70**	**100**	**98**
Line (T&D) losses*	tCO_2e	**77**	**77**	**54**	**23**	**20**	**28**	**28**
Photovoltaics (PVs)	fraction of renewable energy	0,00	0,00	0,00	0,00	0,00	0,002	0,000
Energy used	MW	0,0	0,0	0,0	0,0	0,0	63	0,0
Upstream emissions	tCO_2e	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**2,8**	**0,0**
Line (T&D) losses*	tCO_2e	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,1**	**0,0**
Geothermal	fraction of renewable energy	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Energy used	MW	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Upstream emissions	tCO_2e	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Line (T&D) losses*	tCO_2e	***0,0***	***0,0***	***0,0***	***0,0***	***0,0***	***0,0***	***0,0***
Biomass	fraction of renewable energy	0,00	0,00	0,00	0,56	0,56	0,41	0,44
Energy used	MW	0,00	0,00	0,00	14 573	14 760	11 676	12 643
Combustion emissions	tCO_2e	**0,00**	**0,00**	**0,00**	**225**	**155**	**125**	**143**
Upstream emissions	tCO_2e	**0,00**	**0,00**	**0,00**	**282**	**286**	**226**	**245**
Line (T&D) losses*	tCO_2e	**0,00**	**0,00**	**0,00**	**29**	**25**	**20**	**21**
Other		0,00	0,00	0,00	0,00	0,00	0,00	0,00
Energy used								
Upstream emissions								
Line (T&D) losses*								
Total proportion		1,00	1,00	1,00	1,00	1,00	1,00	1,00
Total tCO_2e		***241***	***247***	***218***	***627***	***557***	***503***	***536***

**Applying national emissions factor for Luxembourg*

5c

		2018	2019	2020	2021	2022	2023	2024
JRC Petten								
Offshore wind	fraction of renewable energy	0,00	0,00	0,00	0,00	0,50	0,50	0,50
Energy used	MW	0,0	0,0	0,0	0,0	1 114	1 081	1 121
Upstream emissions	tCO_2e	**0,0**	**0,0**	**0,0**	**0,0**	**17**	**17**	**17**
Line (T&D) losses*	tCO_2e	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
Onshore wind	fraction of renewable energy	0,00	0,00	0,00	0,00	0,50	0,50	0,50
Energy used	MW	0,0	0,0	0,0	0,0	1 114	1 081	1 121
Upstream emissions	tCO_2e	***0,0***	***0,0***	***0,0***	***0,0***	***16***	***15***	***16***
Line (T&D) losses*	tCO_2e	***0,0***	***0,0***	***0,0***	***0,0***	***0,0***	***0,0***	***0,0***
Hydro	fraction of renewable energy	0,00	0,00	0,00	1,00	0,00	0,00	0,00
Energy used	MW	0,0	0,0	0,0	2 345	0,0	0,0	0,0
Upstream emissions	tCO_2e	**0,0**	**0,0**	**0,0**	**14**	**0,0**	**0,0**	**0,0**
Line (T&D) losses*	tCO_2e	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
Photovoltaics (PVs)	fraction of renewable energy	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Energy used	MW	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Upstream emissions	tCO_2e	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
Line (T&D) losses*	tCO_2e	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
Geothermal	fraction of renewable energy	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Energy used	MW	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Upstream emissions	tCO_2e	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
Line (T&D) losses*	tCO_2e	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
Biomass	fraction of renewable energy	1,00	1,00	1,00	0,00	0,00	0,00	0,00
Energy used	MW	2 906	2 724	2 444	0,00	0,00	0,00	0,00
Combustion emissions	tCO_2e	**0,0**	**0,0**	**38**	**0,0**	**0,0**	**0,0**	**0,0**
Upstream emissions	tCO_2e	**55**	**52**	**46**	**0,0**	**0,0**	**0,0**	**0,0**
Line (T&D) losses*	tCO_2e	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
Other	fraction of renewable energy	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Energy used	MW							
Upstream emissions	tCO_2e							
Line (T&D) losses*	tCO_2e							
Total proportion		1,00	1,00	1,00	1,00	1,00	1,00	1,00
Total tCO_2e		***55***	***52***	***84***	***14***	***33***	***32***	***33***

****Applying national emissions factor for the Netherlands***

5d

		2018	2019	2020	2021	2022	2023	2024
JRC Geel								
Offshore wind	fraction of renewable energy	0,01	0,01	0,00	0,23	0,15	0,12	0,04
Energy used	MW	69	68	34	1 859	1111	814	265
Upstream emissions	tCO_2e	**1,0**	**1,0**	**0,5**	**28**	**17**	**13**	**4,1**
Line (T&D) losses*	tCO_2e	**0,6**	**0,4**	**0,2**	**8,2**	**5,1**	**3,7**	**1,2**
Onshore wind	fraction of renewable energy	0,04	0,04	0,01	0,16	0,16	0,27	0,21
Energy used	MW	391	386	115	1 298	1 232	1 820	1 235
Upstream emissions	tCO_2e	**5,0**	**4,9**	**1,5**	**16**	**17**	**26**	**17**
Line (T&D) losses*	tCO_2e	**3,2**	**2,3**	**0,7**	**5,7**	**5,7**	**8,4**	**5,7**
Hydro	fraction of renewable energy	0,83	0,83	0,81	0,52	0,50	0,38	0,69
Energy used	MW	7 707	7 611	6 588	4 171	3 791	2 560	4 140
Upstream emissions	tCO_2e	**46**	**46**	**40**	**25**	**23**	**15**	**25**
Line (T&D) losses*	tCO_2e	**63**	**45**	**38**	**18**	**17**	**12**	**19**
Photovoltaics (PVs)	fraction of renewable energy	0	0	0,00	0,00	0,00	0,01	0,05
Energy used	MW			4,0	14	7,6	52	296

Upstream emissions	tCO_2e	**0,0**	**0,0**	**0,2**	**0,8**	**0,3**	**2,3**	**13**
Line (T&D) losses*	tCO_2e	**0,0**	**0,0**	**0,02**	**0,06**	**0,03**	**0,2**	**1,4**
Geothermal	fraction of renewable energy	0,00	0,00	0,00	0,00	0,00	0,001	0,001
Energy used	MW						7,36	3,15
Upstream emissions	tCO_2e	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,3**	**0,1**
Line (T&D) losses*	tCO_2e	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
Biomass	fraction of renewable energy	0,10	0,10	0,17	0,08	0,19	0,21	0,01
Energy used	MW	901	890	1 340	665	1 433	1 435	44
Combustion emissions	tCO_2e	**0,0**	**0,0**	**21**	**10**	**15**	**15**	**0,5**
Upstream emissions	tCO_2e	**17**	**17**	**25**	**13**	**28**	**28**	**0,9**
Line (T&D) losses*	tCO_2e	**7,4**	**5,3**	**7,8**	**2,9**	**6,6**	**6,6**	**0,2**
Other	fraction of renewable energy	0,03	0,03	0,00	0,01	0,00	0,0007	0
Energy used	MW							
Upstream emissions	tCO_2e							
Line (T&D) losses*	tCO_2e							
Total proportion		1,00	1,00	1,00	1,00	1,00	1,00	1,00
Total tCO_2e		***144***	***121***	***135***	***128***	***135***	***130***	***88***

* to be evaluated in the next CO_2 review

5e

		2018	2019	2020	2021	2022	2023	2024
JRC Karlsruhe								
Offshore wind	fraction of renewable energy	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Energy used	MW							
Upstream emissions	tCO_2e							
Line (T&D) losses*	tCO_2e	***0,0***	***0,0***	***0,0***	***0,0***	***0,0***	***0,0***	***0,0***
Onshore wind	fraction of renewable energy	0,00	0,00	0,00	0,00			
Energy used	MW							
Upstream emissions	tCO_2e							
Line (T&D) losses*	tCO_2e	***0,0***	***0,0***	***0,0***	***0,0***	***0,0***	***0,0***	***0,0***
Hydro	fraction of renewable energy	0,00	0,00	0,00	0,00			
Energy used	MW							
Upstream emissions	tCO_2e							
Line (T&D) losses*	tCO_2e	***0,0***	***0,0***	***0,0***	***0,0***	***0,0***	***0,0***	***0,0***
Photovoltaics (PVs)	fraction of renewable energy	0,00	0,00	0,00	0,00			
Energy used	MW							
Upstream emissions	tCO_2e							
Line (T&D) losses*	tCO_2e	***0,0***	***0,0***	***0,0***	***0,0***	***0,0***	***0,0***	***0,0***
Geothermal	fraction of renewable energy	0,00	0,00	0,00	0,00			
Energy used	MW							
Upstream emissions	tCO_2e							
Line (T&D) losses*	tCO_2e	***0,0***	***0,0***	***0,0***	***0,0***	***0,0***	***0,0***	***0,0***
Biomass	fraction of renewable energy	0,00	0,00	0,00	0,00			
Energy used	MW							
Combustion emissions	tCO_2e							
Upstream emissions	tCO_2e							
Line (T&D) losses*	tCO_2e	***0,00***	***0,00***	***0,00***	***0,00***	***0,00***	***0,00***	***0,00***
Other	fraction of renewable energy	0,00	0,00	0,00	0,00			
Energy used	MW							
Upstream emissions	tCO_2e							
Line (T&D) losses*	tCO_2e							
Total proportion		0,00	0,00	0,00	0,00	0,00	0,00	0,00
Total tCO_2e		***0,0***	***0,0***	***0,0***	***0,0***	***0,0***	***0,0***	***0,0***

5f

		2018	2019	2020	2021	2022	2023	2024
JRC Seville								
Offshore wind	fraction of renewable energy	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Energy used	MW	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Upstream emissions	tCO_2e	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
Line (T&D) losses*	tCO_2e	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
Onshore wind	fraction of renewable energy	0,00	0,00	0,04	0,84	0,92	1,00	0,73
Energy used	MW	0,0	0,0	65	1 766	2 112	2 092	1 551
Upstream emissions	tCO_2e	**0,0**	**0,0**	**0,8**	**22**	**30**	**29**	**22**
Line (T&D) losses*	tCO_2e	**0,0**	**0,0**	**0,9**	**25**	**31**	**31**	**23**
Hydro	fraction of renewable energy	0,00	0,00	0,96	0,16	0,00	0,00	0,27
Energy used	MW	***0,0***	***0,0***	1 734	340	0,0	0,0	574
Upstream emissions	tCO_2e	**0,0**	**0,0**	**10**	**2,0**	**0,0**	**0,0**	**3,4**
Line (T&D) losses*	tCO_2e	**0,0**	**0,0**	**25**	**4,9**	**0,0**	**0,0**	**8,5**
Photovoltaics (PVs)	fraction of renewable energy	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Energy used	MW	0,0	0,0	0,0	0,0	1,1	0,0	0,0
Upstream emissions	tCO_2e	**0,0**	**0,0**	0,0	**0,0**	**0,1**	**0,0**	**0,0**
Line (T&D) losses*	tCO_2e	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
Geothermal	fraction of renewable energy	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Energy used	MW	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Upstream emissions	tCO_2e	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
Line (T&D) losses*	tCO_2e	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
Biomass	fraction of renewable energy	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Energy used	MW	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Combustion emissions	tCO_2e	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
Upstream emissions	tCO_2e	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
Line (T&D) losses*	tCO_2e	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
Other	fraction of renewable energy	0,00	0,00	0,00	0,00	0,08	0,00	0,00
Energy used	MW							
Upstream emissions	tCO_2e							
Line (T&D) losses*	tCO_2e					*	*	*
Total proportion		0,00	0,00	1,00	1,00	1,00	1,00	1,00
Total tCO_2e		***0,0***	***0,0***	***37***	***55***	***61***	***61***	***57***

* to be evaluated in the next CO_2 review

5g

		2018	2019	2020	2021	2022	2023	2024
JRC Ispra								
Offshore wind	fraction of renewable energy	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Energy used	MW	0	0	0	0	0	0	0
Upstream emissions	tCO_2e	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Line (T&D) losses*	tCO_2e	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Onshore wind	fraction of renewable energy	0,97	0,00	0,00	0,00		0,00	0,91
Energy used	MW	1 900					16	10 178
Upstream emissions	tCO_2e	**24**	**0**	**0**	**0**	**0**	**0**	**144**
Line (T&D) losses*	tCO_2e	**32**	**0**	**0**	**0**	**0**	**0**	**189**
Hydro	fraction of renewable energy	0,03	0,05	1,00	0,02	0,00	0,92	0,01
Energy used	MW	55	115	5390	98	0	12 345	56
Upstream emissions	tCO_2e	**0**	**1**	**32**	**1**	**0**	**74**	**0**
Line (T&D) losses*	tCO_2e	**1**	**2**	**80**	**2**	**0**	**230**	**1**
Photovoltaics (PVs)	fraction of renewable energy	0,00	0,94	0,00	0,00	0,02	0,01	0,00
Energy used	MW	0	2 024	0	0	263	121	0
Upstream emissions	tCO_2e	**0**	**111**	**0**	**0**	**12**	**5**	**0**
Line (T&D) losses*	tCO_2e	**0**	**32**	**0**	**0**	**5**	**2**	**0**
Geothermal	fraction of renewable energy	0,00	0,00	0,00	0,00	0,00	0,00	
Energy used	MW	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Upstream emissions	tCO_2e	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Line (T&D) losses*	tCO_2e	***0,00***	***0,00***	***0,00***	***0,00***	***0,00***	***0,00***	***0,00***
Biomass	fraction of renewable energy	0,00	0,01	0,00	0,98	0,98	0,00	0,00
Energy used	MW	0,0	26	0,0	5 065	10 690	0,0	0,0
Combustion emissions	tCO_2e	**0,0**	**0,0**	**0,0**	**78**	**113**	**0,0**	**0,0**
Upstream emissions	tCO_2e	**0,0**	**0,5**	**0,0**	**98**	**207**	**0,0**	**0,0**
Line (T&D) losses*	tCO_2e	**0,0**	**0,4**	**0,0**	**83**	**199**	**0,0**	**0,0**
Plant oil	fraction of renewable energy	0,00	0,00	0,00	0,00	0,00	0,07	0,00
Energy used	MW	0	0	0	0	0	939	0
Upstream emissions**	tCO_2e	**0**	**0**	**0**	**0**	**0**	**10**	**0**

Line (T&D) losses*	tCO_2e	**0**	**0**	**0**	**0**	**0**	**17**	**0**
Wood	fraction of renewable energy	0,00	0,00	0,00	0,00	0,00	0,00	0,09
Energy used	MW	0	0	0	0	0	0	963
Upstream emissions**	tCO_2e	**0**	**0**	**0**	**0**	**0**	**0**	**11**
Line (T&D) losses*	tCO_2e	**0**	**0**	**0**	**0**	**0**	**0**	**18**
Total proportion		1,00	1,00	1,00	1,00	1,00	1,00	1,00
Total tCO_2e		***58***	***146***	***113***	***261***	***535***	***339***	***363***

**Applying national emissions factor for Italy*

5h

		2018	2019	2020	2021	2022	2023	2024
Grange								
Offshore wind	fraction of renewable energy	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Energy used	MW	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Upstream emissions	tCO_2e	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
Line (T&D) losses*	tCO_2e	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
Onshore wind	fraction of renewable energy	0,00	0,00	0,00	0,00	0,00	0,00	0,00
	MW	0,0	0,0	0,0	0,0	0,0	0,0	0,0
	tCO_2e	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
as tCO_2e	tCO_2e	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
Hydro	fraction of renewable energy	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Energy used	MW	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Upstream emissions	tCO_2e	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
Line (T&D) losses*	tCO_2e	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
Photovoltaics (PVs)	fraction of renewable energy	0,00	0,00	0,00	0,00	0,00	0,00	0,00
	MW	0,0	0,0	0,0	0,0	0,0	0,0	0,0
	tCO_2e	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
as tCO_2e	tCO_2e	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
Geothermal	fraction of renewable energy	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Energy used	MW	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Upstream emissions	tCO_2e	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
Line (T&D) losses*	tCO_2e	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
Biomass	fraction of renewable energy	0,00	0,00	0,00	0,00	0,00	0,00	0,00
	MW	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Combustion emissions	tCO_2e	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
	tCO_2e	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
as tCO_2e	tCO_2e	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
Other	fraction of renewable energy	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Energy used	MW	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Upstream emissions	tCO_2e	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
Line (T&D) losses*	tCO_2e	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
Total proportion		0,00	0,00	0,00	0,00	0,00	0,00	0,00
Total tCO_2e		***0,0***	***0,0***	***0,0***	***0,0***	***0,0***	***0,0***	***0,0***

5i

	2018	2019	2020	2021	2022	2023	2024
DG COMM*							
Combustion emissions (biomass)							
Upstream emissions		2,4	2,7	3,0	3,7	3,9	3,8
Line (T&D) losses		0,7	1,3	1,4	1,9	2,2	2,3
Total tCO_2e		***3,1***	***4,0***	***4,5***	***5,6***	***6,1***	***6,1***

** Data from Enviornmental Statement for the Houses of Europe*

5j

Total of upstream emissions comprising embodied energy of infrastructure and line losses for T&D for electricity supply from renewable sources, (sum tables 5a-5i) tCO_2e

	2018	2019	2020	2021	2022	2023	2024
Commission	3 069	2 935	3 548	3 622	3 892	6 998	4 454

Annex 2 - Waste production and emissions

WASTE PRODUCTION (tonnes)

Brussels waste (tonnes)

i) Non hazardous	EWC	Trend 2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Residual waste/Tout venant	**20 03 01**		**2 545**	**2 594**	**2 577**	**2 449**	**2 351**	**2 407**	**787**	**670**	**698**	**929**	**612**
Paper and card	20 01 01		2 675	2 274	2 349	2 212	2 167	2 398	1 266	1 299	1 218	1 207	1 116
PMC	15 01 06		116	123	142	147	144	152	60	31	62	119	125
Organic waste	20 01 08		311	289	261	243	213	244	79	1,40	145	372	470
Glass	20 01 02		29	26	26	23	28	41	14	6,7	16	23	23
Furniture/Encombrants	20 03 07		404	349	528	506	256	49	32	38	26	46	43
Film étirable (plastics)	20 01 39		0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,003
Frigolite	15 01 02		0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,04
Déchets verts bâtiments	20 02 01		0,0	0,0	0,0	0,0	0,0	19	23	14	4,2	3,1	0,3
Déchets bois bâtiments	17 02 01		0,0	0,0	0,0	0,0	0,0	167	79	341	138	66	198
Déchets métal bâtiments	17 04 07		0,0	0,0	0,0	0,0	0,0	57	46	114	33	44	68
Roofing	17 03 02		0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	1,7
Oil and fat (from kitchen origin)	20 01 25		1,7	1,1	44	234	316	156	2,4	4,8	4,3	5,7	3,2
Oil & fat (from work/maintenance origin)	19 08 09		0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	12	18
Medical waste	18 01		0,0	0,0	2,4	1,7	1,9	2,6	1,9	2,1	3,5	2,5	2,5
Déchets constructions (tout venant/inertes)	17 09 04		0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	381
Contractor/supplier non haz waste	17 01 07		0,0	0,0	0,0	0,0	0,0	570	425	601	380	195	83
Total			**6 083**	**5 656**	**5 929**	**5 816**	**5 476**	**6 262**	**2 815**	**3 123**	**2 729**	**3 024**	**3 145**
ii) Hazardous	**EWC**												
Maintenance of buildings/lifts	13 05		64	45	122	68	76	123	2,30	96	9,02	1,68	0,00
Microfiches	09 01 08		0,00	0,00	0,00	0,00	0,00	4,50	4,50	4,50	0,35	0,00	0,00
Chemical-fixer-developing agents	09 01 03		0,00	0,00	0,00	0,00	0,00	0,00	0,00	2,05	0,00	0,00	0,00
Chemical batteries	20 01 33		2,35	3,24	6,19	4,39	1,81	0,82	0,79	0,19	0,00	0,00	0,00
Paint - toner	08 01 11		0,00	0,00	0,00	0,00	0,00	0,01	0,01	0,16	0,00	0,52	1,47
Cartriges printing toner	08 03 17		7,35	10,21	10,54	10,65	10,13	8,01	6,83	5,25	3,09	3,18	1,38
Diverse chemical waste	18 02 05		0,00	0,00	0,00	0,00	0,00	0,00	0,00	3,56	1,50	0,47	0,00
WEEE	20 01 35		76	72	45	68	56	216	151	153	132	7,44	4,92
Contractor/supplier haz waste	19 03 06		0,00	0,00	0,00	0,00	0,00	1,30	2,00	5,60	1,93	1,69	0,00
Lampes/TL	20 01 21		0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,78
Hydrocarbures	16 07 08		0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Batteries plomb	16 06 01		0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	3,21
Total			**150**	**131**	**183**	**151**	**143**	**353**	**167**	**270**	**148**	**15**	**12**

Luxembourg waste (tonnes)

i) Non hazardous		Trend 2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Residual waste	**20 03 01**		**86**	**456**	**400**	**358**	**303**	**304**	**273**	**146**	**146**	**163**	**134**
Paper and cardboard (20 01 01)	20 01 01		49	301	298	233	226	180	98	83	88	205	108
Plastic (20 01 39)	20 01 39		1,7	4,2	8,9	1,3	2,1	3,4	1,4	3,0	1,9	3,3	1,8
Metals (17 04 05)	17 04 05		0,4	20	109	84	0,4	10	2,0	14	1,2	2,3	2,3
Glass (15 01 07)	15 01 07		3,2	11	27	21	25	24	17	2,2	5,4	9,4	7,8
Storage tins (boîte de conserve) (see Valorlux)			0,4	0,1	1,5	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Wood (20 01 38)	20 01 38		0,8	14	68	52	6,6	11	8,1	14	3,8	7,2	3,7
Metal drinks cans (see Valorlux)	15 01 06		0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Valorlux (15 01 06)	15 01 06		2,5	7,1	6,7	14	11	11	5,1	3,7	6,7	7,7	10,3
Kitchen waste (20 01 08)	20 01 08		9,5	92	112	94	102	110	104	51	60	78	69
Dechets peinture	08 01 12		0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,1	0,2
Data support			0,0	0,0	0,0	0,3	0,1	0,1	0,0	0,0	0,1	0,0	0,0
Plastic wrap (15 01 02)	15 01 02		0,0	0,0	0,0	2,2	1,9	1,7	1,6	1,7	1,6	2,1	2,7
Styropor (polysterene) (15 01 02)	15 01 02		0,0	0,0	0,0	1,5	1,8	1,9	0,9	0,9	1,0	1,5	0,5
Ceramic waste (17 01 03)	17 01 03		0,0	0,0	0,0	0,3	0,3	0,3	0,3	0,1	0,1	0,1	0,5
Oil and fat (20 01 25, 19 08 09)			1,3	3,7	11	15	21	173	98	130	167	165	137
Contractor/supplier non haz waste			0,0	0,0	0,0	0,0	0,0	14	10	16	43	80	60
Total			**154**	**907**	**1 043**	**876**	**702**	**844**	**619**	**466**	**526**	**725**	**537**
ii) Hazardous													
Medical waste (18 01 03)	18 01 03		0,383	0,697	0,616	0,525	0,626	0,589	1,166	1,339	1,469	1,523	0,911
Used batteries (20 01 33)	20 01 33		0,360	0,020	0,480	0,122	0,420	0,244	0,000	0,000	0,621	0,344	0,267
Used containers (bidons souillés) (15 01 10)	15 01 10		0,037	0,340	1,781	0,971	0,451	0,478	0,270	0,189	0,216	0,245	0,231
Cartridges (80312)	08 03 12		0,000	0,384	1,685	1,308	0,718	0,202	0,150	0,183	0,415	0,271	0,077
Electric and electronicwaste, cables etc (20 01 35)	20 01 35		0,140	0,693	0,000	0,000	0,016	3,060	1,620	0,100	1,130	1,644	0,910
Refrigerating Device (20 01 23)	20 01 23												3,500
Chemical products (16 01 07)	16 01 07		0,000	0,000	0,000	0,000	0,000	0,062	0,000	0,000	0,211	0,193	0,000
Absorbent materila including oil filters	15 02 02		0,000	0,140	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,012
Empty fire extinguishers			0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,604	0,000	3,003
Contractor/supplier haz waste			0,000	0,000	0,000	0,000	0,000	0,761	0,107	0,150	0,046	0,483	0,999
Total			**0,920**	**2,274**	**4,562**	**2,926**	**2,231**	**5,396**	**3,313**	**1,961**	**4,712**	**4,703**	**9,910**

JRC Petten waste (tonnes)

i) Non hazardous		Trend 2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Residual waste	**20 03 01**		**12**	**9,7**	**14**	**19**	**15**	**12**	**7,4**	**6,0**	**4,8**	**1,9**	**8,5**
Paper and cardboard	20 01 01		13	8,7	11	10	7,1	6,2	3,7	4,4	3,8	2,6	2,7
Wood	20 01 38		1,1	3,1	1,2	1,7	1,0	1,8	3,0	0,9	0,0	0,0	4,2
Glass			0,0	0,3	0,9	0,0	0,7	0,0	0,0	0,0	0,0	0,0	0,6
Metal (scrap)			3,7	6,0	5,4	5,1	4,5	2,7	2,2	21,7	0,0	0,0	5,9
Grit (from shredder)			0,0	0,0	0,0	0,0	0,0	1,5	0,0	0,0	0,0	0,0	0,0
PMD	15 01 06		0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,1	0,2	0,1	0,6
other (waste from birds, ...)			0,0	0,0	0,0	0,0	0,0	0,0	0,0	50,7	0,0	0,0	1,0
Contractor/supplier non haz waste			0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	2,1
Rigid plastic			NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	0,8
Styrofoam (Piepschuim)			NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	0,1
Folie			NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	0,3
Total			**30**	**28**	**32**	**36**	**28**	**24**	**16**	**84**	**8,7**	**4,6**	**27**
ii) Hazardous													
Batteries			0,051	0,137	0,000	0,177	0,128	0,032	0,000	0,348	0,000	0,600	0,156
Laboratory mixed waste			0,104	0,414	0,000	0,059	0,048	0,373	0,000	0,320	0,000		0,290
Electrical equipment (WEEE)			4,000	4,580	0,000	5,046	0,000	2,060	0,000	0,000	0,000	0,013	3,380
Waste oil			0,201	0,198	0,000	0,566	0,093	0,033	0,000	0,382	0,000	1,500	0,110
Filters			0,164	0,234	0,000	0,207	0,201	0,000	0,000	0,000	0,000		
Paint	20 01 27		0,010	0,026	0,000	0,000	0,011	0,000	0,000	0,302	0,000	0,100	0,046
Solvent			0,050	0,076	0,000	0,031	0,172	0,040	0,000	0,015	0,000	0,100	0,041
Spray cans			0,040	0,010	0,000	0,000	0,007	0,000	0,000	0,000	0,000	0,115	0,021
Medical waste			0,001	0,040	0,000	0,012	0,026	0,008	0,000	0,044	0,000	0,020	0,045
Flourescent lamps	20 01 21		0,001	0,059	0,000	0,092	0,045	0,021	0,000	0,069	0,000		0,038
Lead-acid battery	16 06 01		0,125	0,900	0,000	0,114	0,173	0,067	0,000	1,484	0,000		1,485
Mercury containing objects	06 04 04		0,009	0,010	0,000	0,004	0,000	0,000	0,000	0,000	0,000	0,300	0,000
Asbestos material	17 06 05		0,001	0,020	0,000	0,004	0,000	0,069	0,000	0,049	0,000	0,100	0,004
Developer			0,200	0,741	0,000	0,237	0,000	0,000	0,000	0,000	0,000		0,000
Adhesives, resins and sealants			0,000	0,023	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,100	0,000
Metal containing waste			0,000	0,000	0,000	0,000	0,000	0,091	0,000	0,039	0,000		0,381
Packaged waste												0,280	0,000
Waste water (161001)	16 10 01		1,500	2,000	4,000	2,860	2,960	5,760	4,300	5,000	4,320	5,740	5,560
other (Smeervetmiddellen, Boor en snijolie, Kantoor KGA, ...)			0,000	0,000	0,000	0,000	0,904	0,734	0,000	0,000	0,000	0,000	0,196
Total			**6,457**	**9,468**	**4,000**	**9,409**	**4,768**	**9,288**	**4,300**	**8,052**	**4,320**	**8,968**	**11,753**

NR - Not recorded

JRC Geel waste (tonnes)

i) Non hazardous		Trend 2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Residual; mixed (070299, 080318, 191210, 191212, 200301, 200307)			**56**	**47**	**42**	**32**	**27**	**22**	**15**	**20**	**15**	**14**	**12**
Building, brick and stone (170102, 170301) + 170107			22	0,0	4,5	4,3	4,3	0,0	0,0	4,9	2,7	40	43
Paper and cardboard (200101)	20 01 01		33	15	15	21	20	16	9,5	11	9,2	15	10
Metal (191202, 200140)			38	33	22	22	15	11	6,3	9,5	11	19	23
Wood (170201, 200138)			16	12	15	8,2	4,7	7,2	2,7	6,9	3,4	3,5	4,5
Glass (200102, 150107)			0,0	7,8	2,1	1,2	1,0	0,9	0,3	0,4	0,2	0,6	0,8
Packaging waste: PMD (150106)	15 01 06		1,2	0,5	0,7	1,0	0,7	0,9	0,7	1,2	0,8	1,0	1,1
Swill (200108)	20 01 08		0,0	0,0	0,8	5,5	3,6	6,4	5,0	4,8	4,1	6,3	5,5
Wine samples (020304)	02 03 04		0,0	0,0	4,5	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Plastics (200139; 150102)	20 01 39		0,0	0,0	0,0	0,1	0,0	0,2	0,0	0,4	0,3	0,2	1,1
Contractor/supplier non haz waste			0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Non Dangerous sox lamps (Eural code 160216)	16 02 16					0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Non Dangerous frying oil cat 3. (Eural code 200125)	20 01 25					0,0	0,4	0,3	0,3	0,2	0,3	0,4	0,5
Total			**166**	**115**	**108**	**95**	**76**	**65**	**40**	**59**	**48**	**100**	**102**
ii) Hazardous													
Biological waste (180103)	18 01 03		6,360	3,596	4,456	4,272	2,481	2,317	0,979	1,979	1,024	2,685	3,577
Electric & electronic, AEEA (160213,160214, 200136)			7,342	9,340	5,924	3,120	6,200	3,540	0,000	9,240	4,140	12,240	15,400
Asbestos (170605)	17 06 05		0,018	0,000	0,251	0,240	0,077	0,730	0,025	0,033	0,000	0,000	0,000
Waste from inorganic chemical processes (060106, 060205, 060399)			1,143	1,318	0,259	0,222	1,248	0,316	0,089	0,184	0,219	0,807	0,327
Waste from organic chemical processes (070101, 070103, 070104, 070701, 070704)			3,861	1,460	0,406	0,584	1,357	0,641	0,084	0,129	0,346	0,700	0,360
Paint, ink, glue, resin containing hazardous substances (080111, 080317, 200127)			0,090	1,360	0,028	0,000	0,367	0,000	0,024	0,023	0,015	0,288	0,188
Waste from thermal processes (100804)	10 08 04		0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
Waste oil (130205, 130301, 130802)			1,273	1,290	0,032	0,054	0,615	0,122	0,062	0,065	1,829	0,733	0,243
Cooling gasses (140601)	14 06 01		0,033	0,068	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
Packaging waste, absorbents, cleaning cloth, filters (150110, 150202)			1,314	1,123	3,431	0,616	0,736	0,453	0,246	0,537	0,564	0,673	0,448
Antifreeze, PCB (160114, 160209)			0,000	7,360	1,926	0,000	0,000	5,028	0,000	0,130	0,000	1,976	0,000
Pressurised gasses and lab chemicals (160504, 160506, 200119)			1,414	1,031	5,568	0,575	0,738	2,394	0,136	0,069	0,231	0,619	0,281
Batteries and accumulators (160601, 200133)			0,064	0,957	0,007	0,026	0,660	0,799	0,074	0,335	0,074	0,287	0,114
Waste from production of water for industrial use including resins (190905)	19 09 05		0,045	0,042	0,070	0,073	0,115	0,112	0,033	0,160	0,067	0,156	0,145
Waste from mechanical processes (191211)			0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
Fluorescent lamps and mercury containing objects (200121, 160307, 060404)			0,000	0,076	0,108	0,311	0,105	0,113	0,006	0,102	0,005	0,074	0,006
Contractor/supplier haz waste			0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
Hazardous medical waste (Eural code 170903)	17 09 03					0,000	0,460	0,000	0,000	0,000	0,000	0,000	0,000
Expired medicines, dangerous (Eural code 070513)	07 05 13					0,000	0,652	0,000	0,000	0,000	0,000	0,000	0,000
Total			**22,957**	**29,022**	**22,466**	**10,093**	**15,811**	**16,565**	**1,758**	**12,986**	**8,514**	**21,238**	**21,089**

JRC Karlsruhe waste (tonnes)

i) Non hazardous		Trend 2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Residual waste (200301)	**20 03 01**		**36**	**30**	**26**	**22**	**26**	**31**	**22**	**18**	**24**	**27**	**23**
Paper and cardboard (150101)	15 01 01		18	21	18	19	27	27	18	19	27	23	20
Wood (170201)	17 02 01		15	14	5,6	8,3	3,8	5,9	3,5	6,2	4,1	4,0	5,6
Glass			0,0	0,8	0,8	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,4
Metal (scrap; 170407, 170411)			33	33	30	27	23	11	14	12	23	20	11
Plastic (150102, 200139)			4,1	3,3	1,6	3,9	3,9	1,8	2,0	1,8	1,5	2,2	2,0
Green waste (200201)	20 02 01		0,0	0,0	0,0	0,0	1,3	0,5	1,0	0,5	0,2	0,0	0,4
Total			**107**	**102**	**82**	**80**	**85**	**78**	**60**	**57**	**81**	**76**	**62**
ii) Hazardous													
Batteries (200133*)	20 01 33		0,000	0,000	0,000	0,000	0,940	0,000	0,400	0,000	0,000	0,000	0,000
Mixed chemical waste (e.g. 120109*, 130205*)			0,697	0,000	0,000	0,140	1,710	0,200	0,000	0,000	0,000		2,130
Filters (150202*)	15 02 02								0,400	0,800	0,000		0,000
Flourescent lamps (200121*)	20 01 21		0,212	0,166	0,124	0,108	0,088	0,113	0,000	0,105	0,000		0,000
Lead-acid battery (160601*)			0,902	0,704	0,908	1,790	1,790	0,000	1,140	1,080	0,610	0,995	1,167
Mercury containing objects											0,000	0,062	0,000
Asbestos from dismantling works (170605*)	17 06 05		3,320	1,840	0,000	0,000	0,250	0,140	0,000	0,000	0,200	0,06	0,000
Insulating glass fibre (170603*)	17 06 03		0,180	0,300	4,880	0,000	0,460	0,760	1,210	2,980	0,000		0,000
Electrical equipment (WEEE; 200135*)	20 01 35		5,200	7,250	2,320	3,030	1,720	1,377	4,640	1,590	3,960	2,520	2,560
Other hazardous waste			0,000	0,000	0,000	0,000	0,000	0,000	3,580	1,000	0,400	3,291	0,260
Total			**10,511**	**10,260**	**8,232**	**5,068**	**6,958**	**2,590**	**11,370**	**7,555**	**5,170**	**6,868**	**6,117**

JRC Seville waste (tonnes)

i) Non hazardous		Trend 2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Residual waste	**20 03 01**		**2,2**	**0,7**	**1,6**	**4,5**	**5,0**	**6,6**	**1,5**	**1,8**	**4,1**	**4,7**	**3,5**
20 01 01 Paper and cardboard	20 01 01		1,5	0,9	6,8	5,2	3,3	4,6	1,6	1,3	2,2	1,8	2,2
20 01 38 Wood	20 01 38		0,8	0,8	2,8	0,4	1,4	0,5	0,5	0,0	1,8	1,7	0,0
20 01 02 Glass	20 01 02		0,1	0,1	0,1	0,2	0,0	0,1	0,0	0,0	0,1	0,2	0,2
20 01 40 Metal	20 01 40		1,7	2,6	6,4	0,2	0,1	1,8	0,6	0,0	1,4	0,5	0,0
20 01 39 Plastic	20 01 39		0,0	0,3	0,4	0,5	0,6	1,9	0,9	0,5	1,1	0,7	0,5
Nespresso capsules			0,0	NA	0,1	0,2	0,3	0,6	0,1	0,1	0,2	0,1	0,0
20 01 11 Textiles	20 01 11		0,0	0,0	0,0	0,0	0,0	0,0	0,1	0,0	0,0	0,0	0,0
Contractor/supplier non haz waste			0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
20 01 08 Bio-waste	20 01 08		0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,3
Total			**6,4**	**5,5**	**18**	**11**	**11**	**16**	**5,2**	**3,7**	**11**	**9,8**	**6,7**
ii) Hazardous													
Batteries	16 06 02		0,058	0,045	0,050	0,000	0,072	0,039	0,013	0,000	0,028	0,000	0,100
Absorbents	15 02 02		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0,007
Pesticide	20 01 19		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0,196
Paint	20 01 27		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0,545
Medical waste	18 01 03		0,003	0,003	0,003	0,002	0,006	0,006	0,039	0,003	0,001	0,002	0,002
Flourescent lamps	20 01 21		0,105	0,070	0,064	0,064	0,082	0,220	0,270	0,458	0,060	0,331	0,208
Lead-acid battery	16 06 01		NR	NR	0,060	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
Mercury containing objects	06 04 04		NR	NR	0,005	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
08 03 18 Inks and toner	08 03 18		0,044	0,039	0,180	0,174	0,078	0,087	0,000	0,015	0,000	0,000	0,033
20 01 35 Electrical equipment (WEEE)	20 01 35		3,160	2,520	2,050	0,890	1,074	2,080	0,760	1,812	0,928	0,000	1,563
18 01 09 Medicaments	18 01 09		0,000	0,000	0,000	0,000	0,000	0,000	0,017	0,004	0,020	0,002	0,000
Total			**3,370**	**2,677**	**2,412**	**1,130**	**1,312**	**2,432**	**1,099**	**2,292**	**1,037**	**0,335**	**2,652**

NA - Not applicable

JRC Ispra waste (tonnes)

i) Non hazardous		Trend 2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Mixed urban waste	**20 03 01**		**222**	**214**	**196**	**228**	**184**	**163**	**97**	**115**	**107**	**164**	**168**
Paper and cardboard	20 01 01		138	114	90	138	83	96	50	72	54	87	80
Wood	20 01 38		50	85	57	138	77	40	37	46	34	39	49
Glass	20 01 02		31	21	24	31	23	22	17	16	9,0	9,0	11
Metal (scrap)			371	416	196	271	527	567	114	447	186	253	400
Plastic			33	27	26	29	27	26	13	11	12	11	14
Organic waste	20 01 08		44	48	52	59	69	87	33	38	62	71	74
Street cleaning	20 03 03		151	137	135	128	124	88	76	106	76	70	61
Other			108	173	102	133	134	97	87	106	84	112	149
Contractor/supplier non haz waste			NA	NA	NA	NA	NA	NA	NA	NA	NA		
Total			**888**	**925**	**641**	**895**	**989**	**1 001**	**362**	**958**	**624**	**814**	**1 005**
ii) Hazardous													
Batteries			0,000	0,384	0,224	0,424	0,192	0,792	0,110	0,407	0,735	0,136	0,247
Laboratory mixed waste (tonnes)			5,829	5,363	10,015	6,002	5,174	5,931	4,466	7,377	3,878	3,729	5,788
Waste oil			2,632	9,282	6,330	5,458	17,626	11,321	4,203	12,956	13,235	11,680	3,568
Filters			0,239	2,921	2,524	4,203	4,481	2,677	1,326	3,101	1,446	0,320	1,068
Paint	08 01 11		0,314	0,323	1,387	0,540	1,225	0,180	1,749	1,311	1,831	0,945	0,827
Solvent			1,185	0,000	0,000	0,879	0,000	0,000	0,000	0,000	0,000	0,000	0,058
Spray cans			0,040	0,000	0,081	0,058	0,259	0,000	0,052	0,071	0,193	0,100	0,215
Medical waste			3,020	2,600	1,551	1,974	1,874	1,513	1,495	1,570	1,446	1,440	1,112
Lead-acid battery	16 06 01		7,633	11,100	9,580	8,825	5,340	3,778	0,497	1,585	3,050	0,550	1,816
Mercury containing objects	06 04 04		0,007	0,000	0,017	0,047	0,000	0,000	0,000	0,003	0,000	0,000	0,000
Waste belonging from buindings and streets maintenance	17		0,172	0,114	7,389	19,922	5,364	7,240	4,749	2,703	0,285	9,970	1,672
Waste containing PCB	16 02 09		0,870	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
Electrical equipment WEEE			27,958	25,014	21,602	14,190	4,450	7,957	4,695	7,536	4,380	10,780	10,160
Other hazardous waste			0,240	0,090	0,209	0,084	2,285	1,920	0,799	0,295	0,590	0,000	10,300
Total			**50,139**	**57,191**	**60,909**	**62,606**	**48,27**	**43,309**	**24,141**	**38,915**	**31,069**	**39,65**	**36,831**

NA - Not available

SANTE at Grange waste (tonnes)

i) Non hazardous		Trend 2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Residual waste, landfill (20.03.01 & 07)	**20 03 01 & 07**		**2,3**	**1,5**	**2,0**	**2,2**	**2,8**	**3,6**	**0,7**	**1,5**	**1,0**	**0,5**	**0,3**
Recyclables (20.01.39-40)			3,1	3,2	2,0	2,3	2,6	4,0	2,2	1,0	1,9	1,3	1,0
Cardboard (20.01.01)	20 01 01		2,4	3,8	1,3	1,4	1,0	2,4	0,0	1,0	0,3	0,1	0,4
Paper (20.01.01)	20 01 01		12	5,1	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Shredding (20.01.01)			0,3	0,0	17	6,5	6,4	6,8	3,5	2,6	4,6	3,1	2,0
Compost (20.01.08)	20 01 08		10	10	9,0	6,0	7,1	8,9	2,9	0,7	2,1	4,7	4,8
Recovery*			15	17	19	20	25	14	5,9	11	8	6,1	6,7
Glass (20.01.02)	20 01 02		0,0	0,1	0,1	0,0	0,1	0,0	0,0	0,0	0,0	0,0	0,0
Mixed WEEE (16.02.16)	16 02 16		0,0	0,0	0,4	0,2	0,5	0,4	0,5	0,2	0,0	0,3	0,2
Recycling base units (16.02.14)	16 02 14		0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Contractor/supplier non haz waste			45	41	50	38	45	40	15	18	18	16	0
Total			**45**	**41**	**50**	**38**	**45**	**40**	**15**	**36**	**35**	**32**	**15**
ii) Hazardous													
Fridges & Freezers (20.01.23*)	20 01 23		NA	NA	0,090	0,070	0,000	0,000	0,025	0,000	0,000	0,000	0,000
Large household appliances (20.01.35*)	20 01 35		NA	NA	NA	0,050	0,000	0,000	0,083	0,000	0,000	0,100	0,000
CRT Monitors /Televisions (16.02.13*)	16 02 13		NA	NA	0,017	0,000	0,000	0,000	0,000	0,000	0,000	0,150	0,000
Fluorescent tubes (20.01.21*)	20 01 21		NA	NA	NA	NA	0,035	0,050	0,084	0,002	0,046	0,004	0,063
Oily water from oil/water separators (13.05.07*)	13 05 07		NA	NA	NA	NA	8,940	8,920	0,000	11,860	16,460	0,000	0,000
Batteries (20.01.33*)	20 01 33		NA	NA	NA	NA	NA	0,080	0,116	0,008	0,137	0,024	0,096
Toner (08.03.17*)	08 03 17		NA	NA	NA	NA	NA	0,080	0,025	0,012	0,127	0,019	0,012
Other discarded containing hazardous (16.02.13*)	16 02 13		NA	NA	NA	NA	NA	0,016	0,000	0,222	0,478	0,000	0,000
Contractor/supplier haz waste			NA	0,040	0,040	0,040	0,040	0,040	0,040	0,040	0,788	0,000	0,000
Total			**0,000**	**0,040**	**0,147**	**0,160**	**9,015**	**9,186**	**0,373**	**12,144**	**18,036**	**0,297**	**0,171**

NA - Not available

DG COMM waste (tonnes)

i) Non hazardous		Trend 2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Residual waste, landfill (20.03.01)	**20 03 01**							**6,6**	**3,3**	**3,8**	**3,6**	**3,5**	**3,0**
Total non-hazardous waste								**14**	**9,2**	**8,1**	**8,1**	**9,3**	**6,7**
ii) Hazardous													
Total hazardous waste								**0,089**	**0,605**	**0,018**	**0,887**	**0,120**	**0,044**

EMISSIONS FROM WASTE MANAGEMENT (waste (tonnes), emissions (tonnes tCO_2e))

Brussels

C) Waste disposal categories (tonnes)	Trend 2018-24	2018	2019	2020	2021	2022	2023	2024
i) Incinerated waste - domestic waste		2 351	2 407	787	670	698	929	612
tCO_2e of incinerated domestic		**851**	**871**	**285**	**243**	**261**	**347**	**229**
ii) Incinerated waste - food		0,0	0,0	0,0	0,0	0,0	0,0	0,0
tCO_2e of incinerated food		**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
iii) Methanisation - food		213	244	79	1	145	372	470
tCO_2e of methanisation food		**18**	**21**	**7**	**0**	**13**	**64**	**81**
iv) Composting - food							46	43
tCO_2e of methanisation food		**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**4,0**	**2,5**
v) Recycled/reused - paper		2167	2398	1266	1299	1218	1207	1116
tCO_2e of recycled paper		**72**	**79**	**46**	**47**	**44**	**43**	**40**
vi) Recycled/reused - cardboard		0,0	0,0	0,0	0,0	0,0	0,0	0,0
tCO_2e of recycled cardboard		**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
vii) Recycled/reused - wood		0,0	167	79	341	138	66	198
tCO_2e of recycled wood		**0,0**	**5,5**	**2,8**	**12,3**	**5,0**	**2,4**	**7,1**
viii) Recycled/reused - glass		28	41	14	7	16	23	23
tCO_2e of recycled glass		**0,9**	**1,3**	**0,5**	**0,2**	**0,6**	**0,8**	**0,8**
ix) Recycled/reused - plastic PMC		144	152	60	31	62	119	125
tCO_2e of recycled PMC		**127**	**133**	**52**	**28**	**55**	**4,3**	**4,5**
x) Recycled/reused - others…		0,0	852	530	774	451	308	600
tCO_2e of recycled other		**0,0**	**304**	**19**	**28**	**16**	**11**	**22**
xi) Hazardous waste - all types		461	353	167	270	148	15	12
tCO_2e of hazardous waste		**325**	**249**	**118**	**191**	**105**	**13**	**9,9**
xii) Landfill (probably mostly projects)		0,0	0,0	0,0	0,0	0,0	0,0	0,0
tCO_2e of landfill		**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
TOTAL (tonnes CO_2e)		**1 394**	**1 666**	**530**	**548**	**499**	**486**	**394**

Luxembourg

C) Waste disposal categories (tonnes)		2018	2019	2020	2021	2022	2023	2024
i) Incinerated waste - domestic waste		303	304	273	146	146	163	134
tCO_2e of incinerated domestic		**110**	**110**	**99**	**53**	**55**	**61**	**50**
ii) Incinerated waste - food		0,0	0,0	0,0	0,0	0,0	0,0	0,0
tCO_2e of incinerated food		**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
iii) Methanisation - food		102	110	104	51	60	78	69
tCO_2e of methanisation food		**8,9**	**9,5**	**9,0**	**4,4**	**5,2**	**14**	**12**
iv) Composting - food							0,0	0,0
tCO_2e of methanisation food		**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
v) Recycled/reused - paper		226	180	98	83	88	205	108
tCO_2e of recycled paper		**7,5**	**5,9**	**3,5**	**3,0**	**3,2**	**7,4**	**3,9**
vi) Recycled/reused - cardboard		0,0	0,0	0,0	0,0	0,0	0,0	0,0
tCO_2e of recycled cardboard		**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
vii) Recycled/reused - wood		6,6	11	8,1	14	3,8	7,2	3,7
tCO_2e of recycled wood		**0,2**	**0,4**	**0,3**	**0,5**	**0,1**	**0,3**	**0,1**
viii) Recycled/reused - glass		25	24	17	2,2	5,4	9,4	7,8
tCO_2e of recycled glass		**0,8**	**0,8**	**0,6**	**0,1**	**0,2**	**0,3**	**0,3**
ix) Recycled/reused - plastic PMC		15	16	8,1	8,4	10	13	15
tCO_2e of recycled PMC		**14**	**14**	**7,1**	**7,4**	**8,9**	**0,5**	**0,5**
x) Recycled/reused - others…		24	199	111	161	212	249	200
tCO_2e of recycled other		**8,4**	**71**	**4,0**	**5,8**	**7,6**	**9,0**	**7,2**
xi) Hazardous waste - all types		2,2	5,4	3,3	2,0	4,7	4,7	9,9
tCO_2e of hazardous waste		**1,6**	**3,8**	**2,3**	**1,4**	**3,3**	**4,0**	**8,4**
xii) Landfill (probably mostly projects)		0,0	0,0	0,0	0,0	0,0	0,0	0,0
tCO_2e of landfill		**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
TOTAL (tonnes CO_2e)		**151**	**216**	**126**	**76**	**83**	**96**	**82**

JRC Petten

C) Waste disposal categories (tonnes)	2018	2019	2020	2021	2022	2023	2024
i) Incinerated waste - domestic waste	15	15	7,4	6,0	4,8	1,9	8,5
tCO_2e of incinerated domestic	**5,4**	**5,4**	**2,7**	**2,2**	**1,8**	**0,7**	**3,2**
ii) Incinerated waste - food	0,0	0,0	0,0	0,0	0,0	0,0	0,0
tCO_2e of incinerated food	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
iii) Methanisation - food	0,0	0,0	0,0	0,0	0,0	0,0	0,0
tCO_2e of methanisation food	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
iv) Composting - food						0,0	4,2
tCO_2e of methanisation food	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,3**
v) Recycled/reused - paper	5,0	5,0	1,9	4,4	3,8	2,6	2,7
tCO_2e of recycled paper	**0,2**	**0,2**	**0,1**	**0,2**	**0,1**	**0,1**	**0,1**
vi) Recycled/reused - cardboard	2,1	2,1	1,9	1,9	0,0	0,0	0,0
tCO_2e of recycled cardboard	**0,1**	**0,1**	**0,1**	**0,1**	**0,0**	**0,0**	**0,0**
vii) Recycled/reused - wood	1,0	1,0	3,0	1,6	0,0	0,0	4,2
tCO_2e of recycled wood	**0,0**	**0,0**	**0,1**	**0,1**	**0,0**	**0,0**	**0,2**
viii) Recycled/reused - glass	0,7	0,7	0,0	0,0	0,0	0,0	0,6
tCO_2e of recycled glass	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
ix) Recycled/reused - plastic PMC	0,0	0,0	0,0	0,1	0,2	0,1	0,6
tCO_2e of recycled PMC	**0,0**	**0,0**	**0,0**	**0,0**	**0,1**	**0,0**	**0,0**
x) Recycled/reused - others…	0,0	0,0	0,0	0,0	0,0	0,0	0,0
tCO_2e of recycled other	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
xi) Hazardous waste - all types	0,9	0,9	0,0	3,1	0,0	9,0	12
tCO_2e of hazardous waste	**0,6**	**0,6**	**0,0**	**2,2**	**0,0**	**7,6**	**9,9**
xii) Landfill (probably mostly projects)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
tCO_2e of landfill	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
TOTAL (tonnes CO_2e)	**6,4**	**6,4**	**2,9**	**4,7**	**2,1**	**8,4**	**14**

JRC Geel

C) Waste disposal categories (tonnes)	2018	2019	2020	2021	2022	2023	2024
i) Incinerated waste - domestic waste	27	22	15	20	15	14	12
tCO_2e of incinerated domestic	**9,6**	**7,8**	**5,6**	**7,4**	**5,7**	**5,1**	**4,7**
ii) Incinerated waste - food	0,0	0,0	0,0	0,0	0,0	0,0	0,0
tCO_2e of incinerated food	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
iii) Methanisation - food	3,6	6,4	4,8	4,8	4,1	6,3	5,5
tCO_2e of methanisation food	**0,3**	**0,6**	**0,4**	**0,4**	**0,4**	**1,1**	**1,0**
iv) Composting - food							
tCO_2e of methanisation food	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
v) Recycled/reused - paper	8,9	8,8	3,9	2,9	2,0	4,6	2,5
tCO_2e of recycled paper	**0,3**	**0,3**	**0,1**	**0,1**	**0,1**	**0,2**	**0,1**
vi) Recycled/reused - cardboard	11	7,6	5,5	7,6	7,2	10,1	7,9
tCO_2e of recycled cardboard	**0,3**	**0,3**	**0,2**	**0,3**	**0,3**	**0,4**	**0,3**
vii) Recycled/reused - wood	4,7	7,2	2,7	6,9	3,4	3,5	4,5
tCO_2e of recycled wood	**0,2**	**0,2**	**0,1**	**0,2**	**0,1**	**0,1**	**0,2**
viii) Recycled/reused - glass	1,0	0,9	0,3	0,4	0,2	0,6	0,8
tCO_2e of recycled glass	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
ix) Recycled/reused - plastic PMC	0,7	0,9	0,7	1,2	0,8	1,0	1,1
tCO_2e of recycled PMC	**0,6**	**0,8**	**0,6**	**1,0**	**0,7**	**0,0**	**0,0**
x) Recycled/reused - others…	20	12	6,7	15	15	60	67
tCO_2e of recycled other	**7,0**	**4,2**	**0,2**	**0,5**	**0,5**	**2,2**	**2,4**
xi) Hazardous waste - all types	17	21	5,2	15	8,5	21	21
tCO_2e of hazardous waste	**12**	**15**	**3,7**	**10**	**6,0**	**18**	**18**
xii) Landfill (probably mostly projects)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
tCO_2e of landfill	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
TOTAL (tonnes CO_2e)	**31**	**29**	**11**	**20**	**14**	**27**	**26**

JRC Karlsruhe

C) Waste disposal categories (tonnes)	2018	2019	2020	2021	2022	2023	2024
i) Incinerated waste - domestic waste	0,0	0,0	0,0	0,0	0,0	21	21
tCO_2e of incinerated domestic	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**7,9**	**7,9**
ii) Incinerated waste - food	0,0	0,0	0,0	0,0	0,0	0,0	0,0
tCO_2e of incinerated food	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
iii) Methanisation - food	0,0	0,0	0,0	0,0	0,0	0,0	0,0
tCO_2e of methanisation food	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
iv) Composting - food						4,7	4,7
tCO_2e of methanisation food	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,4**	**0,3**
v) Recycled/reused - paper	0,0	0,0	0,0	0,0	0,0	23	20
tCO_2e of recycled paper	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,8**	**0,7**
vi) Recycled/reused - cardboard	0,0	0,0	0,0	0,0	0,0		
tCO_2e of recycled cardboard	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
vii) Recycled/reused - wood	0,0	0,0	0,0	0,0	0,0	4,0	5,6
tCO_2e of recycled wood	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,1**	**0,2**
viii) Recycled/reused - glass	0,0	0,0	0,0	0,0	0,0		
tCO_2e of recycled glass	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
ix) Recycled/reused - plastic PMC	0,0	0,0	0,0	0,0	0,0		
tCO_2e of recycled PMC	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
x) Recycled/reused - others…	0,0	0,0	0,0	0,0	0,0		
tCO_2e of recycled other	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
xi) Hazardous waste - all types	0,0	0,0	0,0	0,0	0,0	6,9	6,1
tCO_2e of hazardous waste	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**5,8**	**5,2**
xii) Landfill (probably mostly projects)	0,0	0,0	0,0	0,0	0,0		
tCO_2e of landfill	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
TOTAL (tonnes CO_2e)	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**15**	**14**

JRC Seville

C) Waste disposal categories (tonnes)	2018	2019	2020	2021	2022	2023	2024
i) Incinerated waste - domestic waste	0,0	0,0	0,0	0,0	0,0	0,0	0,0
tCO_2e of incinerated domestic	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
ii) Incinerated waste - food	0,0	0,0	0,0	0,0	0,0	0,0	0,0
tCO_2e of incinerated food	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
iii) Methanisation - food	0,0	0,0	0,0	0,0	0,0	0,0	0,3
tCO_2e of methanisation food	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,1**
iv) Composting - food						0,0	0,0
tCO_2e of methanisation food	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
v) Recycled/reused - paper	0,0	0,0	0,1	0,1	2,2	1,8	2,2
tCO_2e of recycled paper	**0,0**	**0,0**	**0,0**	**0,0**	**0,1**	**0,1**	**0,1**
vi) Recycled/reused - cardboard	0,0	0,0	0,0	0,0	0,0	0,0	0,0
tCO_2e of recycled cardboard	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
vii) Recycled/reused - wood	0,0	0,0	0,5	0,5	1,8	1,7	0,0
tCO_2e of recycled wood	**0,0**	**0,0**	**0,0**	**0,0**	**0,1**	**0,1**	**0,0**
viii) Recycled/reused - glass	0,0	0,0	0,0	0,0	0,1	0,2	0,2
tCO_2e of recycled glass	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
ix) Recycled/reused - plastic PMC	0,0	0,0	0,5	0,5	1,1	0,7	0,5
tCO_2e of recycled PMC	**0,0**	**0,0**	**0,4**	**0,4**	**1,0**	**0,0**	**0,0**
x) Recycled/reused - others…	0,0	0,0	0,6	0,6	1,6	0,6	0,015
tCO_2e of recycled other	**0,0**	**0,0**	**0,0**	**0,0**	**0,1**	**0,0**	**0,0**
xi) Hazardous waste - all types	0,0	0,0	1,1	1,1	0,2	0,4	0,4
tCO_2e of hazardous waste	**0,0**	**0,0**	**0,8**	**0,8**	**0,1**	**0,3**	**0,3**
xii) Landfill (probably mostly projects)	0,0	0,0	0,0	0,0	4,1	4,7	3,5
tCO_2e of landfill	**0,0**	**0,0**	**0,0**	**0,0**	**0,1**	**0,1**	**0,1**
TOTAL (tonnes CO_2e)	**0,0**	**0,0**	**1,3**	**1,3**	**1,5**	**0,6**	**0,5**

JRC Ispra

C) Waste disposal categories (tonnes)	2018	2019	2020	2021	2022	2023	2024
i) Incinerated waste - domestic waste	14	10	0,0	0,0	0,0	0,0	0,0
tCO_2e of incinerated domestic	**4,9**	**3,6**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
ii) Incinerated waste - food	0,0	0,0	0,0	0,0	0,0	0,0	0,0
tCO_2e of incinerated food	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
iii) Methanisation - food	69	87	34	38	62	50	74
tCO_2e of methanisation food	**6,0**	**7,6**	**2,9**	**3,3**	**5,4**	**8,6**	**12,8**
iv) Composting - food						21,0	0,0
tCO_2e of methanisation food	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**1,8**	**0,0**
v) Recycled/reused - paper	83	96	50	72	54	61	72
tCO_2e of recycled paper	**2,7**	**3,2**	**1,8**	**2,6**	**1,9**	**2,2**	**2,6**
vi) Recycled/reused - cardboard	0,0	0,0	0,0	0,0	0,0	0,0	0,0
tCO_2e of recycled cardboard	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
vii) Recycled/reused - wood	77	40	37	46	34	39	49
tCO_2e of recycled wood	**2,5**	**1,3**	**1,3**	**1,7**	**1,2**	**1,4**	**1,8**
viii) Recycled/reused - glass	23	22	17	16	9,3	9,1	11
tCO_2e of recycled glass	**0,8**	**0,7**	**0,6**	**0,6**	**0,3**	**0,3**	**0,4**
ix) Recycled/reused - plastic PMC	27	26	13	11	12	11	14
tCO_2e of recycled PMC	**23,5**	**22,7**	**11,0**	**10,0**	**10,2**	**0,4**	**0,5**
x) Recycled/reused - others…	924	882	360	752	440	603	771
tCO_2e of recycled other	**330**	**315**	**13**	**27**	**16**	**22**	**28**
xi) Hazardous waste - all types	48	43	24	39	31	40	37
tCO_2e of hazardous waste	**34**	**31**	**17**	**27**	**22**	**33**	**31**
xii) Landfill (probably mostly projects)	31	23	14	21	12	22	14
tCO_2e of landfill	**1,0**	**0,8**	**0,5**	**0,7**	**0,4**	**0,6**	**0,4**
TOTAL (tonnes CO_2e)	**405**	**385**	**48**	**73**	**57**	**69**	**77**

Grange

C) Waste disposal categories (tonnes)	2018	2019	2020	2021	2022	2023	2024
i) Incinerated waste - domestic waste	25	14	14	14	7,7	6,1	6,7
tCO_2e of incinerated domestic	**8,9**	**5,1**	**5,1**	**5,1**	**2,9**	**2,3**	**2,5**
ii) Incinerated waste - food	0,0	0,0	0,0	0,0	0,0	0,0	0,0
tCO_2e of incinerated food	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
iii) Methanisation - food	7,1	8,9	8,9	8,9	2,1	4,7	4,8
tCO_2e of methanisation food	**0,6**	**0,8**	**0,8**	**0,8**	**0,2**	**0,8**	**0,8**
iv) Composting - food						4,7	4,8
tCO_2e of methanisation food	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,4**	**0,3**
v) Recycled/reused - paper	6,4	6,8	6,8	6,8	4,6	3,1	2,0
tCO_2e of recycled paper	**0,2**	**0,2**	**0,2**	**0,2**	**0,2**	**0,1**	**0,1**
vi) Recycled/reused - cardboard	1,0	2,4	2,4	2,4	0,3	0,1	0,4
tCO_2e of recycled cardboard	**0,0**	**0,1**	**0,1**	**0,1**	**0,0**	**0,0**	**0,0**
vii) Recycled/reused - wood	0,0	0,0	0,0	0,0	0,0	0,0	0,0
tCO_2e of recycled wood	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
viii) Recycled/reused - glass	0,1	0,0	0,0	0,0	0,0	0,0	0,0
tCO_2e of recycled glass	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
ix) Recycled/reused - plastic PMC	2,6	4,0	4,0	4,0	1,9	1,3	1,0
tCO_2e of recycled PMC	**2,3**	**3,5**	**3,5**	**3,5**	**1,7**	**0,0**	**0,0**
x) Recycled/reused - others…	0,0	0,0	0,0	0,0	0,0	0,0	0,0
tCO_2e of recycled other	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
xi) Hazardous waste - all types	0,5	9,6	9,6	9,6	17	0,3	0,4
tCO_2e of hazardous waste	**0,4**	**6,7**	**6,7**	**6,7**	**12**	**0,3**	**0,3**
xii) Landfill (probably mostly projects)	2,8	3,6	3,6	3,6	1,0	0,5	0,3
tCO_2e of landfill	**0,1**	**0,1**	**0,1**	**0,1**	**0,0**	**0,0**	**0,0**
TOTAL (tonnes CO_2e)	**13**	**17**	**17**	**17**	**17**	**3,5**	**3,8**

DG COMM

C) Waste management (tonnes)	2019	2020	2021	2022	2023	2024
TOTAL (tonnes CO_2e)	2,76	2,02	2,21	2,34	1,52	1,09

Radioactive waste and waste water

JRC Karlsruhe

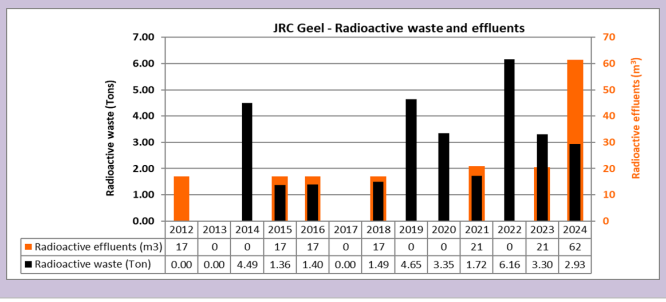
		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Nuclear waste volume (m3)		179	152	108	127	127	74	44	32	71	55	56	56
Evolution (%)			*-15*	*-29*	*18*	*0,000*	*-42*	*-41*	*-28*	*123*	*-23*	*1,8*	*0,000*
Activity (TBq)		13	2,0	10	9,0	5,0	7,0	2,0	0,25	0,45	0,62	3,64	3,64
Evolution (%)			*-85*	*400*	*-10,0*	*-44*	*40*	*-71*	*-88*	*80*	*38*	*487*	*0,000*

Nuclear waste management includes the disposal of radioactive waste as well as the unrestricted disposal of non-contaminated waste from the controlled area. The amounts of nuclear waste since 2011 are shown in the table above. A trend cannot be determined as the amount of disposed nuclear waste is caused by changing parameters, e.g., the research activities, glove box disassembling and also the capacity of KTE (the official collecting facility for low and middle radioactive waste in Baden-Württemberg).
In addition to the usual handling of nuclear waste, non-contaminated waste from the controlled area can be cleared acc. to §33 and §35 StrlSchV (new version since 2019) respectively acc. to § 29 StrlSchV (old version until 2019) by respective measuring for unrestricted disposal. This waste is registered under “normal waste”.
Waste water coming from the Hot Cells and the decontamination processes in Wing B is collected separately and disposed by KTE as radioactive waste. Due to construction works at the collection facility in wing B, nothing was disposed 2020 to 2022.

JRC Ispra - Radioactive Waste Management System (RWMS)
The RWMS set up at the JRC Ispra site includes clearance materials and radioactive waste according to Italian Law (mainly Legislative Decree 101/2020). It includes elements related to planning, quality assurance and activity recording. JRC Ispra's waste management policy is based on three main rules according to Italian law and international guidelines:
- Minimise the amount of unused nuclear materials by recycling them within industry.
- Maximise the quantity of clearable waste that can be removed from regulatory control.
- Reduce the volume of remaining radioactive waste for temporary storage on the Ispra site (ISF).

Part of waste can be processed by internal and specific procedures as conventional waste; as a result of this iter and after necessary authorisations these waste can be managed according to Italian Law (Legislative Decree 152/2006). During 2024 about 80 tonnes were processed and released as conventional waste.

JRC Geel radioactive waste
JRC Geel was initially reporting the nuclear waste within the category hazardous waste. To express the data in an harmonised way with the other JRC sites, the sitel will report its nuclear waste separatly. It is also more appropriate considering that nuclear waste disposal is not periodical.



	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Radioactive effluents (m3)	17	0	0	17	17	0	17	0	0	21	0	21	62
Radioactive waste (Ton)	0.00	0.00	4.49	1.36	1.40	0.00	1.49	4.65	3.35	1.72	6.16	3.30	2.93

Annex 3 - Fixed assets (IT, Buildings, Furniture)

Brussels

A) Fixed assets buildings, construction type	2018	2019	2020	2021	2022	2023	2024
i) Not specified - offices (total, m²)	1 031 971	1 056 659	1 056 659	1 065 711	992 390	909 880	852 361
Not specified - offices (amortised, m²)							
Annualised emissions (tonnes CO_2e)	19 198	19 594	19 288	18 592	18 388	16 752	15 768
ii) Steel - industrial building (total, m²)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Steel - industrial building (amortised, m²)							
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
iii) Steel - parking underground (total, m²)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Steel - parking underground (amortised, m²)							
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
iv) Steel - restaurants (total, m²)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Steel - restaurants (amortised, m²)							
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
v) Concrete - industrial buildings (total, m²)	0,0	0,0	0,0	0,0	0,0	43 729	43 729
Concrete - industrial buildings (amortised, m²)							
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	1 203	1 203
vi) Concrete - parking underground (total, m²)	477 720	484 328	484 328	484 678	417 466	436 022	407 584
Concrete - parking underground (amortised, m²)							
Annualised emissions (tonnes CO_2e)	9 079	9 137	8 893	8 372	7 708	7 789	7 555
vii) Concrete - restaurants (total, m²)	12 449	12 449	12 449	12 449	10 315	10 272	9 561
Concrete - restaurants (amortised, m²)							
Annualised emissions (tonnes CO_2e)	189	189	200	190	168	167	154
Total annualised emissions (tonnes CO_2e)	28 466	28 920	28 381	27 154	26 264	25 910	24 681

B) Fixed assets IT	2018	2019	2020	2021	2022	2023	2024
i) Desktop PC (Total No.)		393	319	58	42	19	21
Annualised emissions (tonnes CO_2e)		202	54	10	7,1	3,2	3,5
ii) Docking stations (Total No)		15 307	3 494	5 924	2 420	3 341	4 884
Annualised emissions (tonnes CO_2e)		2 526	517	877	358	494	723
iii) Flat screens (Total No)		6 726	2 498	4 641	3 439	6 033	1 167
Annualised emissions (tonnes CO_2e)		5 159	586	1 089	807	1 416	274
iv) Laptop (Total No)		1 024	5 097	4 896	6 858	7 555	13 948
Annualised emissions (tonnes CO_2e)		160	796	765	1 071	1 180	2 179
v) individual printers (Total No)		139	0	9	0	5	4
Annualised emissions (tonnes CO2e)		17	0,0	1,1	0,0	0,6	0,5
vi) Network printers and copiers (Total No)		306	26	70	36	6,0	0,0
Annualised emissions (tonnes CO_2e)		900	76	205	106	18	
vii) Fax machines (Total No)		0	0	0	0	0	0
Annualised emissions (tonnes CO_2e)		0,0	0,0	0,0	0,0	0,0	0,0
viii) Scanners (Total No)		8	13	40	29	2	2
Annualised emissions (tonnes CO_2e)		12	19	59	43	3	3
ix) Telephones (simple) (No)		0	0	0	0	0	0
Annualised emissions (tonnes CO_2e)		0,0	0,0	0,0	0,0	0,0	0,0
x) Telephones (smartphones and iphones, Total No)		984	918	641	1 241	1 210	1 697
Annualised emissions (tonnes CO_2e)		29	27	19	36	35	49
xi) Fixed telephones (Total No)		0	0	0	577	110	0
Annualised emissions (tonnes CO_2e)		0,0	0,0	0,0	10	1,9	0,0
xii) Informatics server (Total No)		43	57	31	48	6	19
Annualised emissions (tonnes CO_2e)		26	34	19	29	3,6	11
xiii) Projectors (Total No)		2	1	0	0	2	6
Annualised emissions (tonnes CO_2e)		0,2	0,1	0,0	0,0	0,3	0,9
xiv) Videoconference installations (Total No)		74	38	13	13	5	4
Annualised emissions (tonnes CO_2e)		37	19	6,5	6,5	2,5	2,0
xv) Televisions (Total No)		3,0	0,0	16	0	6,0	0,0
Annualised emissions (tonnes CO_2e)		1,5	0,0	8,0	0,0	3,0	0,0
xvi) Firewall router switch (from 2019), Total No		152	169	166	5	117	290
Annualised emissions (tonnes CO_2e)		12,3	13,6	13,4	0,4	9,4	23,4
xvii) Tablet, classical 9 to 11 inch, (Total No)		249	195	128	171	127	535
Annualised emissions (tonnes CO_2e)		16	12	8,1	11	8,0	34
Total annualised emissions (tonnes CO_2e)		9 096	2 155	3 080	2 485	3 179	3 304

C) Fixed assets Furniture	2018	2019	2020	2021	2022	2023	2024
i) Chairs (Units)	6318	7 678	12 160	203	8	2 777	3 774
CO_2 emissions (tonnes CO_2e)	164	199	315	5,3	0,2	72	98
ii) Desks (Units)	545	913	2 070	984	501	1209	1188
CO_2 emissions (tonnes CO_2e)	38	64	145	69	35	85	83
iii) Tables (Units)	1218	1 222	1649	1 156	559	1 638	1 593
CO_2 emissions (tonnes CO_2e)	85	86	116	81	39	115	112
iv) Cupboards (Units)	650	819	1766	936	659	1968	845
CO_2 emissions (tonnes CO_2e)	590	743	1602	849	598	1785	766
v) Fridges (Units)	123	58	104	39	8	50	0
CO_2 emissions (tonnes CO_2e)	32	15	27	10	2,1	13	0,0
vi) Coffee machines (Units)	10	19	44	3	5	0	0
CO_2 emissions (tonnes CO_2e)	0,3	0,6	1,5	0,1	0,2	0,0	0,0
Total annualised emissions (tonnes CO_2e)	909	1 107	2 206	1 014	675	2 070	1 059

Luxembourg

A) Fixed assets buildings, construction type	2018	2019	2020	2021	2022	2023	2024
i) Not specified - offices (total, m²)	177 507	177 507	177 490	177 490	176 561	187 728	168 102
Not specified - offices (amortised, m²)	26 117	26 117	26 117	26 117	25 188	25 188	5 562
Annualised emissions (tonnes CO_2e)	3 280	3 280	3 280	3 280	3 280	3 522	3 522
ii) Steel - industrial building (total, m²)							
Steel - industrial building (amortised, m²)							
Annualised emissions (tonnes CO_2e)							
iii) Steel - parking underground (total, m²)							
Steel - parking underground (amortised, m²)							
Annualised emissions (tonnes CO_2e)							
iv) Steel - restaurants (total, m²)							
Steel - restaurants (amortised, m²)							
Annualised emissions (tonnes CO_2e)							
v) Concrete - industrial buildings (total, m²)	3 416	4 116	4 116	4 116	4 116	3 864	4 425
Concrete - industrial buildings (amortised, m²)							
Annualised emissions (tonnes CO_2e)	94	113	113	113	113	106	122
vi) Concrete - parking underground (total, m²)	50 121	50 121	50 121	50 121	50 121	52 706	43 954
Concrete - parking underground (amortised, m²)	8 753	8 753	8 753	8 753	8 753	8 753	
Annualised emissions (tonnes CO_2e)	905	905	905	905	905	961	961
vii) Concrete - restaurants (total, m²)							
Concrete - restaurants (amortised, m²)							
Annualised emissions (tonnes CO_2e)							
Total annualised emissions (tonnes CO_2e)	4 279	4 298	4 298	4 298	4 298	4 589	4 605

B) Fixed assets IT	2018	2019	2020	2021	2022	2023	2024
i) Desktop PC (Total No.)		132	48	6	5	0	0
Annualised emissions (tonnes CO_2e)		68	8	1,0	0,8	0,0	0,0
ii) Docking stations (Total No)		2 481	809	897	888	509	419
Annualised emissions (tonnes CO_2e)		409	120	133	131	75	62
iii) Flat screens (Total No)		859	831	495	664	1 093	113
Annualised emissions (tonnes CO_2e)		659	195	116	156	257	27
iv) Laptop (Total No)		95	741	891	1 385	1 180	2 663
Annualised emissions (tonnes CO_2e)		15	116	139	216	184	416
v) individual printers (Total No)		1	0	1	0	0	0
Annualised emissions (tonnes CO_2e)	0,0	0,1	0,0	0,1	0,0	0,0	0,0
vi) Network printers and copiers (Total No)		26	0	7	0	0	0
Annualised emissions (tonnes CO_2e)		76	0,0	21	0,0	0,0	0,0
vii) Fax machines (Total No)		0	0	0	0	0	0
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
viii) Scanners (Total No)		3	2	0	0	0	1
Annualised emissions (tonnes CO_2e)	0,0	4,4	2,9	0,0	0,0	0,0	1,5
ix) Telephones (simple) (No)		0	0	0	0	0	0
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
x) Telephones (smartphones and iphones, Total No)		168	131	93	45	150	109
Annualised emissions (tonnes CO_2e)	0,0	4,9	3,8	2,7	1,3	4,4	3,2
xi) Fixed telephones (Total No)		0	0	0	117	14	0
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	2,0	0,2	0,0
xii) Informatics server (Total No)		949	403	244	409	244	438
Annualised emissions (tonnes CO_2e)		569	242	146	245	146	263
xiii) Projectors (Total No)		0	0	0	0	0	0
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
xiv) Videoconference installations (Total No)		12	3	4	0	0	3
Annualised emissions (tonnes CO_2e)		6,0	1,5	2,0	0,0	0,0	1,5
xv) Televisions (Total No)		0	0	0	0	0	1
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,5
xvi) Firewall router switch (from 2019), Total No		187	443	27	97	136	120
Annualised emissions (tonnes CO_2e)	0,0	15	36	2,2	7,8	11	9,7
xvii) Tablet, classical 9 to 11 inch, (Total No)		24	48	28	22	13	33
Annualised emissions (tonnes CO_2e)	0,0	1,5	3,0	1,8	1,4	0,8	2,1
Total annualised emissions (tonnes CO2e)		1 829	728	565	762	679	786

C) Fixed assets Furniture	2018	2019	2020	2021	2022	2023	2024
i) Chairs (Units)	330	512	1 963	406	731	357	14
CO_2 emissions (tonnes CO_2e)	8,6	13	51	11	19	9,3	0,4
ii) Desks (Units)	141	70	449	221	10	134	100
CO_2 emissions (tonnes CO_2e)	9,9	4,9	31	16	0,7	9,4	7,0
iii) Tables (Units)	49	48	58	12	28	47	10
CO_2 emissions (tonnes CO_2e)	3,4	3,4	4,1	0,8	2,0	3,3	0,7
iv) Cupboards (Units)	160	91	438	9	13	227	57
CO_2 emissions (tonnes CO_2e)	145	83	397	8,2	12	206	52
v) Fridges (Units)	2	16	2	2	3	2	7
CO_2 emissions (tonnes CO_2e)	0,5	4,1	0,5	0,5	0,8	0,5	1,8
vi) Coffee machines (Units)		5	0	1	1	0	2
CO_2 emissions (tonnes CO_2e)	0,00	0,17	0,00	0,03	0,03	0,00	0,07
Total annualised emissions (tonnes CO_2e)	168	108	484	36	34	228	62

JRC Petten

A) Fixed assets buildings, construction type	2018	2019	2020	2021	2022	2023	2024
i) Not specified - offices (total, m²)	7 539	7 539	7 539	7 539	7 539	7 539	7 539
Not specified - offices (amortised, m²)							
Annualised emissions (tonnes CO_2e)	82	82	82	82	82	82	82
ii) Steel - industrial building (total, m²)	4 246	4 246	4 246	4 246	4 246	4 246	4 246
Steel - industrial building (amortised, m²)							
Annualised emissions (tonnes CO_2e)	39	39	39	39	39	39	39
iii) Steel - parking underground (total, m²)							
Steel - parking underground (amortised, m²)							
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
iv) Steel - restaurants (total, m²)							
Steel - restaurants (amortised, m²)							
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
v) Concrete - industrial buildings (total, m²)	719	719	719	719	719	719	719
Concrete - industrial buildings (amortised, m²)							
Annualised emissions (tonnes CO_2e)	17	17	9,9	9,9	9,9	9,9	9,9
vi) Concrete - parking underground (total, m²)							
Concrete - parking underground (amortised, m²)							
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
vii) Concrete - restaurants (total, m²)							
Concrete - restaurants (amortised, m²)							
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Total annualised emissions (tonnes CO2e)	138	138	130	130	130	130	130

B) Fixed assets IT	2018	2019	2020	2021	2022	2023	2024
i) Desktop PC (Total No.)			2		6	0	0
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,3	0,0	1,0	0,0	0,0
ii) Docking stations (Total No)							50
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	7,4
iii) Flat screens (Total No)							70
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	16
iv) Laptop (Total No)			95	32	72	33	123
Annualised emissions (tonnes CO_2e)	0,0	0,0	15	5,0	11	5,2	19
v) individual printers (Total No)							0
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
vi) Network printers and copiers (Total No)							0
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
vii) Fax machines (Total No)							0
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
viii) Scanners (Total No)							0
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
ix) Telephones (simple) (No)							0
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
x) Telephones (smartphones and iphones, Total No)							0
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
xi) Fixed telephones (Total No)							0
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
xii) Informatics server (Total No)							6
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	3,6
xiii) Projectors (Total No)							0
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
xiv) Videoconference installations (Total No)							0
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
xv) Televisions (Total No)							4
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	2,0
xvi) Firewall router switch (from 2019), Total No							0
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
xvii) Tablet, classical 9 to 11 inch, (Total No)							0
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Total annualised emissions (tonnes CO2e)	0,0	0,0	15	5,0	12	5,2	49

C) Fixed assets Furniture	2018	2019	2020	2021	2022	2023	2024
i) Chairs (Units)		26	18	0	5	6	30
CO_2 emissions (tonnes CO_2e)	0,0	0,7	0,5	0,0	0,1	0,2	0,8
ii) Desks (Units)		11	1	0	0	0	0
CO_2 emissions (tonnes CO_2e)	0,0	0,8	0,1	0,0	0,0	0,0	0,0
iii) Tables (Units)		1	0	6	0	1	
CO_2 emissions (tonnes CO_2e)	0,0	0,1	0,0	0,4	0,0	0,1	0,0
iv) Cupboards (Units)		0	1	1	0	0	0
CO_2 emissions (tonnes CO_2e)	0,0	0,0	0,9	0,9	0,0	0,0	0,0
v) Fridges (Units)		0	0	0	0	0	0
CO_2 emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
vi) Coffee machines (Units)							
CO_2 emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Total annualised emissions (tonnes CO_2e)	0,0	1,5	1,4	1,3	0,1	0,2	0,8

Note fixed assets furniture : For the displayed categories, only items with unitary value above 420 EUR are inventoried in the JRC. Moreover, the displayed categories do not take into account laboratory equipment (e.g. laboratory chais, refrigerators, etc.)

JRC Geel

A) Fixed assets buildings, construction type	2018	2019	2020	2021	2022	2023	2024
i) Not specified - offices (total, m²)	9 964	9 964	9 964	9 964	9 964	9 964	9 964
Not specified - offices (amortised, m²)							
Annualised emissions (tonnes CO_2e)	108	90	90	90	85	73	73
ii) Steel - industrial building (total, m²)	1 630	1 632	1 633	1 632	1 632	1 632	1 632
Steel - industrial building (amortised, m²)							
Annualised emissions (tonnes CO_2e)	7,5	7,5	7,5	7,5	3,1	1,3	1,3
iii) Steel - parking underground (total, m²)							
Steel - parking underground (amortised, m²)							
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
iv) Steel - restaurants (total, m²)							
Steel - restaurants (amortised, m²)							
Annualised emissions (tonnes CO_2e)							
v) Concrete - industrial buildings (total, m²)	38 241	38 264	38 390	38 389	38 389	38 389	38 389
Concrete - industrial buildings (amortised, m²)							
Annualised emissions (tonnes CO_2e)	526	434	436	436	409	315	315
vi) Concrete - parking underground (total, m²)							
Concrete - parking underground (amortised, m²)							
Annualised emissions (tonnes CO_2e)							
vii) Concrete - restaurants (total, m²)	665	665	665	665	665	665	665
Concrete - restaurants (amortised, m²)							
Annualised emissions (tonnes CO_2e)	6,1	6,1	6,1	6,1	6,1	6,1	6,1
Total annualised emissions (tonnes CO2e)	647	538	540	540	504	396	396

B) Fixed assets IT	2018	2019	2020	2021	2022	2023	2024
i) Desktop PC (Total No.)	584	570	557	617	677	461	0
Annualised emissions (tonnes CO_2e)	300	292	94	104	114	78	0,0
ii) Docking stations (Total No)	0	0	405	445	557	589	100
Annualised emissions (tonnes CO_2e)	0,0	0,0	60	66	82	87	15
iii) Flat screens (Total No)	785	891	1 000	1 078	1 154	1 187	0
Annualised emissions (tonnes CO_2e)	602	683	235	253	271	279	0,0
iv) Laptop (Total No)	172	174	386	342	687	408	136
Annualised emissions (tonnes CO_2e)	220	27	60	53	107	64	21
v) individual printers (Total No)	70	59	65	17	20	19	0
Annualised emissions (tonnes CO_2e)	7,7	7,3	8,1	2,1	2,5	2,4	0,0
vi) Network printers and copiers (Total No)	68	73	72	75	73	71	0
Annualised emissions (tonnes CO_2e)	200	215	211	220	214	208	0,0
vii) Fax machines (Total No)	0	0	0	0	0	0	0
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
viii) Scanners (Total No)	3	3	2	2	3	2	0
Annualised emissions (tonnes CO_2e)	4,4	4,4	2,9	2,9	4,4	2,9	0,0
ix) Telephones (simple) (No)	44	45	49	16	22	15	0
Annualised emissions (tonnes CO_2e)	0,9	0,9	0,8	0,3	0,4	0,2	0,0
x) Telephones (smartphones and iphones, Total No)	22	22	45	45	50	49	2
Annualised emissions (tonnes CO_2e)	0,7	0,6	1,3	1,3	1,5	1,4	0,1
xi) Fixed telephones (Total No)	762	762	762	785	791	801	0
Annualised emissions (tonnes CO_2e)	13	13	13	13	13	14	0,0
xii) Informatics server (Total No)	130	74	44	43	43	41	0
Annualised emissions (tonnes CO_2e)	333	44	26	26	26	25	0,0
xiii) Projectors (Total No)	27	29	30	30	30	29	0
Annualised emissions (tonnes CO_2e)	2,5	2,7	2,8	2,8	4,4	4,2	0,0
xiv) Videoconference installations (Total No)	12	12	13	14	14	14	0
Annualised emissions (tonnes CO_2e)	18	6,0	6,5	7,0	7,0	7,0	0,0
xv) Televisions (Total No)	60	60	63	60	65	62	0
Annualised emissions (tonnes CO_2e)	88	30	32	30	33	31	0,0
xvi) Firewall router switch (from 2019), Total No	1 307	1 374	1 461	1 856	1 959	2 422	
Annualised emissions (tonnes CO_2e)	105	111	118	150	158	195	0,0
xvii) Tablet, classical 9 to 11 inches	0	0	10	10	6	15	3
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,6	0,6	0,4	0,9	0,2
Total annualised emissions (tonnes CO2e)	1 895	1 438	872	933	1 040	1 000	36

C) Fixed assets Furniture	2018	2019	2020	2021	2022	2023	2024
i) Chairs (Units)	2			4			14
CO_2 emissions (tonnes CO_2e)	0,1	0,0	0,0	0,1	0,0	0,0	0,4
ii) Desks (Units)	5	6	2		11	5	1
CO_2 emissions (tonnes CO_2e)	0,4	0,4	0,1	0,0	0,8	0,4	0,1
iii) Tables (Units)	2	3		1	3		1
CO_2 emissions (tonnes CO_2e)	0,1	0,2	0,0	0,1	0,2	0,0	0,1
iv) Cupboards (Units)	4	1	2		5		2
CO_2 emissions (tonnes CO_2e)	3,6	0,9	1,8	0,0	4,5	0,0	1,8
v) Fridges (Units)	1				1		
CO_2 emissions (tonnes CO_2e)	0,3	0,0	0,0	0,0	0,3	0,0	0,0
vi) Coffee machines (Units)					10		
CO_2 emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,3	0,0	0,0
Total annualised emissions (tonnes CO_2e)	4,4	1,5	2,0	0,2	6,1	0,4	2,3

Note fixed assets furniture: For the displayed categories, only items with unitary value above 420 EUR are inventoried in the JRC. Moreover, the displayed categories do not take into account laboratory equipment (e.g. laboratory chais, refrigerators, etc.)

JRC Karlsruhe

A) Fixed assets buildings, construction type	2018	2019	2020	2021	2022	2023	2024
i) Not specified - offices (total, m²)	8 500	8 500	8 500	8 500	8 500	8 500	8 500
Not specified - offices (amortised, m²)							
Annualised emissions (tonnes CO_2e)	111	111	111	111	111	111	111
ii) Steel - industrial building (total, m²)	0	0	0	0	0		
Steel - industrial building (amortised, m²)							
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
iii) Steel - parking underground (total, m²)	0	0	0	0	0		
Steel - parking underground (amortised, m²)							
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
iv) Steel - restaurants (total, m²)	0	0	0	0	0		
Steel - restaurants (amortised, m²)							
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
v) Concrete - industrial buildings (total, m²)	0	0	0	0	0		
Concrete - industrial buildings (amortised, m²)							
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
vi) Concrete - parking underground (total, m²)	0	0	0	0	0		
Concrete - parking underground (amortised, m²)							
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
vii) Concrete - restaurants (total, m²)	0	0	0	0	0		
Concrete - restaurants (amortised, m²)							
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Total annualised emissions (tonnes CO2e)	111	111	111	111	111	111	111

B) Fixed assets IT	2018	2019	2020	2021	2022	2023	2024
i) Desktop PC (Total No.)	33	59	60		1		
Annualised emissions (tonnes CO_2e)	17	30	10				
ii) Docking stations (Total No)							150
Annualised emissions (tonnes CO_2e)							
iii) Flat screens (Total No)							50
Annualised emissions (tonnes CO_2e)							12
iv) Laptop (Total No)	15	33	139	59	49		108
Annualised emissions (tonnes CO_2e)	19	5,1	22	9,2	7,7	0,0	17
v) individual printers (Total No)							0
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
vi) Network printers and copiers (Total No)							0
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
vii) Fax machines (Total No)							0
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
viii) Scanners (Total No)							0
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
ix) Telephones (simple) (No)							0
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
x) Telephones (smartphones and iphones, Total No)							4
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,1
xi) Fixed telephones (Total No)							
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
xii) Informatics server (Total No)							
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
xiii) Projectors (Total No)							
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
xiv) Videoconference installations (Total No)							
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
xv) Televisions (Total No)							
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
xvi) Firewall router switch (from 2019), Total No							
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
xvii) Tablet, classical 9 to 11 inches							
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Total annualised emissions (tonnes CO2e)	36	35	32	9,2	7,8	0,0	29

C) Fixed assets Furniture	2018	2019	2020	2021	2022	2023	2024
i) Chairs (Units)		2			5	1	1
CO_2 emissions (tonnes CO_2e)	0,0	0,1	0,0	0,0	0,1	0,0	0,0
ii) Desks (Units)							
CO_2 emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
iii) Tables (Units)						6	6
CO_2 emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,4	0,4
iv) Cupboards (Units)		3			21	5	5
CO_2 emissions (tonnes CO_2e)	0,0	2,7	0,0	0,0	19	4,5	4,5
v) Fridges (Units)							
CO_2 emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
vi) Coffee machines (Units)							
CO_2 emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Total annualised emissions (tonnes CO_2e)	0,0	2,8	0,0	0,0	19	5,0	5,0

Note fixed assets furniture : For the displayed categories, only items with unitary value above 420 EUR are inventoried in the JRC. Moreover, the displayed categories do not take into account laboratory equipment (e.g. laboratory chais, refrigerators, etc.)

JRC Seville

A) Fixed assets buildings, construction type	2018	2019	2020	2021	2022	2023	2024
i) Not specified - offices (total, m²)	0	0	5 898	5 926	5 926	5 926	5 926
Not specified - offices (amortised, m²)						5 926	5 926
Annualised emissions (tonnes CO_2e)	0,0	0,0	77	77	77	0,0	0,0
ii) Steel - industrial building (total, m²)	0	0	424	424	424	424	424
Steel - industrial building (amortised, m²)					0,0	424	424
Annualised emissions (tonnes CO_2e)	0,0	0,0	3,9	3,9	3,9	0,0	0,0
iii) Steel - parking underground (total, m²)	0,0	0,0	1 376	1 376	1 376	1 376	1 376
Steel - parking underground (amortised, m²)					0,0	1 376	1 376
Annualised emissions (tonnes CO_2e)	0,0	0,0	6,1	6,1	6,1	0,0	0,0
iv) Steel - restaurants (total, m²)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Steel - restaurants (amortised, m²)					0,0	0,0	0,0
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
v) Concrete - industrial buildings (total, m²)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Concrete - industrial buildings (amortised, m²)					0,0	0,0	0,0
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
vi) Concrete - parking underground (total, m²)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Concrete - parking underground (amortised, m²)					0,0	0,0	0,0
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
vii) Concrete - restaurants (total, m²)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Concrete - restaurants (amortised, m²)					0,0	0,0	0,0
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Total annualised emissions (tonnes CO2e)	0,0	0,0	87	87	87	0,0	0,0

B) Fixed assets IT	2018	2019	2020	2021	2022	2023	2024
i) Desktop PC (Total No.)	0	0	0	0	1	0	3
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,2	0,0	0,5
ii) Docking stations (Total No)	0	0	0	0	228	124	50
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	34	18	7,4
iii) Flat screens (Total No)	123	0	98	50	139	249	0
Annualised emissions (tonnes CO_2e)	94	0,0	23	12	33	58	0,0
iv) Laptop (Total No)	134	137	147	25	230	137	94
Annualised emissions (tonnes CO_2e)	172	21	23	3,9	36	21	15
v) individual printers (Total No)	2	0	0	0	0	0	0
Annualised emissions (tonnes CO_2e)	0,2	0,0	0,0	0,0	0,0	0,0	0,0
vi) Network printers and copiers (Total No)	18	1	0	0	1	0	0
Annualised emissions (tonnes CO_2e)	52,9	2,9	0,0	0,0	2,9	0,0	0,0
vii) Fax machines (Total No)	0	0	0	0	0	0	0
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
viii) Scanners (Total No)	0	0	0	0	0	0	0
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
ix) Telephones (simple) (No)	0	0	0	0	0	0	0
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
x) Telephones (smartphones and iphones, Total No)	44	8	1	1	2	15	1
Annualised emissions (tonnes CO_2e)	1,3	0,2	0,0	0,0	0,1	0,4	0,0
xi) Fixed telephones (Total No)	0	0	8	8	0	0	0
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,1	0,1	0,0	0,0	0,0
xii) Informatics server (Total No)	1	2	0	5	3	8	3
Annualised emissions (tonnes CO_2e)	2,6	1,2	0,0	3,0	1,8	4,8	1,8
xiii) Projectors (Total No)	3	1	0	0	0	0	0
Annualised emissions (tonnes CO_2e)	0,3	0,1	0,0	0,0	0,0	0,0	0,0
xiv) Videoconference installations (Total No)	0	1	4	0	16	0	5
Annualised emissions (tonnes CO_2e)	0,0	0,5	2,0	0,0	8,0	0,0	2,5
xv) Televisions (Total No)	0	0	0	0	0	0	0
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
xvi) Firewall router switch (from 2019), Total No	0	35	0	0	0	0	0
Annualised emissions (tonnes CO_2e)	0,0	2,8	0,0	0,0	0,0	0,0	0,0
xvii) Tablet, classical 9 to 11 inches	0	5	0	4	1	7	0
Annualised emissions (tonnes CO_2e)	0,0	0,3	0,0	0,3	0,1	0,4	0,0
Total annualised emissions (tonnes CO2e)	323	29	48	19	115	104	27

C) Fixed assets Furniture	2018	2019	2020	2021	2022	2023	2024
i) Chairs (Units)				163	36		
CO_2 emissions (tonnes CO_2e)	0,0	0,0	0,0	4,2	0,9	0,0	0,0
ii) Desks (Units)							
CO_2 emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
iii) Tables (Units)					3		
CO_2 emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,2	0,0	0,0
iv) Cupboards (Units)							
CO_2 emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
v) Fridges (Units)							
CO_2 emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
vi) Coffee machines (Units)							
CO_2 emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Total annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	4,2	1,1	0,0	0,0

Note fixed assets furniture : only items inventoried. Moreover, the displayed categories do not take into account laboratory equipment (e.g. laboratory chais, refrigerators, etc.)

JRC Ispra

A) Fixed assets buildings, construction type	2018	2019	2020	2021	2022	2023	2024
i) Not specified - offices (total, m²)	156 736	137 763	138 989	143 712	164 565	164 655	161 722
Not specified - offices (amortised, m²)					15 586	16 085	16 107
Annualised emissions (tonnes CO_2e)	2 038	1 791	1 807	1 868	1 937	1 931	1 893
ii) Steel - industrial building (total, m²)	634	2 536	2 536	2 536	2 536	2 536	2 536
Steel - industrial building (amortised, m²)					0	0	0
Annualised emissions (tonnes CO_2e)	3,5	14	14	14	14	14	14
iii) Steel - parking underground (total, m²)	0	0	0	0	0	0	0
Steel - parking underground (amortised, m²)							
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
iv) Steel - restaurants (total, m²)	0	0	0	0	0	0	0
Steel - restaurants (amortised, m²)							
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
v) Concrete - industrial buildings (total, m²)	98 547	83 582	84 757	53 898	92 438	92 473	94 060
Concrete - industrial buildings (amortised, m²)					43 481	43 516	43 502
Annualised emissions (tonnes CO_2e)	1 626	1 379	1 398	889	808	808	834
vi) Concrete - parking underground (total, m²)	0	0	0	0	0	0	0
Concrete - parking underground (amortised, m²)							
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
vii) Concrete - restaurants (total, m²)	5 796	5 796	5 796	5 737	5 796	5 796	5 796
Concrete - restaurants (amortised, m²)					59	59	59
Annualised emissions (tonnes CO_2e)	64	64	64	63	63	63	63
Total annualised emissions (tonnes CO2e)	3 731	3 248	3 283	2 835	2 822	2 816	2 804

B) Fixed assets IT	2018	2019	2020	2021	2022	2023	2024
i) Desktop PC (Total No.)	242	246	378	47	102	42	36
Annualised emissions (tonnes CO_2e)	124	126	64	8	17	7	6
ii) Docking stations (Total No)	191	362	273	415	1 298	1 008	351
Annualised emissions (tonnes CO_2e)	32	60	40	61	192	149	52
iii) Flat screens (Total No)	428	243	848	84	676	1 052	233
Annualised emissions (tonnes CO_2e)	328	186	199	20	159	247	55
iv) Laptop (Total No)	137	295	975	782	1 484	331	236
Annualised emissions (tonnes CO_2e)	175	46	152	122	232	52	37
v) individual printers (Total No)	3	6			2		
Annualised emissions (tonnes CO_2e)	0,3	0,7	0,0	0,0	0,2	0,0	0,0
vi) Network printers and copiers (Total No)	7	210	12	5	5	0	4
Annualised emissions (tonnes CO_2e)	21	617	35	15	15	0,0	12
vii) Fax machines (Total No)	0	0	0	0	0	0	0
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
viii) Scanners (Total No)	3	3	2	0	2	0	0
Annualised emissions (tonnes CO_2e)	4,4	4,4	2,9	0,0	2,9	0,0	0,0
ix) Telephones (simple) (No)	0	0	0	0	0	0	0
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
x) Telephones (smartphones and iphones, Total No)	21	17	57	5	18	27	25
Annualised emissions (tonnes CO_2e)	0,6	0,5	1,7	0,1	0,5	0,8	0,7
xi) Fixed telephones (Total No)	3	0	0	2	0	0	1
Annualised emissions (tonnes CO_2e)	0,1	0,0	0,0	0,0	0,0	0,0	0,0
xii) Informatics server (Total No)	132	140	115	135	64	71	67
Annualised emissions (tonnes CO_2e)	339	84	69	81	38	43	40
xiii) Projectors (Total No)	11	14	10			1	
Annualised emissions (tonnes CO_2e)	1,0	1,3	0,9	0,0	0,0	0,1	0,0
xiv) Videoconference installations (Total No)	0	17	76	11	0	3	52
Annualised emissions (tonnes CO_2e)	0,0	8,5	38	5,5	0,0	1,5	26
xv) Televisions (Total No)	17	101	63	4	4	12	19
Annualised emissions (tonnes CO_2e)	25	51	32	2,0	2,0	6,0	10
xvi) Firewall router switch (from 2019), Total No	75	35	68	28	26	51	83
Annualised emissions (tonnes CO_2e)	6,1	2,8	5,5	2,3	2,1	4,1	6,7
xvii) Tablet, classical 9 to 11 inches	2	20	3	29	8	26	4
Annualised emissions (tonnes CO_2e)	0,0	1,3	0,2	1,8	0,5	1,6	0,3
Total annualised emissions (tonnes CO2e)	1 056	1 190	641	319	661	512	245

C) Fixed assets Furniture	2018	2019	2020	2021	2022	2023	2024
i) Chairs (Units)		40	79	32	89	1	19
CO_2 emissions (tonnes CO_2e)	0,0	1,0	2,0	0,8	2,3	0,0	0,5
ii) Desks (Units)		4	10			1	3
CO_2 emissions (tonnes CO_2e)	0,0	0,3	0,7	0,0	0,0	0,1	0,2
iii) Tables (Units)		105	72	19	54	1	7
CO_2 emissions (tonnes CO_2e)	0,0	7,4	5,1	1,3	3,8	0,1	0,5
iv) Cupboards (Units)		14	27	99	5	57	3
CO_2 emissions (tonnes CO_2e)	0,0	13	24	90	4,5	52	2,7
v) Fridges (Units)		1	3	2	2	2	15
CO_2 emissions (tonnes CO_2e)	0,0	0,3	0,8	0,5	0,5	0,5	3,9
vi) Coffee machines (Units)							
CO_2 emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Total annualised emissions (tonnes CO_2e)	0,0	22	33	92	11	52	7,8

Note fixed assets furniture : For the displayed categories, only items with unitary value above 420 EUR are inventoried in the JRC. Moreover, the displayed categories do not take into account laboratory equipment (e.g. laboratory chais, refrigerators, etc.)

Grange

	2018	2019	2020	2021	2022	2023	2024
i) Not specified - offices (total, m²)	9 910	9 910	9 910	9 910	9 910	9 910	9 910
Not specified - offices (amortised, m²)							
Annualised emissions (tonnes CO_2e)	129	129	129	129	129	129	129
ii) Steel - industrial building (total, m²)	0	0	0	0	0		
Steel - industrial building (amortised, m²)							
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
iii) Steel - parking underground (total, m²)	0	0	0	0	0		
Steel - parking underground (amortised, m²)							
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
iv) Steel - restaurants (total, m²)	100	100	100	100	100		
Steel - restaurants (amortised, m²)							
Annualised emissions (tonnes CO_2e)	0,4	0,4	0,4	0,4	0,4	0,0	0,0
v) Concrete - industrial buildings (total, m²)	0	0	0	0	0		
Concrete - industrial buildings (amortised, m²)							
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
vi) Concrete - parking underground (total, m²)	0	0	0	0	0		
Concrete - parking underground (amortised, m²)							
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
vii) Concrete - restaurants (total, m²)	0	0	0	0	0		
Concrete - restaurants (amortised, m²)							
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Total annualised emissions (tonnes CO2e)	129	129	129	129	129	129	129

B) Fixed assets IT	2018	2019	2020	2021	2022	2023	2024
i) Desktop PC (Total No.)		0	0	0	0	0	0
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
ii) Docking stations (Total No)		145	0	48	34	10	1
Annualised emissions (tonnes CO_2e)	0,0	24	0,0	7,1	5,0	1,5	0,1
iii) Flat screens (Total No)		46	50	3	31	0	0
Annualised emissions (tonnes CO_2e)	0,0	35	12	0,7	7,3	0,0	0,0
iv) Laptop (Total No)		0	21	25	19	68	36
Annualised emissions (tonnes CO_2e)	0,0	0,0	3,3	3,9	3,0	10,6	5,6
v) individual printers (Total No)		0	0	0	0	0	0
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
vi) Network printers and copiers (Total No)		0	0	0	0	0	0
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
vii) Fax machines (Total No)		0	0	0	0	0	0
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
viii) Scanners (Total No)		0	0	0	0	0	0
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
ix) Telephones (simple) (No)		0	0	0	0	0	0
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
x) Telephones (smartphones and iphones, Total No)		6	1	0	1	4	4
Annualised emissions (tonnes CO_2e)	0,0	0,2	0,0	0,0	0,0	0,1	0,1
xi) Fixed telephones (Total No)		0	0	0	0	0	0
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
xii) Informatics server (Total No)		1	2	0	0	0	0
Annualised emissions (tonnes CO_2e)	0,0	0,6	1,2	0,0	0,0	0,0	0,0
xiii) Projectors (Total No)		0	0	0	0	0	0
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
xiv) Videoconference installations (Total No)		0	0	1	0	0	0
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,5	0,0	0,0	0,0
xv) Televisions (Total No)		0	0	0	0	0	0
Annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
xvi) Firewall router switch (from 2019), Total No		0	0	0	0	0	0
Annualised emissions (tonnes CO2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
xvii) Tablet, classical 9 to 11 inches		1	0	0	0	1	0
Annualised emissions (tonnes CO_2e)	0,0	0,1	0,0	0,0	0,0	0,1	0,0
Total annualised emissions (tonnes CO2e)	0,0	60	16	12	15	12	5,9

C) Fixed assets Furniture	2018	2019	2020	2021	2022	2023	2024
i) Chairs (Units)							
CO_2 emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
ii) Desks (Units)							
CO_2 emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
iii) Tables (Units)							
CO_2 emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
iv) Cupboards (Units)							
CO_2 emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
v) Fridges (Units)							
CO_2 emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
vi) Coffee machines (Units)							
CO_2 emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Total annualised emissions (tonnes CO_2e)	0,0	0,0	0,0	0,0	0,0	0,0	0,0

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B) Fixed assets IT	2018	2019	2020	2021	2022	2023	2024
Total annualised emissions (tonnes CO_2e)		37	31	6,8	11	13	2,3

C) Fixed assets Furniture	2018	2019	2020	2021	2022	2023	2024
Total annualised emissions (tonnes CO_2e)		15	1,6	1,6	1,5	0,6	1,0

Annex 4 - Emissions from refrigerant loss

Brussels refrigerant loss

Refrigerant loss (kg)	Trend 2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
R410A		99	129	126	25	105	153	80	136	95	56	155
as tCO_2e		**190**	**248**	**241**	**47**	**202**	**293**	**153**	**261**	**181**	**108**	**350**
R134A		65	80	407	254	145	18	294	581	218	216	474
as tCO_2e		**85**	**104**	**529**	**330**	**189**	**23**	**382**	**755**	**283**	**281**	**724**
R407C		181	176	310	108	226	153	211	91	166	124	112
as tCO_2e		**293**	**285**	**501**	**175**	**366**	**248**	**342**	**148**	**269**	**201**	**214**
R417A		0,0	0,0	0,0	0,0	5,0	0,0	0,0	0,0	0,0	0,0	0,0
as tCO_2e		**0,0**	**0,0**	**0,0**	**0,0**	**12**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
ISCEON 89		0,0	0,0	0,0	0,0	5,0	0,0	0,0	0,0	0,0	0,0	0,0
as tCO_2e		**0,0**	**0,0**	**0,0**	**0,0**	**19**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
R407D		0,0	0,0	0,0	0,0	5,0	0,0	0,0	0,0	0,0	0,0	0,0
as tCO_2e		**0,0**	**0,0**	**0,0**	**0,0**	**8,1**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
R404A		64	32	11	50	13	29	0,0	0,0	9,6	26	92
as tCO_2e		**253**	**126**	**43**	**197**	**52**	**114**	**0,0**	**0,0**	**38**	**102**	**433**
R452A		0,0	0,0	0,0	0,0	0,0	3,2	32	0,0	2,8	3,5	0,0
as tCO_2e		**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**71**	**0,0**	**6,0**	**7,5**	**0,0**
R1234ze		0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	30
as tCO_2e		**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,2**
R455A		0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
as tCO_2e		**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
R449A		0,0	0,0	0,0	0,0	0,0	0,0	0,0	21	14	9,1	2,3
as tCO_2e		**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**29**	**20**	**13**	**3,2**
Total (tCO_2e)		**821**	**763**	**1 315**	**749**	**847**	**677**	**876**	**1 163**	**771**	**711**	**1 724**

Note GHGs R417a, R32, and R513a are used but no losses reported

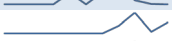
Luxembourg refrigerant loss

Refrigerant loss (kg)	Trend 2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
R410A		0,0	12	6,3	14	14	1,5	0,0	2,8	0,0	0,0	0,0
as tCO_2e		**0,0**	**23**	**12**	**26**	**26**	**2,9**	**0,0**	**5,3**	**0,0**	**0,0**	**0,0**
R134A		0,0	234	15	4,2	87	56	138	201	16	129	179
as tCO_2e		**0,0**	**305**	**19**	**5,5**	**114**	**73**	**179**	**261**	**20**	**167**	**274**
R404A		0,0	18	13	18	13	3,2	8,0	18	13	2,9	2,0
as tCO_2e		**0,0**	**70**	**50**	**72**	**51**	**13**	**32**	**69**	**52**	**11**	**9,2**
R407C		0,0	5,9	2,5	2,6	0,0	0,0	0,0	0,0	0,0	0,0	0,0
as tCO_2e		**0,0**	**9,5**	**4,1**	**4,2**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
ISCEON 89		0,0	0,0	0,0	0,0	5,0	0,0	0,0	0,0	0,0	0,0	0,0
as tCO_2e		**0,0**	**0,0**	**0,0**	**0,0**	**19**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
R407D		0,0	0,0	0,0	0,0	5,0	0,0	0,0	0,0	0,0	0,0	0,0
as tCO_2e		**0,0**	**0,0**	**0,0**	**0,0**	**8,1**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
R449A								0,0	0,0	4,8	0,0	0,0
as tCO_2e								**0,0**	**0,0**	**6,7**	**0,0**	**0,0**
R452a								0,0	0,0	0,0	0,0	0,5
as tCO_2e								**0,0**	**0,0**	**0,0**	**0,0**	**1,1**
Total (tCO_2e)		**0,0**	**407**	**85**	**108**	**218**	**89**	**211**	**336**	**73**	**178**	**284**

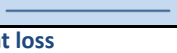
JRC Petten refrigerant loss

Refrigerant loss (kg)	Trend 2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
R410A		0,0	0,0	40	23	0,0	15	1,3	15	14	13	24
as tCO_2e		**0,0**	**0,0**	**76**	**44**	**0,0**	**28**	**2,4**	**28**	**27**	**24**	**54**
R407C		6,8	0,0	3,0	0,0	0,0	8,6	0,0	0,0	26	0,0	0,0
as tCO_2e		**11**	**0,0**	**4,8**	**0,0**	**0,0**	**14**	**0,0**	**0,0**	**42**	**0,0**	**0,0**
R507A		0,0	5,0	0,0	17	8,5	0,0	0,0	0,0	0,0	0,0	0,0
as tCO_2e		**0,0**	**11**	**0,0**	**38**	**19**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
ISCEON 89		0,0	0,0	0,0	0,0	5,0	0,0	0,0	0,0	0,0	0,0	0,0
as tCO_2e		**0,0**	**0,0**	**0,0**	**0,0**	**19**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
R407D		0,0	0,0	0,0	0,0	5,0	0,0	0,0	0,0	0,0	0,0	0,0
as tCO_2e		**0,0**	**0,0**	**0,0**	**0,0**	**8,1**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
Total (tCO_2e)		**11**	**11**	**81**	**82**	**46**	**42**	**2,4**	**28**	**69**	**24**	**54**

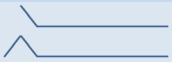
JRC Geel refrigerant loss

Refrigerant loss (kg)	Trend 2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
R410A		2,6	1,4	2,0	5,1	4,5	0,0	3,7	33,3	0,0	0,6	0,2
as tCO_2e		**5,0**	**2,7**	**3,9**	**9,8**	**8,5**	**0,0**	**7,2**	**64**	**0,0**	**1,1**	**0,3**
R134A		8,0	0,0	14	7,0	26	0,0	0,0	2,0	8,1	0,0	48
as tCO_2e		**10**	**0,0**	**18**	**9,0**	**33**	**0,0**	**0,0**	**2,6**	**11**	**0,0**	**74**
R404A		46	15	8,3	8,5	0,0	5,9	0,0	0,0	0,0	0,0	0,0
as tCO_2e		**180**	**60**	**33**	**33**	**0,0**	**23**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
R407C		0,0	14	0,0	0,0	6,4	0,0	0,0	0,0	0,0	5,6	0,0
as tCO_2e		**0,0**	**22**	**0,0**	**0,0**	**10**	**0,0**	**0,0**	**0,0**	**0,0**	**9,1**	**0,0**
R507A		0,0	0,0	0,0	0,6	7,5	38	0,0	0,0	0,0	0,0	0,0
as tCO_2e		**0,0**	**0,0**	**0,0**	**1,2**	**17**	**85**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
R227A		0,0	0,0	0,0	0,0	0,0	49	0,0	0,0	0,0	0,0	0,0
as tCO_2e		**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**129**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
RSF_6		0,0	0,0	0,2	0,2	0,0	1,7	4,5	2,9	1,0	0,9	38
as tCO_2e		**0,0**	**0,0**	**5,4**	**5,4**	**0,0**	**40**	**106**	**69**	**23**	**21**	**967**
ISCEON 89		0,0	0,0	0,0	0,0	7,5	0,0	8,0	14	2,8	0,3	0,0
as tCO_2e		**0,0**	**0,0**	**0,0**	**0,0**	**29**	**0,0**	**30**	**53**	**10**	**1,1**	**0,0**
R449A		0,0	0,0	0,0	0,0	0,0	0,0	0,0	4,4	12	1,1	6,3
as tCO_2e		**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**6,2**	**17**	**1,5**	**8,7**
R32										2,0	2,4	2,6
as tCO_2e										**1,4**	**1,6**	**2,0**
Total (tCO_2e)		**196**	**85**	**60**	**59**	**98**	**278**	**143**	**195**	**62**	**35**	**1 052**

JRC Karlsruhe refrigerant loss

Refrigerant loss (kg)	Trend 2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
R22		0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
as tCO_2e		**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
R410A		0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
as tCO_2e		**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
R134A		0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
as tCO_2e		**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
Total (tCO_2e)		**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**

JRC Seville refrigerant loss

Refrigerant loss (kg)	Trend 2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
R134A			36	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
as tCO_2e		**0,0**	**47**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
ISCEON 89		0,0	0,0	0,0	0,0	5,0	0,0	0,0	0,0	0,0	0,0	0,0
as tCO_2e		**0,0**	**0,0**	**0,0**	**0,0**	**19**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
R407D		0,0	0,0	0,0	0,0	5,0	0,0	0,0	0,0	3,0	0,0	0,0
as tCO_2e		**0,0**	**0,0**	**0,0**	**0,0**	**8,1**	**0,0**	**0,0**	**0,0**	**4,9**	**0,0**	**0,0**
Total (tCO_2e)		**0,0**	**47**	**0,0**	**0,0**	**27**	**0,0**	**0,0**	**0,0**	**4,9**	**0,0**	**0,0**

JRC Ispra refrigerant loss

Refrigerant loss (kg)	Trend 2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
R410A		4,3	6,5	19	11	3,7	22	6,9	38	0,0		8,5
as tCO_2e		**8,3**	**12**	**36**	**21**	**7,0**	**41**	**13**	**72**	**0,0**	**0,0**	**19**
R134A		60	0,00	360	30	0,0	0,0	138	187	48	30	7,0
as tCO_2e		**78**	**0,00**	**468**	**39**	**0,0**	**0,0**	**179**	**243**	**62**	**39**	**11**
R404A		0,0	4,1	0,0	25	0,0	0,0	5,5	0,0	0,0		0,4
as tCO_2e		**0,0**	**16**	**0,0**	**99**	**0,0**	**0,0**	**22**	**0,0**	**0,0**	**0,0**	**1,7**
R407C		3,6	4,0	48	1,3	2,1	0,0	64	0,0	0,0		
as tCO_2e		**5,8**	**6,5**	**77**	**2,1**	**3,3**	**0,0**	**104**	**0,0**	**0,0**	**0,0**	**0,0**
R507A		0,0	0,0	370	0,0	0,0	0,0	99	0,0	0,0		
as tCO_2e		**0,0**	**0,0**	**829**	**0,0**	**0,0**	**0,0**	**222**	**0,0**	**0,0**	**0,0**	**0,0**
R23		0,0	31	0,0	0,0	0,0	13	0,0	0,0	0,0		0,3
as tCO_2e		**0,0**	**384**	**0,0**	**0,0**	**0,0**	**166**	**0,0**	**0,0**	**0,0**	**0,0**	**3,7**
R508B		0,0	6,8	0,0	0,0	0,0	0,0	0,0	0,0	0,0		
as tCO_2e		**0,0**	**91**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
R227A		0,0	1,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0		
as tCO_2e		**0,0**	**2,6**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
ISCEON 89		0,0	0,0	0,0	0,0	5,0	0,0	0,0	0,0	0,0		
as tCO_2e		**0,0**	**0,0**	**0,0**	**0,0**	**19**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
R407D		0,0	0,0	0,0	0,0	5,0	0,0	0,0	0,0	0,0		
as tCO_2e		**0,0**	**0,0**	**0,0**	**0,0**	**8,1**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
Total (tCO_2e)		**92**	**513**	**1 410**	**161**	**37**	**208**	**540**	**315**	**62**	**39**	**35**

DG SANTE at GRANGE refrigerant loss

Refrigerant loss (kg)	Trend 2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
R404A		0,0	0,0	0,0	0,0	0,0	0,0	2,0	2,0	0,0	0,0	0,0
as tCO_2e		**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**7,9**	**7,9**	**0,0**	**0,0**	**0,0**
R407C			2,7	0,0	0,0	4,0	0,0	0,0	0,0	0,0	0,0	0,0
as tCO_2e		**0,0**	**4,3**	**0,0**	**0,0**	**6,5**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
ISCEON 89		0,0	0,0	0,0	0,0	5,0	0,0	0,0	0,0	0,0	0,0	0,0
as tCO_2e		**0,0**	**0,0**	**0,0**	**0,0**	**19,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
R407D		0,0	0,0	0,0	0,0	5,0	0,0	0,0	0,0	0,0	0,0	0,0
as tCO_2e		**0,0**	**0,0**	**0,0**	**0,0**	**8,1**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
R459A		0,0	0,0	0,0	0,0	0,0	0,0	0,0	2,8	0,0	0,0	0,0
as tCO_2e		**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**3,9**	**0,0**	**0,0**	**0,0**
Total (tCO_2e)		**0,0**	**4,3**	**0,0**	**0,0**	**33,6**	**0,0**	**7,9**	**12**	**0,0**	**0,0**	**0,0**

DG COMM refrigerant loss

Refrigerant loss (kg)	Trend 2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Total (tCO_2e)							**0,004**	**0,000**	**0,000**	**0,010**	**0,050**	**0,000**

NO_x, CO total emissions from Ispra trigeneration plant

	Trend 2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
NOx (kg)		28 498	37 292	33 507	32 317	21 962	37 322	24 450	26 040	29 100	18 230	24 144
CO (kg)		46 835	48 489	51 800	37 376	30 887	46 093	25 240	24 800	32 450	9 150	11 063
NH3 (kg)		-	-	-	-	-	-	-	-	140	720	78

NO_x total emissions (tonnes) at JRC Petten

		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
NOx (tonnes)		0,56	0,61	0,56	0,43	0,45	0,42	0,23	0,24	0,17	0,24	0,29

Total air emissions buildings (tonnes) as minimum (SO_2, NO_x, PM10) at JRC-Geel

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Total air emissions buildings (tonnes) as minimum (SO_2, NO_x, PM_{10})	0,79	0,44	0,47	0,45	0,43	0,42	0,44	0,43	0,48	0,34	0,26	0,28

JRC Geel Atmospheric emissions containing α emitting aerosols

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
α aerosols (kBq)	0,90	2,30	0,80	1,10	1,50	1,40	1,40	0,50	1,10	1,00	1,00	1,20

JRC Karlsruhe exhaust air: Aerosols declaration to authorities (Bq/y)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Beta AE	43 300	130 000	297 000	619 000	15 100	2 850	22 000			12 600		
Alpha AE				500								

JRC Ispra gaseous and liquid discharge %

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Gaseous	0,21	0,18	0,19	0,45	0,25	5,70	0,13	0,11	0,11	0,14	0,06	0,18
Liquid	0,04	0,05	0,00	0,01	0,02	0,01	0,02	0,62	0,89	0,85	0,73	0,22

Annex 5 - Biodiversity and emissions from food, service contracts and paper

BIODIVERSITY

Total use of land (m^2)

Site	Trend 2020-24	2020	2021	2022	2023	2024
Brussels		285 928	285 928	241 966	241 966	204 336
m^2/p		**9,6**	**9,3**	**7,8**	**7,6**	**6,7**
Luxembourg		138 339	138 339	138 339	138 322	133 355
m^2/p		**26**	**25**	**24**	**25**	**24**
JRC Petten		332 500	332 500	332 500	332 500	332 500
m^2/p		**1 346**	**1 385**	**1 446**	**1 458**	**1 409**
JRC Geel		380 316	380 316	380 316	380 316	380 316
m^2/p		**1 430**	**1 446**	**1 441**	**1 441**	**1 441**
JRC Karlsruhe		72 000	72 000	72 000	72 000	72 000
m^2/p		**233**	**236**	**235**	**237**	**240**
JRC Seville		12 094	12 094	12 094	12 094	12 094
m^2/p		**32**	**31**	**30**	**30**	**28**
JRC Ispra		1 592 231	1 592 231	1 592 231	1 592 231	1 592 231
m^2/p		**660**	**643**	**638**	**645**	**638**
Grange		90 000	90 000	90 000	90 000	90 000
m^2/p		**520**	**506**	**495**	**533**	**556**
DG COMM		8 898	8 898	8 898	8 898	8 898
m^2/p		**75**	**81**	**71**	**64**	**65**
Commission		**2 903 408**	**2 907 184**	**2 863 268**	**2 863 272**	**2 820 618**
m^2/p		**74**	**72**	**70**	**69**	**70**

Total sealed area (m^2)

Site	Trend 2020-24	2020	2021	2022	2023	2024
Brussels		181 864	181 864	163 031	155 257	141 250
m^2/p		**6,1**	**5,9**	**5,3**	**4,9**	**4,6**
Luxembourg		104 029	104 029	104 029	104 830	99 863
m^2/p		**20**	**19**	**18**	**19**	**18**
JRC Petten		59 909	59 909	59 909	59 909	59 909
m^2/p		**243**	**250**	**260**	**263**	**254**
JRC Geel		70 512	72 110	72 110	72 110	72 110
m^2/p		**265**	**274**	**273**	**273**	**273**
JRC Karlsruhe		72 000	72 000	72 000	72 000	72 000
m^2/p		**233**	**236**	**235**	**237**	**240**
JRC Seville		23 487	23 487	23 487	23 487	23 487
m^2/p		**61**	**60**	**58**	**58**	**55**
JRC Ispra		650 028	644 657	642 116	642 116	638 096
m^2/p		**270**	**260**	**257**	**260**	**256**
Grange		18 000	18 000	18 000	18 000	18 000
m^2/p		**104**	**101**	**99**	**107**	**111**
DG COMM		8 514	8 514	8 514	8 514	8 514
m^2/p		**72**	**77**	**68**	**61**	**63**
Commission		**1 179 830**	**1 177 161**	**1 155 790**	**1 148 823**	**1 125 815**
m^2/p		**30**	**29**	**28**	**28**	**28**

Nature oriented area onsite (m^2)

Site	Trend 2020-24	2020	2021	2022	2023	2024
Brussels		104 064	104 064	78 935	86 709	63 068
m^2/p		**3,5**	**3,4**	**2,6**	**2,7**	**2,1**
Luxembourg		34 310	34 310	34 310	33 492	35 253
m^2/p		**6,5**	**6,2**	**6,0**	**5,9**	**6,2**
JRC Petten		75 591	75 591	75 591	75 591	75 591
m^2/p		**306**	**315**	**329**	**332**	**320**
JRC Geel		309 804	308 206	308 206	308 206	308 206
m^2/p		**1 165**	**1 172**	**1 167**	**1 167**	**1 167**
JRC Karlsruhe		162 000	162 000	162 000	162 000	162 000
m^2/p		**524**	**531**	**529**	**533**	**540**
JRC Seville		4 994	4 994	4 994	4 994	4 994
m^2/p		**13**	**13**	**12**	**12**	**12**
JRC Ispra		942 203	948 492	951 033	951 033	955 559
m^2/p		**391**	**383**	**381**	**385**	**383**
Grange		18 250	18 250	18 250	18 250	18 250
m^2/p		**105**	**103**	**100**	**108**	**113**
DG COMM		456	466	466	466	466
m^2/p		**3,9**	**4,2**	**3,7**	**3,3**	**3,4**
Commission		**1 651 215**	**1 658 331**	**1 635 747**	**1 642 713**	**1 625 352**
m^2/p		**42**	**41**	**40**	**40**	**40**

Nature oriented area offsite (m^2)

Site	Trend 2020-24	2020	2021	2022	2023	2024
Brussels		0,0	0,0	0,0	0,0	0,0
m^2/p		**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
Luxembourg		0	0	0	0	0
m^2/p		**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
JRC Petten		197 000	197 000	197 000	197 000	197 000
m^2/p		**798**	**821**	**857**	**864**	**835**
JRC Geel		0	0	0	0	0
m^2/p		**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
JRC Karlsruhe		0	0	0	0	0
m^2/p		**0,00**	**0,00**	**0,00**	**0,00**	**0,00**
JRC Seville		0	0	0	0	0
m^2/p		**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
JRC Ispra		0	0	0	0	0
m^2/p		**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
Grange		18 000	18 000	18 000	18 000	18 000
m^2/p		**104**	**101**	**99**	**107**	**111**
DG COMM		0,0	0,0	0,0	0,0	0,0
m^2/p						
Commission		**215 000**	**215 821**	**215 857**	**215 864**	**215 835**
m^2/p		**5,5**	**5,4**	**5,3**	**5,2**	**5,4**

FOOD/CATERING

Brussels

A) Catering consumption (tonnes)		Trend 2018-24	2018	2019	2020	2021	2022	2023	2024
i) Beef	tonnes		0,0	70	20	2,2	15	15	7,6
as tCO_2e			**0,0**	**1 991**	**564**	**62**	**434**	**516**	**205**
ii) Pork	tonnes		0,0	82	23	2,5	18	19	7,0
as tCO_2e			**0,0**	**481**	**136**	**15**	**105**	**180**	**71**
iii) Chicken	tonnes		0,0	106	30	3,3	23	16	17
as tCO_2e			**0,0**	**502**	**142**	**16**	**109**	**69**	**96**
iv) Fish	tonnes		0,0	63	18	2,0	14	27	27
as tCO_2e			**0,0**	**604**	**165**	**18**	**127**	**296**	**286**
v) Milk	tonnes		0,0	50	14	1,0	9,0	65	10
as tCO_2e			**0,0**	**61**	**17**	**1,2**	**11**	**97**	**16**
vi) Other dairy (avg yoghurt/butter)	tonnes		0,0	28	7,8	0,7	6,3	43	24
as tCO_2e			**0,0**	**171**	**48**	**4,4**	**39**	**384**	**115**
vii) Coffee	tonnes		0,0	14	3,9	0,3	2,5	17	3,5
as tCO_2e			**0,0**	**43**	**12**	**0,9**	**7,7**	**156**	**35**
viii) Lamb	kg							36	49
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**1,4**	**2,0**
ix) Veal	kg							27	0
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,5**	**0,00**
x) Fruits	kg							71 691	48 840
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**42**	**29**
xi) Vegetables	kg							73 455	107 474
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**62**	**91**
xii) Bread	kg							41 904	1 940
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**29**	**1,3**
xiii) Pasta	kg							23 445	5 252
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**50**	**11**
xiv) Rice	kg							7 764	5 267
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**21**	**15**
TOTAL tCO_2e			**0,0**	**3 852**	**1 085**	**117**	**833**	**1 906**	**972**

Luxembourg

A) Catering consumption (tonnes)		Trend 2018-24	2018	2019	2020	2021	2022	2023	2024
i) Beef	tonnes		0,0	12	3,6	1,7	5,4	6,6	6,2
as tCO_2e			**0,0**	**332**	**103**	**48**	**156**	**223**	**167**
ii) Pork	tonnes		0,0	14	3,0	0,9	3,6	5,6	6,2
as tCO_2e			**0,0**	**80**	**18**	**5,0**	**21**	**53**	**63**
iii) Chicken	tonnes		0,0	18	3,5	2,3	3,1	5,8	5,3
as tCO_2e			**0,0**	**84**	**16**	**11**	**15**	**26**	**29**
iv) Fish	tonnes		0,0	11	5,0	2,7	4,8	4,4	4,1
as tCO_2e			**0,0**	**101**	**46**	**25**	**44**	**48**	**44**
v) Milk	tonnes		0,0	8,4	7,2	4,9	8,6	8,4	8,2
as tCO_2e			**0,0**	**10**	**8,8**	**6,0**	**10**	**13**	**12**
vi) Other dairy (avg yoghurt/butter)	tonnes		0,0	4,6	2,4	5,7	9,5	11	10
as tCO_2e			**0,0**	**28**	**15**	**35**	**59**	**99**	**48**
vii) Coffee	tonnes		0,0	2,3	1,9	0,6	2,3	2,2	2,1
as tCO_2e			**0,0**	**7,2**	**6,1**	**2,0**	**7,2**	**21**	**21**
viii) Lamb	kg						715	172	190
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**29**	**6,9**	**7,7**
ix) Veal	kg						1 381	1 781	2 159
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**24**	**30**	**37**
x) Fruits	kg						7 968	17 746	15 745
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**4,7**	**10**	**9,3**
xi) Vegetables	kg						51 459	84 576	80 837
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**44**	**72**	**68**
xii) Bread	kg						7 315	8 605	8 249
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**5,0**	**5,9**	**5,7**
xiii) Pasta	kg						2 570	2 298	1 803
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**5,5**	**4,9**	**3,9**
xiv) Rice	kg						1 488	1 837	1 836
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**4,1**	**5,1**	**5,1**
TOTAL tCO_2e			**0,0**	**642**	**213**	**132**	**427**	**617**	**521**

JRC Petten

A) Catering consumption (tonnes)		Trend 2018-24	2018	2019	2020	2021	2022	2023	2024
i) Beef	tonnes		0,0	0,0	0,0	0,0	0,0	0,0	0,0
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
ii) Pork	tonnes		0,0	0,0	0,0	0,0	0,0	0,0	0,0
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
iii) Chicken	tonnes		0,0	0,0	0,0	0,0	0,0	0,0	0,0
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
iv) Fish	tonnes		0,0	0,0	0,0	0,0	0,0	0,0	0,0
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
v) Milk	tonnes		0,0	0,0	0,0	0,0	0,0	0,0	0,0
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
vi) Other dairy (avg yoghurt/butter)	tonnes		0,0	0,0	0,0	0,0	0,0	0,0	0,0
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
vii) Coffee	tonnes		0,0	0,0	0,0	0,0	0,0	0,0	0,0
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
viii) Lamb	kg							**0,0**	**0,0**
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
ix) Veal	kg							**0,0**	**0,0**
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
x) Fruits	kg							**0,0**	**0,0**
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
xi) Vegetables	kg							**0,0**	**0,0**
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
xii) Bread	kg							**0,0**	**0,0**
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
xiii) Pasta	kg								
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
xiv) Rice	kg							**0,0**	**0,0**
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
TOTAL tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**

Note: There is no dedicated JRC Petten canteen within the site boundary

JRC Geel

A) Catering consumption (tonnes)		Trend 2018-24	2018	2019	2020	2021	2022	2023	2024
i) Beef	tonnes		0,5	0,4	0,2	0,2	0,5	0,5	0,4
as tCO_2e			**13**	**13**	**6,6**	**5,3**	**15**	**16**	**11**
ii) Pork	tonnes		0,4	0,5	0,2	0,1	0,2	0,4	0,4
as tCO_2e			**2,6**	**2,8**	**1,4**	**0,8**	**1,3**	**4,1**	**4,1**
iii) Chicken	tonnes		0,6	0,5	0,2	0,1	0,3	0,4	0,5
as tCO_2e			**2,9**	**2,3**	**0,8**	**0,6**	**1,6**	**1,9**	**2,5**
iv) Fish	tonnes		1,0	0,7	0,3	0,1	0,3	0,7	0,7
as tCO_2e			**9,8**	**6,7**	**3,0**	**1,0**	**3,0**	**8,0**	**8,1**
v) Milk	tonnes		0,4	0,6	0,6	0,5	0,6	0,4	0,5
as tCO_2e			**0,5**	**0,8**	**0,7**	**0,6**	**0,7**	**0,7**	**0,7**
vi) Other dairy (avg yoghurt/butter)	tonnes		0,2	0,5	0,1	0,5	0,3	0,4	0,6
as tCO_2e			**1,5**	**2,9**	**0,9**	**3,0**	**2,0**	**3,5**	**2,6**
vii) Coffee	tonnes		0,1	0,1	0,0	0,0	0,0	0,0	0,0
as tCO_2e			**0,4**	**0,3**	**0,1**	**0,0**	**0,1**	**0,1**	**0,2**
viii) Lamb	kg							**0,0**	**0,0**
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
ix) Veal	kg							**5,2**	**7,0**
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,1**	**0,1**
x) Fruits	kg							**45**	**222**
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,1**
xi) Vegetables	kg							**6 325**	**6 648**
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**5,4**	**5,6**
xii) Bread	kg							**955**	**797**
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,7**	**0,5**
xiii) Pasta	kg							**240**	**278**
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,5**	**0,6**
xiv) Rice	kg							**143**	**255**
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,4**	**0,7**
TOTAL tCO_2e			**31**	**28**	**13**	**11**	**24**	**41**	**37**

JRC Karlsruhe

A) Catering consumption (tonnes)		Trend 2018-24	2018	2019	2020	2021	2022	2023	2024
i) Beef	tonnes		0,0	0,0	0,0	0,0	0,0	0,0	0,0
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
ii) Pork	tonnes		0,0	0,0	0,0	0,0	0,0	0,0	0,0
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
iii) Chicken	tonnes		0,0	0,0	0,0	0,0	0,0	0,0	0,0
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
iv) Fish	tonnes		0,0	0,0	0,0	0,0	0,0	0,0	0,0
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
v) Milk	tonnes		0,0	0,0	0,0	0,0	0,0	0,0	0,0
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
vi) Other dairy (avg yoghurt/butter)	tonnes		0,0	0,0	0,0	0,0	0,0	0,0	0,0
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
vii) Coffee	tonnes		0,0	0,0	0,0	0,0	0,0	0,0	0,0
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
viii) Lamb	kg								
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
ix) Veal	kg								
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
x) Fruits	kg								
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
xi) Vegetables	kg								

as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
xii) Bread	kg								
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
xiii) Pasta	kg								
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
xiv) Rice	kg								
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
TOTAL tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**

Note: There is no dedicated JRC Karlsuhe canteen within the site boundary, only a small cafeteria

JRC Seville

A) Catering consumption (tonnes)		Trend 2018-24	2018	2019	2020	2021	2022	2023	2024
i) Beef	tonnes		0,0	0,0	0,0	0,0	0,0	0,0	0,0
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
ii) Pork	tonnes		0,0	0,0	0,0	0,0	0,0	0,0	0,0
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
iii) Chicken	tonnes		0,0	0,0	0,0	0,0	0,0	0,0	0,0
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
iv) Fish	tonnes		0,0	0,0	0,0	0,0	0,0	0,0	0,0
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
v) Milk	tonnes		0,0	0,0	0,0	0,0	0,0	0,0	0,0
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
vi) Other dairy (avg yoghurt/butter)	tonnes		0,0	0,0	0,0	0,0	0,0	0,0	0,0
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
vii) Coffee	tonnes		0,0	0,0	0,1	0,1	0,2	0,0	0,0
as tCO_2e			**0,0**	**0,0**	**0,3**	**0,3**	**0,5**	**0,0**	**0,0**
viii) Lamb	kg		0,0	0,0	0,0	0,0	0,0	0,0	0,0
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
ix) Veal	kg		0,0	0,0	0,1	0,1	10,8	0,0	0,0
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,2**	**0,0**	**0,0**
x) Fruits	kg		0,0	0,0	0,0	0,0	0,0	0,0	0,0
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
xi) Vegetables	kg		0,0	0,0	0,1	0,1	0,0	0,0	0,0
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
xii) Bread	kg		0,0	0,0	0,0	0,0	0,0	0,0	0,0
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
xiii) Pasta	kg		0,0	0,0	0,1	0,1	0,0	0,0	0,0
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
xiv) Rice	kg		0,0	0,0	0,0	0,0	0,0	0,0	0,0
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
TOTAL tCO_2e			**0,0**	**0,0**	**0,3**	**0,3**	**0,7**	**0,0**	**0,0**

Note: There is no dedicated JRC Seville canteen

JRC Ispra

A) Catering consumption (tonnes)		Trend 2018-24	2018	2019	2020	2021	2022	2023	2024
i) Beef	tonnes		0,0	0,0	0,0	0,0	0,0	2,4	7,5
as tCO_2e								**82**	**203**
ii) Pork	tonnes		9,7	7,6	3,4	5,1	7,0	6,1	7,7
as tCO_2e			**57**	**45**	**19,86**	**30**	**41**	**57**	**78**
iii) Chicken	tonnes		10	9,4	3,1	4,5	8,0	9,1	8,5
as tCO_2e			**48**	**45**	**14,75**	**21**	**38**	**41**	**47**
iv) Fish	tonnes		15	15	4,1	6,2	7,0	8,3	8,5
as tCO_2e			**147**	**144**	**38**	**57**	**65**	**91**	**92**
v) Milk	tonnes		12	11	3,0	3,6	7,0	8,3	7,9
as tCO_2e			**14**	**14**	**3,6**	**4,4**	**8,5**	**12**	**12**
vi) Other dairy (avg yoghurt/butter)	tonnes		5,7	4,0	1,7	2,0	3,4	3,6	3,8
as tCO_2e			**35**	**25**	**11**	**12**	**21**	**32**	**18**
vii) Coffee	tonnes		3,3	2,6	2,5	7,4	1,6	1,8	1,5
as tCO_2e			**10**	**8,1**	**7,9**	**23**	**5,02**	**17**	**15**
viii) Lamb	kg		371	404	101	140	192	394	515
as tCO_2e			**15**	**16**	**4,1**	**5,6**	**7,7**	**16**	**21**
ix) Veal	kg		7 209	4 081	1 201	1 130	2 199	1 217	2 777
as tCO_2e			**123**	**70**	**21**	**19**	**38**	**21**	**47**
x) Fruits	kg		53 901	51 770	14 775	15 026	24 743	29 563	27 080
as tCO_2e			**32**	**30**	**8,7**	**8,8**	**15**	**17**	**16**
xi) Vegetables	kg		96 533	83 349	25 071	30 352	60 941	66 352	65 568
as tCO_2e			**82**	**71**	**21**	**26**	**52**	**56**	**55**
xii) Bread	kg		15 285	11 914	4 512	5 143	5 275	7 057	5 962
as tCO_2e			**11**	**8,2**	**3,1**	**3,5**	**3,6**	**4,9**	**4,1**
xiii) Pasta	kg		14 525	12 984	2 538	6 298	10 844	11 423	12 450
as tCO_2e			**31**	**28**	**5,4**	**14**	**23**	**24**	**27**
xiv) Rice	kg		5 181	4 455	1 356	2 080	3 740	4 588	4 445
as tCO_2e			**14**	**12**	**3,7**	**5,7**	**10**	**13**	**12**
TOTAL tCO_2e			**618**	**516**	**161**	**231**	**327**	**484**	**647**

Grange

A) Catering consumption (tonnes)		Trend 2018-24	2018	2019	2020	2021	2022*	2023*	2024
i) Beef	tonnes		0,0	0,5	0,1	0,1	0,1	0,2	0,4
as tCO_2e			**0,0**	**16**	**2,2**	**2,2**	**3,7**	**5,3**	**11**
ii) Pork	tonnes		0,0	0,5	0,0	0,0	0,1	0,2	0,1
as tCO_2e			**0,0**	**2,8**	**0,1**	**0,1**	**0,7**	**2,1**	**1,3**
iii) Chicken	tonnes		0,0	0,5	0,0	0,0	0,1	0,5	0,4
as tCO_2e			**0,0**	**2,3**	**0,0**	**0,0**	**0,5**	**2,1**	**2,2**
iv) Fish	tonnes		0,0	0,6	0,1	0,1	0,1	0,1	0,3
as tCO_2e			**0,0**	**5,8**	**1,1**	**1,1**	**1,3**	**1,3**	**2,8**
v) Milk	tonnes		0,0	4,0	0,0	0,0	1,0	2,5	1,4
as tCO_2e			**0,0**	**4,9**	**0,0**	**0,0**	**1,2**	**3,7**	**2,1**
vi) Other dairy (avg yoghurt/butter)	tonnes		0,0	0,2	0,0	0,0	0,1	0,0	0,1
as tCO_2e			**0,0**	**1,5**	**0,0**	**0,0**	**0,4**	**0,4**	**0,4**
vii) Coffee	tonnes		0,0	0,5	0,1	0,1	0,1	0,2	0,2

as tCO_2e			**0,0**	**1,4**	**0,4**	**0,4**	**0,3**	**2,0**	**1,6**
viii) Lamb	kg							0,0	0,0
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
ix) Veal	kg							0,0	0,0
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
x) Fruits	kg							0,6	0,5
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
xi) Vegetables	kg							1,2	0,9
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
xii) Bread	kg							0,3	0,1
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
xiii) Pasta	kg							0,1	0,1
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
xiv) Rice	kg							0,0	0,1
as tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
TOTAL tCO_2e			**0,0**	**34**	**3,8**	**3,8**	**8,2**	**17**	**21**

* Data exceptionally not available (N.a) available owing to contractor IT issues, new contract being arranged

DG COMM

A) Catering consumption (tonnes)	**Trend 2018-24**	**2018**	**2019**	**2020**	**2021**	**2022***	**2023***	**2024**
TOTAL tCO_2e			**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**

* Data exceptionally not available (N.a) available owing to contractor IT issues, new contract being arranged

SERVICE CONTRACTS

Brussels

B) Service contracts	**Trend 2018-24**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
i) Security (FTE)		678	672	579	594	622	571	599
as tCO_2e		**380**	**377**	**325**	**333**	**349**	**320**	**336**
ii) Cleaning (FTE)		373	378	356	350	362	340	357
as tCO_2e		**440**	**446**	**420**	**413**	**427**	**401**	**421**
iii) Services (printing, advertising, architecture and engineering, multi-technical building maintenance) (kEUR)		0,0	0,0	0,0	0,0	0,0	0,0	0,0
as tCO_2e		**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
iv) Service contracts - Services (Service/Insurance, banking services, advice, and fees) (kEUR)		0,0	0,0	0,0	0,0	0,0	0,0	0,0
as tCO_2e		**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
v) Other heavy service contracts - (kEUR)		22 411	25 354	22 411	24 275	24 389	30 346	31 599
as tCO_2e		**2 465**	**2 789**	**3 810**	**4 127**	**4 146**	**5 159**	**5 372**
TOTAL tCO_2e		**3 285**	**3 612**	**4 555**	**4 872**	**4 922**	**5 880**	**6 129**

Luxembourg

B) Service contracts	**Trend 2018-24**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
i) Security (FTE)		250	261	169	177	200	197	186
as tCO_2e		**140**	**146**	**95**	**99**	**112**	**111**	**104**
ii) Cleaning (FTE)		143	87	78	82	91	88	75
as tCO_2e		**169**	**103**	**92**	**97**	**107**	**104**	**88**
iii) Services (printing, advertising, architecture and engineering, multi-technical building maintenance) (kEUR)		0,0	0,0	0,0	1 558	8 751	7 660	6 028
as tCO_2e		**0**	**0**	**0**	**265**	**1 488**	**1 302**	**1 025**
iv) Service contracts - Services (Service/Insurance, banking services, advice, and fees) (kEUR)		0,00	0,00	0,00	0,00	568	2 153	7 922
as tCO_2e		**0**	**0**	**0**	**0**	**63**	**237**	**871**
v) Other heavy service contracts - (kEUR)		10 295	11 047	11 610	11 959	5 201	3 722	583
as tCO_2e		**1 132**	**1 215**	**1 974**	**2 033**	**884**	**633**	**99**
TOTAL tCO_2e		**1 441**	**1 464**	**2 160**	**2 494**	**2 654**	**2 386**	**2 188**

JRC Petten

B) Service contracts	**Trend 2018-24**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
i) Security (FTE)		4,1	4,1	4,1	4,1	4,1	4,1	4,1
as tCO_2e		**2,3**	**2,3**	**2,3**	**2,3**	**2,3**	**2,3**	**2,3**
ii) Cleaning (FTE)		3,8	3,8	3,8	3,8	3,8	3,8	3,8
as tCO_2e		**4,4**	**4,4**	**4,4**	**4,4**	**4,4**	**4,4**	**4,4**
iii) Services (printing, advertising, architecture and engineering,		500	500	500	500	500	881	749
as tCO_2e		**55**	**55**	**85**	**85**	**85**	**150**	**127**
iv) Service contracts - Services (Service/Insurance, banking		898	898	898	898	898	141	444
as tCO_2e		**99**	**99**	**99**	**99**	**99**	**16**	**49**
v) Other heavy service contracts - (kEUR)		0,0	0,0	0,0	0,0	0,0	13	13
as tCO_2e		**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**2,2**	**2,2**
TOTAL tCO_2e		**160**	**160**	**190**	**190**	**190**	**174**	**185**

JRC Geel

B) Service contracts	**Trend 2018-24**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
i) Security (FTE)		18	18	18	18	18	18	18
as tCO_2e		**10**	**10**	**10**	**10**	**10**	**10**	**10**
ii) Cleaning (FTE)		7,6	7,6	7,6	7,6	7,6	7,6	7,6
as tCO_2e		**9,0**	**9,0**	**9,0**	**9,0**	**9,0**	**9,0**	**9,0**
iii) Services (printing, advertising, architecture and engineering,		0,0	1 018	1 126	1 178	1 321	1 667	1 668
as tCO_2e		**0,0**	**112**	**191**	**200**	**225**	**283**	**284**
iv) Service contracts - Services (Service/Insurance, banking		0,0	0,0	0,0	0,0	0,0		
as tCO_2e		**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
v) Other heavy service contracts - (kEUR)		7,0	510	392	588	576	636	680
as tCO_2e		**0,8**	**56**	**67**	**100**	**98**	**108**	**116**
TOTAL tCO_2e		**20**	**187**	**277**	**319**	**342**	**411**	**418**

JRC Karlsruhe

B) Service contracts	Trend 2018-24	2018	2019	2020	2021	2022	2023	2024
i) Security (FTE)		0,0	0,0	38	38	38	38	38
as tCO_2e		**0,0**	**0,0**	**21**	**21**	**21**	**21**	**21**
ii) Cleaning (FTE)		0,0	0,0	5,0	5,0	5,0	5,0	5,0
as tCO_2e		**0,0**	**0,0**	**5,9**	**5,9**	**5,9**	**5,9**	**5,9**
iii) Services (printing, advertising, architecture and engineering,		0,0	0,0	0,0	0,0			
as tCO_2e		**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
iv) Service contracts - Services (Service/Insurance, banking		0,0	0,0	0,0	0,0			
as tCO_2e		**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
v) Other heavy service contracts - (kEUR)		0,0	0,0	0,0	0,0			
as tCO_2e		**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
TOTAL tCO_2e		**0,0**	**0,0**	**27**	**27**	**27**	**27**	**27**

JRC Seville

B) Service contracts	Trend 2018-24	2018	2019	2020	2021	2022	2023	2024
i) Security (FTE)		0,0	0,0	0,0	0,0	0,0	0,0	0,0
as tCO_2e		**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
ii) Cleaning (FTE)		0,0	0,0	1,0	1,0	1,0	1,0	1,0
as tCO_2e		**0,0**	**0,0**	**1,2**	**1,2**	**1,2**	**1,2**	**1,2**
iii) Services (printing, advertising, architecture and engineering,		0,0	0,0	70	151	138	230	1 670
as tCO_2e		**0,0**	**0,0**	**12**	**26**	**23**	**39**	**284**
iv) Service contracts - Services (Service/Insurance, banking		0,0	0,0	0,0	0,0	0,0	0,8	2,8
as tCO_2e		**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,1**	**0,3**
v) Other heavy service contracts - (kEUR)		0,0	0,0	0,0	9,6	6,9	0,0	0,0
as tCO_2e		**0,0**	**0,0**	**0,0**	**1,6**	**1,2**	**0,0**	**0,0**
TOTAL tCO_2e		**0,0**	**0,0**	**13**	**28**	**26**	**40**	**285**

JRC Ispra

B) Service contracts	Trend 2018-24	2018	2019	2020	2021	2022	2023	2024
i) Security (FTE)		50	50	47	42	46	51	45
as tCO_2e		**28**	**28**	**26**	**24**	**26**	**29**	**25**
ii) Cleaning (FTE)		90	90	90	90	90	90	93
as tCO_2e		**106**	**106**	**106**	**106**	**106**	**106**	**110**
iii) Services (printing, advertising, architecture and engineering, multi-technical building maintenance) (kEUR)								
as tCO_2e		**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
iv) Service contracts - Services (Service/Insurance, banking services, advice, and fees) (kEUR)								
as tCO_2e		**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
v) Other heavy service contracts - (kEUR)								
as tCO_2e		**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
TOTAL tCO_2e		**134**	**134**	**133**	**130**	**132**	**135**	**135**

Grange

B) Service contracts	Trend 2018-24	2018	2019	2020	2021	2022	2023	2024
i) Security (FTE)		9,0	9,0	9,0	9,0	9,0	9,0	9,0
as tCO_2e		**5,0**	**5,0**	**5,0**	**5,0**	**5,0**	**5,0**	**5,0**
ii) Cleaning (FTE)		7,0	7,0	7,0	7,0	7,0	7,0	7,0
as tCO_2e		**8,3**	**8,3**	**8,3**	**8,3**	**8,3**	**8,3**	**8,3**
iii) Services (printing, advertising, architecture and engineering, multi-technical building maintenance) (kEUR)		71	90	90	90	90	77	90
as tCO_2e		**7,8**	**9,9**	**15**	**15**	**15**	**13**	**15**
iv) Service contracts - Services (Service/Insurance, banking services, advice, and fees) (kEUR)		0,0	0,0	0,0	0,0	0,0	31	31
as tCO_2e		**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**3,4**	**3,4**
v) Other heavy service contracts - (kEUR)		0,0	0,0	0,0	0,0	0,0	0,0	0,0
as tCO_2e		**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
TOTAL tCO_2e		**21**	**23**	**29**	**29**	**29**	**30**	**32**

DG COMM

B) Service contracts	Trend 2018-24	2018	2019	2020	2021	2022	2023	2024
TOTAL tCO_2e								

PAPER

Office paper (tonnes per year)

Site	Trend 2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Brussels		894	875	750	634	639	608	227	166	150	189	149
tonnes/person		**0,033**	**0,032**	**0,028**	**0,022**	**0,022**	**0,021**	**0,008**	**0,005**	**0,005**	**0,006**	**0,005**
Luxembourg		96	86	77	58	54	48	19	11	16	15	13
tonnes/person		**0,024**	**0,018**	**0,017**	**0,012**	**0,011**	**0,009**	**0,004**	**0,002**	**0,003**	**0,003**	**0,002**
JRC Petten*		4,7	5,8	2,4	3,0	2,4	4,8	1,2	1,1	1,5	0,9	3,7
tonnes/person		**0,017**	**0,021**	**0,009**	**0,012**	**0,009**	**0,019**	**0,005**	**0,004**	**0,006**	**0,004**	**0,016**
JRC Geel		7,4	3,6	5,9	3,2	3,1	3,4	1,0	1,4	1,5	1,1	1,7
tonnes/person		**0,022**	**0,011**	**0,020**	**0,012**	**0,012**	**0,013**	**0,004**	**0,005**	**0,006**	**0,004**	**0,006**
JRC Karlsruhe		6,0	4,8	4,8	3,6	3,6	2,1	0,0	1,1	2,2	2,1	2,2
tonnes/person		**0,019**	**0,015**	**0,015**	**0,011**	**0,011**	**0,007**	**0,000**	**0,003**	**0,007**	**0,007**	**0,007**
JRC Seville		3,6	3,8	3,3	3,7	4,3	3,5	1,2	0,9	3,1	1,2	1,2
tonnes/person		**0,012**	**0,013**	**0,011**	**0,012**	**0,013**	**0,010**	**0,003**	**0,002**	**0,008**	**0,003**	**0,003**
JRC Ispra		41	36	32	30	28	24	9,76	9,7	10,0	10,4	6,5
tonnes/person		**0,017**	**0,016**	**0,014**	**0,013**	**0,012**	**0,010**	**0,004**	**0,004**	**0,004**	**0,004**	**0,003**
Grange		1,8	3,5	6,3	3,7	3,3	2,9	1,2	1,1	0,9	0,9	0,8

tonnes/person		**0,010**	**0,020**	**0,033**	**0,020**	**0,018**	**0,016**	**0,007**	**0,006**	**0,005**	**0,005**	**0,005**
DG COMM							1,7	0,5	0,7	0,8	0,8	0,8
tonnes/person							**0,014**	**0,004**	**0,007**	**0,006**	**0,006**	**0,006**
Commission		1 054	1 018	881	741	737	697	259	192	185	221	178
tonnes/person		**0,030**	**0,029**	**0,025**	**0,020**	**0,020**	**0,018**	**0,007**	**0,005**	**0,005**	**0,005**	**0,004**

*Paper usage since 2021 at JRC Petten based on printed paper

Printshop paper consumption (tonnes)

Site	Trend 2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Brussels		272	225	248	251	206	226	78	35	98	59	74
tonnes/person		**0,010**	**0,008**	**0,009**	**0,009**	**0,007**	**0,008**	**0,003**	**0,001**	**0,003**	**0,002**	**0,002**
Luxembourg		0,0	0,0	0,0	40	39	38	16	12	16	12	16
tonnes/person		**0,000**	**0,000**	**0,000**	**0,008**	**0,008**	**0,007**	**0,003**	**0,002**	**0,003**	**0,002**	**0,003**
JRC Petten		0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
tonnes/person		**0,000**	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
JRC Geel		0,0	0,0	0,0	0,0	0,5	0,6	0,4	0,3	0,3	0,5	0,4
tonnes/person		**0,000**	**0,000**	**0,000**	**0,000**	**0,002**	**0,002**	**0,002**	**0,001**	**0,001**	**0,002**	**0,001**
JRC Karlsruhe		0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0		
tonnes/person		**0,000**	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
JRC Seville		1,2	1,2	1,7	1,4	2,1	1,5	1,3	0,5	0,6	0,3	0,1
tonnes/person		**0,004**	**0,004**	**0,006**	**0,004**	**0,006**	**0,004**	**0,003**	**0,001**	**0,001**	**0,001**	**0,000**
JRC Ispra		5,8	4,8	3,8	5,1	6,4	5,5	1,8	1,3	3,0	2,3	2,0
tonnes/person		**0,002**	**0,002**	**0,002**	**0,002**	**0,003**	**0,002**	**0,001**	**0,001**	**0,001**	**0,001**	**0,001**
Grange		0,00	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
tonnes/person		**0,000**	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
DG COMM							2,0	2,8	1,7	1,8	0,8	0,7
tonnes/person							**0,016**	**0,024**	**0,016**	**0,015**	**0,006**	**0,005**
Commission		279	231	253	298	254	274	100	51	120	74	94
tonnes/person		**0,008**	**0,007**	**0,007**	**0,008**	**0,007**	**0,007**	**0,003**	**0,001**	**0,003**	**0,002**	**0,002**

Purchased paper, used or new (tonnes)

C) Supply contracts	Trend 2018-24	2018	2019	2020	2021	2022	2023	2024
Brussels		845	834	304	201	248	247	223
as tCO_2e		**776**	**766**	**280**	**185**	**228**	**227**	**205**
Luxembourg		93	87	34	23	36	27	26
as tCO_2e		**85**	**80**	**32**	**21**	**33**	**25**	**24**
Petten		12	4,8	0,0	2,8	0,0	0,0	0,2
as tCO_2e		**11**	**4,4**	**0,0**	**2,6**	**0,0**	**0,0**	**0,1**
Geel		3,6	4,0	1,4	1,7	1,8	1,6	2,0
as tCO_2e		**3,3**	**3,7**	**1,3**	**1,5**	**1,7**	**1,5**	**1,9**
Karlsruhe		3,6	2,1	0,0	1,1	2,2	2,1	2,2
as tCO_2e		**3,3**	**1,9**	**0,0**	**1,0**	**2,1**	**1,9**	**2,1**
Seville		0,0	0,0	1,8	1,8	1,3	1,5	1,3
as tCO_2e		**0,0**	**0,0**	**1,6**	**1,6**	**1,2**	**1,4**	**1,2**
Ispra		34	29	12	11	13	13	8,6
as tCO_2e		**31**	**27**	**11**	**10**	**12**	**12**	**7,9**
Grange		3,3	2,9	1,2	1,1	0,8	0,9	0,8
as tCO_2e		**3,0**	**2,6**	**1,1**	**1,0**	**0,7**	**0,8**	**0,8**
DG COMM			3,2	4,0	3,8	2,9	2,1	1,5
as tCO_2e		**0,0**	**3,0**	**3,7**	**3,5**	**2,6**	**2,0**	**1,4**
Commission		**994**	**967**	**359**	**247**	**306**	**295**	**265**
as tCO_2e		**913**	**888**	**330**	**227**	**281**	**272**	**244**

Annex 6 - GPP data and EMAS costs

Under "procedures completed", are to be included:

- All the newly signed contracts following a procurement procedure i.e. above 1 000 EUR
  (can be of any type: open, restricted, negotiated, middle value, low value, very low value, dynamic purchasing system, etc.)
- *Signed framework contracts* (include only the year signed by the authorising officer)
- *Signed direct contracts*
- *Signed purchase orders*

What not to include?

Ø *Signed order forms* (they fall under a framework contract)
Ø *Signed specific contracts* (they fall under a framework contract)
Ø *Contract amendments* and *modifications of contracts*
(with and without a procurement procedure: they must not be included as the contractual conditions and award methods are unchanged and do not affect GPP)
Ø Closed procurement procedures which were *unsuccessful*
Ø The ongoing contracts (they are included only once, the year they are signed)

GPP Please note that the approach to reporting GPP in the following tables has recently changed and more consolidated information will be reported in 2026

Tender procedures (above 1 000 EUR*)

Procedures completed related to operations (number)

Site	Trend 2019-24	2019	2020	2021	2022	2023	2024
Brussels **> 143 000 EUR**		18	20	34	20	21	21
Luxembourg > 15 000 EUR		12	16	12	12	12	11
JRC Petten		3	9	14	13	8	5
JRC Geel					18	18	14
JRC Karlsruhe		43	45	34	52	46	35
JRC Seville		6	2	1	3	5	2
JRC Ispra (> 1 000 and < 15 000 EUR)		183	191	222	213	211	242
JRC Ispra > 15 000 EUR		116	103	102	88	79	95
Grange*		2	2	2	1	3	1
DG COMM		141	102	82	91	89	101
Commission		**383**	**388**	**421**	**420**	**403**	**426**

* except special cases mentioned in the table

Procedures completed related to operations with some specific greening/environmental criteria (or that are "green by nature") - number

Site	Trend 2019-24	2019	2020	2021	2022	2023	2024
Brussels **> 143 000 EUR**		16	18	15	17	19	19
Luxembourg > 15 000 EUR		8	15	12	11	7	7
JRC Petten*		0	0	1	1	0	1
JRC Geel		1	1	0	0	0	0
JRC Karlsruhe							
JRC Seville		1	0	0	3	2	0
JRC Ispra (> 1 000 and < 15 000 EUR)							
JRC Ispra >15 000 EUR		4	6	9	13	14	14
Grange		2	2	2	1	3	1
DG COMM		6	3	4	9	10	6
Commission		**32**	**42**	**39**	**46**	**45**	**42**

NR - Not recorded;

*contracts with specific environmental criteria are not counted - same amount as GPP criteria

Procedures completed related to operations applying EU GPP criteria - number

Site	Trend 2019-24	2019	2020	2021	2022	2023	2024
Brussels **> 143 000 EUR**		15	16	15	12	19	19
Luxembourg > 15 000 EUR		3	4	4	2	4	2
JRC Petten		1	3	4	11	3	4
JRC Geel		0	0	0	8	5	6
JRC Karlsruhe > 15 000 EUR		10	13	14	14	13	11
JRC Seville		1	0	1	0	1	2
JRC Ispra (> 1 000 and < 15 000 EUR)		77	92	87	78	65	103
JRC Ispra > 15 000 EUR		10	11	5	14	10	15
Grange		2	2	2	1	3	1
DG COMM		10	16	20	17	12	14
Commission		**119**	**141**	**132**	**140**	**123**	**163**

Brussels: the available information is limited to the threshold for publication of public procurement procedures (>143K€)

Luxembourg: The available information concern contracts >15k, managed by finance/procurement unit

Procedures completed NOT related to operations

Site	Trend 2019-24	2019	2020	2021	2022	2023	2024
Brussels **> 143 000 EUR**		0	0	0	0	0	0
Luxembourg		0	0	0	0	0	0
JRC Petten		26	20	16	23	21	16
JRC Geel					46	53	48
JRC Karlsruhe		0	0	0	0	0	0
JRC Seville		27	38	26	20	33	30
JRC Ispra (> 1 000 and < 15 000 EUR)		1.103	856	841	828	601	586
Grange							
DG COMM		174	120	85	82	80	70
Commission		**1156**	**914**	**883**	**917**	**708**	**680**

Procedures completed NOT related to operations with some specific greening/environmental criteria (or that are "green by nature")

Site	Trend 2019-24	2019	2020	2021	2022	2023	2024
Brussels **> 143 000 EUR**		0	0	0	0	0	0
Luxembourg		0	0	0	0	0	0
JRC Petten		1	0	0	0	0	0
JRC Geel		1	1	0	0	0	0
JRC Karlsruhe							0
JRC Seville**		10	3	3	6	5	5
JRC Ispra (> 1 000 and < 15 000 EUR)							
Grange							0
DG COMM		6	5	6	4	3	8
Commission		**12**	**4**	**3**	**6**	**5**	**5**

** Contracts reported by PPMT (Public Procurement Management Tool) and selected by key words

Procedures completed NOT related to operations applying EU GPP criteria

Site	Trend 2019-24	2019	2020	2021	2022	2023	2024
Brussels **> 143 000 EUR**		0	0	0	0	0	0
Luxembourg		0	0	0	0	0	0
JRC Petten		5	4	4	4	6	2
JRC Geel					4	3	1
JRC Karlsruhe							0
JRC Seville		NA	NA	NA	NA	NA	NA
JRC Ispra (> 1 000 and < 15 000 EUR)		233	113	96	104	107	83
Grange							0
DG COMM		2	3	2	2	6	2
Commission		**238**	**117**	**100**	**112**	**116**	**86**

Brussels: Given the OIB's mission, all of the Office's contracts concern operations.

Luxembourg: Given OIL's mission, all contracts concern operations

NA - Not available

Office supply catalogue

Brussels

Category	Trend 2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Green products (no)		186	330	364	358	351	110	113	57	51	86	46
Green products (EUR)		0	0	0	0	0	940 701	303 170	339 306	335 040	412 303	296 369
Total products (no)		514	715	780	750	737	234	238	105	103	163	59
Total products (EUR)		0	0	0	0	0	1 894 255	439 029	414 472	515 605	561 276	528 911

Luxembourg

Category	Trend 2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Green products (no)		94	89	87	118	108	98	102	109	89	90	88
Green products (EUR)		66 729	68 944	71 916	43 105	32 960	16 326	12 700	20 763	38 464	39 795	27 422
Total products (no)		357	391	331	324	309	181	184	198	171	168	166
Total products (EUR)		193 508	239 796	137 671	124 593	108 469	149 596	61 057	44 285	56 071	51 686	37 178

JRC Petten

Category	Trend 2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Green products (no)		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	16
Green products (EUR)		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	1 449
Total products (no)		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	30
Total products (EUR)		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	9 592

NR - Not recorded

JRC Geel

Category	Trend 2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Green products (no)		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Green products (EUR)		0	0	0	0	0	0	0	0	0	0	0
Total products (no)		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Total products (EUR)		0	0	0	0	0	0	0	0	0	0	0

NR- Not recorded

JRC Karlsruhe

Category	Trend 2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Green products (no)		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Green products (EUR)		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Total products (no)		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Total products (EUR)		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

NR- Not recorded

JRC Seville

Category	Trend 2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Green products (no)		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Green products (EUR)		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Total products (no)		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Total products (EUR)		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM

NM- Not measured

JRC Ispra

Category	Trend 2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Green products (no)		165	171	232	200	210	203	201	172	148	219	219
Green products (EUR)		NA	NA	NA	NA	NA	NA	NA	NA	NA		
Total products (no)		682	700	732	675	742	709	718	650	767	763	763
Total products (EUR)		280 000	191 600	165 726	170 229	184 406	153 221	106 929	90 836	87 230	82 948	68 915

NA - Not applicable

Grange

Category	Trend 2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Green products (no)		NA	NA	NA	NA	NA	NA	NA	NA	NA	124	0
Green products (EUR)		NA	10 485	10 485	3 310	11 562	3 347	3 347	3 347	NA	2 558	
Total products (no)		NA	NA	NA	NA	NA	NA	NA	NA	NA	389	0
Total products (EUR)		NA	28 301	20 093	13 628	18 594	14 112	14 112	14 112	n.a.	6 359	

Note: Grange purchases greatly reduced in recent years, financial breakdown of green product purchase in the office catalogue not available

NA - Not applicable

DG COMM

Category	Trend 2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Green products (no)							106	2.482	185	6.743	1.593	0
Green products (EUR)							244	6 842	410	16 902	1 082	0
Total products (no)							5 834	1 266	6 070	2 633	4 279	1 589
Total products (EUR)							3.538	9 766	8 468	6 522	3 582	3 212

COSTS

Costs for HR COORD and ECORS (overhead for all staff inclued in calculations)												
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Total amount	**1 122 884**	**928 052**	**1 007 252**	**1 021 252**	**1 021 252**	**1 049 252**	**1 119 252**	**1 133 252**	**1 147 252**	**1 182 252**	**1 366 480**	**1 961 000**	**1 965 300**
Number of total staff	36 109	34 144	35 189	35 444	35 225	36 649	37 141	37 913	39 088	40 125	40 631	42 156	42 719
Total per employee	31	27	29	29	29	29	30	30	29	29	34	47	46
Staff Time Cost annual	**1 056 000**	**844 800**	**924 000**	**938 000**	**938 000**	**966 000**	**1 036 000**	**1 050 000**	**1 064 000**	**1 099 000**	**1 176 480**	**1 691 000**	**1 691 000**
HR COORD (FTE)	2,0	2,4	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,3	4,5	4,5
ECOR network (FTE)	6,0	4,0	4,0	4,0	4,0	4,0	4,0	4,0	4,0	4,0	3,6	5,0	5,0
Annual cost of one FTE	132 000	132 000	132 000	134 000	134 000	138 000	148 000	150 000	152 000	157 000	171 000	178 000	178 000
SERVICE CONTRACTS (HR COORD)													
Total	**66 884**	**83 252**	**83 252**	**83 252**	**83 252**	**83 252**	**83 252**	**83 252**	**83 252**	**83 252**	**190 000**	**270 000**	**274 300**
External audit	11 121	15 874	15 874	15 874	15 874	15 874	15 874	15 874	15 874	15 874	66 000	99 000	101 300
Internal Audit	55 763	67 378	67 378	67 378	67 378	67 378	67 378	67 378	67 378	67 378	124 000	171 000	173 000
Veille Réglementaire	0	0	0	0	0	0							

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Brussels											
Electricity (EUR/MWh)	**97**	**90**	**85**	**90**	**90**	**110**	**110**	**125**	**249**	**234**	**100**
Electricity (EUR)	10 679 072	9 884 792	9 193 990	9 482 459	9 470 524	11 591 280	9 955 729	10 134 854	18 439 309	16 052 562	6 493 303
Electricity (EUR/p)	390	365	341	336	332	400	333	331	596	493	197
Gas (EUR/MWh)	**41**	**41**	**35**	**32**	**32**	**27**	**22**	**75**	**150**	**98**	**67**
Gas (EUR)	2 906 121	3 302 796	2 841 300	2 572 941	2 524 857	2 075 177	1 547 925	6 020 675	8 805 750	4 945 466	3 228 005
Gas (EUR/p)	106	122	106	91	89	72	52	197	285	152	98
Fuel (EUR/MWh)	**68**	**45**	**37**	**37**	**37**	**37**	**37**	**37**	**117**	**79**	**68**
Fuel (EUR)	174 750	72 927	36 860						11 399	20 035	1 297
Fuel (EUR/p)	6,38	2,69	1,37	0,00	0,00	0,00	0,00	0,00	0,37	0,62	0,04
Annual direct staff costs (time FTE)	**1,0**	**1,0**	**1,0**	**1,0**	**1,0**	**1,0**	**1,0**	**1,0**	**2,0**	**1,6**	**1,6**
Annual contract costs	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Luxembourg											
Electricity (EUR/MWh)	**51**	**47**	**42**	**38**	**41**	**56**	**62**	**52**	**109**	**380**	**179**
Electricity (EUR)	1 052 651	1 845 840	1 765 039	1 262 135	1 277 994	1 759 646	1 885 721	1 502 113	3 199 488	11 269 764	5 808 917
Electricity (EUR/p)	260	396	379	264	255	342	360	270	562	1 997	1 027
Gas (EUR/MWh)	**26**	**26**	**26**	**24**	**26**	**31**	**22**	**21**	**83**	**118**	**49**
Gas (EUR)	88 364	714 100	958 703	673 456	346 950	430 007	314 187	328 042	1 095 455	1 268 713	359 214
Gas (EUR/p)	22	153	206	141	69	84	60	59	192	225	64
Fuel (EUR/MWh)	**100**	**100**	**100**	**100**	**60**	**60**	**31**	**31**	**31**	**66**	**0**
Fuel (EUR)	0,0	0,0	0,0	362	90	366	110	103	103	514	0,0
Fuel (EUR/p)	0,00	0,00	0,00	0,08	0,02	0,07	0,02	0,02	0,02	0,09	0,00
Annual direct staff costs (time FTE)	**3,5**	**3,5**	**3,5**	**3,5**	**2,5**	**2,5**	**2,5**	**2,5**	**2,5**	**2,5**	**2,5**
Annual contract costs	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Petten											
Electricity (EUR/MWh)	**74**	**74**	**74**	**74**	**74**	**74**	**74**	**74**	**98**	**135**	**132**
Electricity (EUR)	223 027	214 904	210 473	206 928	214 608	201 167	180 489	173 186	219 170	292 844	296 945
Electricity (EUR/p)	791	773	763	787	865	808	731	722	953	1 284	1 258
Gas (EUR/MWh)	**34**	**34**	**34**	**34**	**34**	**34**	**34**	**34**	**121**	**18**	**59**
Gas (EUR)	122 332	129 033	120 461	110 670	116 518	105 582	77 211	84 401	229 697	32 719	128 426
Gas (EUR/p)	434	464	436	421	470	424	313	352	999	144	544
Fuel (EUR/MWh)	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**0**	**0**
Fuel (EUR)	0	0	0	1 372	0	0	0	0	0	0	0
Fuel (EUR/p)	0,00	0,00	0,00	5,22	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Annual direct staff costs (time FTE)	**0,5**	**0,5**	**0,5**	**0,5**	**0,5**	**0,5**	**0,5**	**0,5**	**1,0**	**1,0**	**1,0**
Annual contract costs	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Geel											
Electricity (EUR/MWh)	**88**	**90**	**88**	**88**	**87**	**121**	**111**	**99**	**335**	**441**	**222**
Electricity (EUR)	1 027 269	930 755	956 148	906 670	850 201	1 112 063	902 226	794 204	2 539 123	2 949 930	1 327 959
Electricity (EUR/p)	2 969	2 838	3 230	3 421	3 283	4 245	3 392	3 020	9 618	11 174	5 030
Gas (EUR/MWh)	**47**	**29**	**22**	**27**	**30**	**24**	**17,17**	**46**	**148**	**92**	**48**
Gas (EUR)	79 046	56 551	41 701	47 982	51 724	43 313	31 111	91 698	208 067	94 663	54 212
Gas (EUR/p)	228	172	141	181	200	165	117	349	788	359	205
Fuel (EUR/MWh)	**62**	**49**	**35**	**47**	**57**	**57**	**44**	**69**	**104**	**84**	**84**
Fuel (EUR)	4 848	1 253	941	1 501	2 026	1 896	381	1 908	2 882	2 168	2 313
Fuel (EUR/p)	14,01	3,82	3,18	5,66	7,82	7,24	1,43	7,25	10,92	8,21	8,76
Annual direct staff costs (time FTE)	**0,5**	**0,5**	**0,5**	**0,5**	**0,5**	**0,5**	**0,5**	**0,5**	**0,5**	**0,5**	**0,5**
Annual contract costs	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Karlsruhe											
Electricity (EUR/MWh)	**90**	**90**	**90**	**90**	**90**	**90**	**90**	**90**	**144**	**269**	**269**
Electricity (EUR)	1 048 523	1 101 240	1 070 730	1 050 338	1 103 400	1 107 000	958 500	1 022 400	1 675 008	3 228 040	3 228 040
Electricity (EUR/p)	3 277	3 420	3 305	3 262	3 481	3 514	3 102	3 352	5 474	10 619	10 760
District heating (EUR/MWh)	**70**	**70**	**70**	**70**	**70**	**70**	**70**	**70**	**128**	**195**	**195**
District heating (EUR)	0	0	0	0	0	0	0	0	1 149 285	1 434 030	1 434 030
District heating (EUR/p)	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	3 756	4 717	4 780
Fuel (EUR/MWh)	**0,00**	**0,00**	**0,00**	**0,00**	**0,00**	**0,00**	**0,00**	**0,00**	**0,00**	**0,00**	**0,00**
Fuel (EUR)	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Fuel (EUR/p)	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Annual direct staff costs (time FTE)	**0,5**	**0,5**	**0,5**	**0,5**	**0,5**	**0,5**	**0,5**	**0,5**	**0,5**	**0,5**	**0,5**
Annual contract costs	**5 000**	**5 000**	**5 000**	**5 000**	**5 000**	**5 000**	**5 000**	**5 000**	**5 000**	**5 000**	**5 000**
Seville											
Electricity (EUR/MWh)	**136**	**131**	**138**	**131**	**131**	**135**	**130**	**110**	**148**	**168**	**184**
Electricity (EUR)	306 085	283 358	284 193	285 187	238 652	261 415	234 108	231 428	340 018	351 456	391 092
Electricity (EUR/p)	1 059	1 001	947	886	698	710	613	593	844	861	912
Gas (EUR/MWh)	**62**	**46**	**58**	**52**	**52**	**58**	**53**	**51**	**62**	**49**	**75**
Gas (EUR)	23 881	17 244	20 024	22 731	27 677	21 569	24 417	22 737	24 448	8 730	16 201
Gas (EUR/p)	83	61	67	71	81	59	64	58	61	21	38
Fuel (EUR/MWh)	**0,00**	**0,00**	**0,00**	**0,00**	**0,00**	**0,00**	**0,00**	**0,00**	**0,00**	**0,00**	**0,00**
Fuel (EUR)	0	0	0	0	0	0	0	0	0	0	0
Fuel (EUR/p)	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Annual direct staff costs (time FTE)	**1,0**	**1,0**	**1,0**	**1,0**	**1,0**	**1,0**	**1,0**	**1,0**	**1,0**	**1,0**	**0,8**
Annual contract costs	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**900**
Ispra											
Electricity (EUR/MWh)	**168**	**164**	**157**	**179**	**173**	**210**	**137**	**210**	**340**	**198**	**188**
Electricity (EUR)	374 745	407 986	473 856	720 748	772 934	455 516	738 646	1 085 108	3 725 006	2 656 764	2 105 036
Electricity (EUR/p)	160	178	210	317	338	195	306	438	1 494	1 076	844
Gas (EUR/MWh)	**39**	**31**	**22**	**25**	**30**	**23**	**17**	**51**	**141**	**63**	**52**
Gas (EUR)	3 765 554	2 968 460	1 957 302	2 229 755	2 654 795	2 095 452	1 339 432	4 322 010	8 556 389	3 044 412	2 633 111
Gas (EUR/p)	1 612	1 293	867	979	1 162	899	556	1 746	3 431	1 234	1 056
Fuel (EUR/MWh)	**0,00**	**0,00**	**0,00**	**0,00**	**0,00**	**0,00**	**0,00**	**0,00**	**122**	**101**	**98**
Fuel (EUR)	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	5 510	5 567	4 317
Fuel (EUR/p)	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	2,21	2,26	1,73
Annual direct staff costs (time FTE)	**1,9**	**1,9**	**1,9**	**1,9**	**1,9**	**1,9**	**1,9**	**1,9**	**1,9**	**2,9**	**2,9**
Annual contract costs	**139 560**	**120 268**	**198 300**	**231 645**	**218 128**	**196 095**	**195 315**	**184 725**	**168 255**	**160 020**	**186 275**
Grange											
Electricity (EUR/MWh)	**117**	**116**	**116**	**116**	**116**	**116**	**116**	**116**	**314**	**205**	**227**
Electricity (EUR)	102 991	98 731	96 603	94 613	92 292	98 886	74 414	65 591	175 655	116 304	127 574
Electricity (EUR/p)	575	549	508	503	516	562	430	368	965	688	787
Gas (EUR/MWh)	**646**	**89**	**89**	**89**	**89**	**89**	**89**	**89**	**596**	**505**	**124**
Gas (EUR)	4 437	582	239	150	3 615	4 564	2 389	203	2 430	2 800	803
Gas (EUR/p)	25	3,23	1,26	0,80	20	26	13,81	1,14	13,35	16,57	4,96
Fuel (EUR/MWh)	**43**	**48**	**48**	**48**	**48**	**48**	**48**	**48**	**113**	**133**	**106**
Fuel (EUR)	59 176	75 554	74 389	65 561	52 490	54 514	50 176	46 176	105 746	111 702	106 077
Fuel (EUR/p)	331	420	392	349	293	310	290	259	581	661	655
Annual direct staff costs (time FTE)	**0,3**	**0,3**	**0,3**	**0,3**	**0,3**	**0,3**	**0,3**	**0,3**	**0,3**	**0,3**	**0,3**
Annual contract costs	**14 400**	**14 400**	**14 856**	**14 856**	**14 856**	**18 600**	**18 600**	**18 600**	**0,00**	**76 563**	**76 563**
DG COMM											
Electricity (EUR/MWh)						**440**	**427**	**441**	**595**	**781**	**1.040**
Electricity (EUR)						76 473	63 412	68 454	96 137	129 437	85 922
Electricity (EUR/p)						617	537	622	769	925	632
Gas (EUR/MWh)						**45**	**27**	**37**	**32**	**38**	**40,80**
Gas (EUR)						10 972	5 237	9 351	7 324	6 485	7 657
Gas (EUR/p)						88	44	85	59	46	56
Fuel (EUR/MWh)						**0**	**0**	**69**	**69**	**145**	**146**
Fuel (EUR)						0	0	18	4	201	424
Fuel (EUR/p)						0,00	0,00	0,16	0,03	1,44	3
Annual direct staff costs (time FTE)						**0,00**	**0,14**	**0,18**	**0,61**	**0,85**	**0,61**
Annual contract costs						**0,00**	**0,00**	**5 600**	**5 545**	**5 640**	**5 640**

Annex 7 - Fleet vehicles and professional travel

FLEET

Vehicle fleet and emissions data - Brussels

data - Brussels	Trend 2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Fleet vehicles:												
Full Electric		0	10	10	13	13	13	13	14	17	50	72
Hybrid		0	0	0	0	20	32	41	62	70	58	34
Euro 6		0	56	74	98	93	73	65	39	36	8	1
Euro 5		0	51	23	18	0	0	0	0	0	11	8
Euro 4		0	0	0	0	0	0	0	0	0		
Euro 3		0	0	0	0	0	0	0	0	0		
Euro 2		0	0	0	0	0	0	0	0	0		
Euro 1		0	0	0	0	0	0	0	0	0		
Euro 0		0	0	0	0	0	0	0	0	0		
Armoured vehicle		0	0	0	0	0	13	10	10	4	4	4
Semi armoured		0	0	0	0	0	0	0	0	4	4	4
Avg No fleet vehicles		**0**	**117**	**107**	**129**	**126**	**131**	**129**	**125**	**123**	**127**	**115**
Total kms		2 456 406	2 477 072	2 829 675	2 508 253	2 311 311	2 346 590	1 432 721	1 766 920	2 138 721	2 081 145	1 932 805
Diesel used (m^3)		201	204	198	178	144	132	54	32	32	16	2,9
Petrol used (m^3)		6,5	5,3	13,4	22	61	85	73	114	135	137	101
Fuel efficiency (litres/100km)		**8,4**	**8,4**	**7,5**	**8,0**	**8,9**	**9,3**	**8,9**	**8,2**	**7,8**	**7,4**	**5,4**
gCO_2e/km (manufacturer)		148	145	129	118	116	119	113	94	82	53	34
tCO_2e diesel combustion		**502**	**510**	**495**	**444**	**360**	**330**	**135**	**79**	**80**	**40**	**7,2**
tCO_2e diesel upstream		**133**	**135**	**131**	**117**	**95**	**87**	**36**	**21**	**20**	**10**	**1,8**
tCO_2e petrol combustion		**15**	**12**	**31**	**50**	**138**	**195**	**168**	**260**	**298**	**303**	**223**
tCO_2e petrol upstream		**3,4**	**2,8**	**7,1**	**11,6**	**32**	**45**	**39**	**60**	**67**	**68**	**50**
Total tCO_2e		**653**	**659**	**663**	**623**	**626**	**657**	**377**	**420**	**464**	**420**	**281**
gCO_2e/km (actual, inc upstream)		**266**	**266**	**234**	**248**	**271**	**280**	**263**	**238**	**217**	**202**	**145**
Commission vehicles fixed asset emissions (tonnes CO_2e)						**116**	**117**	**72**	**88**	**107**	**104**	**96**

Vehicle fleet and emissions data - Luxembourg

data - Luxembourg	Trend 2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Fleet vehicles:												
Full Electric		0	0	0	0	2	4	4	4	4	8	8
Hybrid		0	0	0	0	0	5	8	10	11	12	14
Euro 6		0	5	12	18	23	21	18	16	14	10	10
Euro 5		0	12	11	5	3	1	1	0	0	0	0
Euro 4		0	4	3	3	2	1	1	1	1	1	0
Euro 3		0	4	4	4	3	0	0	0	0	0	0
Euro 2		0	0	0	0	0	0	0	0	0	0	0
Euro 1		0	0	0	0	0	0	0	0	0	0	0
Euro 0		0	0	0	0	0	0	0	0	0	0	0
Armoured vehicle		0	0	0	0	0	0	0	0	0	0	0
Other		0	0	0	0	0	0	0	0	0	0	0
Avg No fleet vehicles		**0**	**25**	**30**	**30**	**33**	**32**	**32**	**31**	**30**	**31**	**32**
Total kms		623 890	665 992	771 824	731 060	812 152	781 567	322 876	408 831	543 415	514 009	553 749
Diesel used (m^3)		50	53	63	59	61	54	24	24	29	27	23
Petrol used (m^3)		1,0	1,3	1,5	0,7	3,8	7,9	4,1	9,2	14	13	15
Fuel efficiency (litres/100km)		**8,3**	**8,2**	**8,3**	**8,1**	**8,0**	**7,9**	**8,8**	**8,0**	**7,8**	**7,9**	**6,9**
gCO_2e/km (manufacturer)		171	167	161	158	145	142	126	121	110	92	92
tCO_2e diesel combustion		**126**	**133**	**157**	**147**	**153**	**135**	**61**	**59**	**71**	**68**	**58**
tCO_2e diesel upstream		**33**	**35**	**41**	**39**	**40**	**36**	**16**	**16**	**17**	**17**	**14**
tCO_2e petrol combustion		**2,4**	**2,9**	**3,3**	**1,7**	**8,6**	**18**	**9,4**	**21**	**31**	**29**	**32**
tCO_2e petrol upstream		**0,6**	**0,7**	**0,8**	**0,4**	**2,0**	**4,2**	**2,2**	**4,8**	**6,8**	**6,6**	**7,2**
Total tCO_2e		**163**	**172**	**203**	**187**	**204**	**193**	**89**	**101**	**126**	**120**	**112**
gCO_2e/km (actual, inc upstream)		**260**	**258**	**263**	**256**	**251**	**247**	**275**	**246**	**232**	**234**	**202**
Commission vehicles fixed asset emissions (tonnes CO_2e)						**41**	**39**	**16**	**20**	**27**	**26**	**28**

Vehicle fleet and emissions data - JRC Petten

data - JRC Petten	Trend 2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Fleet vehicles:												
Full Electric		0	1	1	1	1	1	1	1	1	1	1
Hybrid		0	0	0	0	0	0	0	0	0	0	0
Euro 6		0	0	0	0	0	0	0	0	0	0	0
Euro 5		0	2	2	2	2	2	2	2	2	2	2
Euro 4		0	0	0	0	0	0	0	0	0	0	0
Euro 3		0	0	0	0	0	0	0	0	0	0	0
Euro 2		0	0	0	0	0	0	0	0	0	0	0
Euro 1		0	0	0	0	0	0	0	0	0	0	0
Euro 0		0	0	0	0	0	0	0	0	0	0	0
Armoured vehicle		0	0	0	0	0	0	0	0	0	0	0
Other		0	0	0	0	1	1	1	1	1	1	1
Avg No fleet vehicles		**0**	**3**	**3**	**3**	**4**	**4**	**4**	**4**	**4**	**4**	**4**
Total kms		4 500	30 513	55 440	61 324	56 473	45 396	21 963	37 109	43 577	48 931	47 967
Diesel used (m^3)		0,1	1,5	2,7	3,4	3,2	2,1	1,5	2,3	2,7	3,0	4,2
Petrol used (m^3)		0,5	1,4	2,2	2,0	1,9	1,4	0,3	0,4	0,9	1,2	0,4
Fuel efficiency (litres/100km)		**12**	**9,5**	**8,8**	**8,8**	**9,1**	**7,7**	**8,3**	**7,3**	**8,4**	**8,6**	**9,5**
gCO_2e/km (manufacturer)		168	148	148	148	148	148	148	148	148	148	148
tCO_2e diesel combustion		**0,2**	**3,7**	**6,8**	**8,5**	**8,1**	**5,3**	**3,7**	**5,8**	**6,8**	**7,5**	**10,4**
tCO_2e diesel upstream		**0,1**	**1,0**	**1,8**	**2,2**	**2,1**	**1,4**	**1,0**	**1,5**	**1,7**	**1,8**	**2,5**
tCO_2e petrol combustion		**1,1**	**3,2**	**5,0**	**4,5**	**4,3**	**3,2**	**0,7**	**0,9**	**2,0**	**2,7**	**0,8**
tCO_2e petrol upstream		**0,2**	**0,7**	**1,2**	**1,0**	**1,0**	**0,7**	**0,2**	**0,2**	**0,5**	**0,6**	**0,2**
Total tCO_2e		**1,6**	**8,7**	**15**	**16**	**16**	**11**	**5,6**	**8,5**	**11**	**13**	**14**
gCO_2e/km (actual, inc upstream)		**357**	**284**	**265**	**266**	**275**	**234**	**256**	**228**	**251**	**257**	**292**
Commission vehicles fixed asset emissions (tonnes CO_2e)						**2,8**	**2,3**	**1,1**	**1,9**	**2,2**	**2,4**	**2,4**

Vehicle fleet and emissions data - JRC Geel

data - JRC Geel	Trend 2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024*
Fleet vehicles:												
Full Electric		0	0	0	0	0	1	1	1	1	1	3
Hybrid		0	0	0	0	0	0	0	0	1	1	1
Euro 6		0	0	1	1	1	1	1	1	1	1	1
Euro 5		0	0	1	1	1	1	1	1			
Euro 4		0	0	0	0	0	0	0	0			
Euro 3		0	0	1	1	1	0	0	0			
Euro 2		0	0	1	1	1	1	1	1	1	1	1
Euro 1		0	0	0	0	0	0	0	0			
Euro 0		0	0	0	0	0	0	0	0			
Armoured vehicle		0	0	0	0	0	0	0	0			
Other		0	0	3	3	3	3	3	3	3	3	3
Avg No fleet vehicles		**0**	**0**	**7**	**7**	**7**	**7**	**7**	**7**	**7**	**7**	**9**
Total kms		NR	NR	NR	NR		11 909	6 940	6 708	6 579	8 181	7 241
Diesel used (m^3)		0,9	0,7	0,9	1,0	0,8	0,8	0,9	0,6	0,5	0,7	0,7
Petrol used (m^3)		2,0	2,1	1,7	1,7	1,6	1,2	0,8	0,7	0,6	0,6	0,5
Propane used (kg)		158	158	158	126	116	165	121	126	137	130	189
Fuel efficiency (litres/100km)**							**16**	**24**	**19**	**16**	**17**	**16**
gCO_2e/km (manufacturer)		0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
tCO_2e diesel combustion		**2,1**	**1,8**	**2,2**	**2,6**	**2,0**	**2,0**	**2,3**	**1,5**	**1,2**	**1,8**	**1,6**
tCO_2e diesel upstream		**0,6**	**0,5**	**0,6**	**0,7**	**0,5**	**0,5**	**0,6**	**0,4**	**0,3**	**0,5**	**0,4**
tCO_2e petrol combustion		**4,6**	**4,8**	**4,0**	**3,8**	**3,7**	**2,6**	**1,7**	**1,6**	**1,3**	**1,4**	**1,2**
tCO_2e petrol upstream		**1,1**	**1,1**	**0,9**	**0,9**	**0,9**	**0,6**	**0,4**	**0,4**	**0,3**	**0,3**	**0,3**
tCO_2e propane combustion		**0,5**	**0,5**	**0,5**	**0,4**	**0,3**	**0,5**	**0,4**	**0,4**	**0,4**	**0,4**	**0,6**
tCO_2e propane upstream		**0,1**	**0,1**	**0,1**	**0,1**	**0,1**	**0,1**	**0,1**	**0,1**	**0,1**	**0,1**	**0,1**
Total tCO_2e		**8,9**	**8,7**	**8,1**	**8,4**	**7,4**	**6,3**	**5,4**	**4,3**	**3,6**	**4,4**	**4,1**
gCO_2e/km (actual, inc upstream)							**529**	**785**	**637**	**545**	**540**	**573**
Commission vehicles fixed asset emissions (tonnes CO_2e)						**0,0**	**0,6**	**0,3**	**0,3**	**0,3**	**0,4**	**0,4**

* missing 2024 invoices for consumption of diesel and petrol by vehicle fleet. Esimation based on proportionality from 2023 based on km

**excludes fork lifts which use propane and don't have an odometer

Vehicle fleet and emissions data - JRC Karlsruhe

data - JRC Karlsruhe	Trend 2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Fleet vehicles:												
Full Electric		0	0	0	1	1	2	2	2	4	4	4
Hybrid		0	0	0	0	0	0	0	0	0	0	0
Euro 6		0	0	0	0	0	2	4	4	2	2	2
Euro 5		0	0	9	9	9	7	5	5	5	4	4
Euro 4		0	0	1	1	1	1	1	1	1	1	1
Euro 3		0	0	0	0	0	0	0	0	0	0	0
Euro 2		0	0	0	0	0	0	0	0	0	0	0
Euro 1		0	0	0	0	0	0	0	0	0	0	0
Euro 0		0	0	1	1	1	0	0	0	0	0	0
Armoured vehicle		0	0	0	0	0	0	0	0	0	0	0
Other		0	0	0	0	0	0	0	0	0	0	0
Avg No fleet vehicles		**0**	**0**	**11**	**12**	**12**	**12**	**12**	**12**	**12**	**11**	**11**
Total kms		183 400	137 616	133 520	124 944	104 666	77 749	94 250	96 380	83 500		
Diesel used (m^3)		5,7	7,8	12	14	12	4,6	2,5	3,9	4,5	2,8	1,7
Petrol used (m^3)		12	5,9	1,6	1,1	1,4	2,6	1,7	2,1	1,5	0,4	0,0
Fuel efficiency (litres/100km)		**9,5**	**9,9**	**11**	**12**	**12**	**9,3**	**4,5**	**6,2**	**7,6**	**8,6**	**8,6**
gCO_2e/km (manufacturer)		202	172	165	162	157	146	151	151	140	117	117
tCO_2e diesel combustion		**14**	**19**	**31**	**36**	**29**	**11**	**6,2**	**9,7**	**11**	**6,9**	**4,3**
tCO_2e diesel upstream		**3,8**	**5,1**	**8,2**	**9,4**	**7,7**	**3,0**	**1,6**	**2,5**	**2,7**	**1,7**	**1,1**
tCO_2e petrol combustion		**27**	**13**	**3,6**	**2,5**	**3,1**	**5,9**	**4,0**	**4,9**	**3,3**	**0,8**	**0,0**
tCO_2e petrol upstream		**6,2**	**3,1**	**0,8**	**0,6**	**0,7**	**1,4**	**0,9**	**1,1**	**0,7**	**0,2**	**0,0**
Total tCO_2e		**51**	**41**	**44**	**48**	**41**	**22**	**13**	**18**	**18**	**10**	**5,4**
gCO_2e/km (actual, inc upstream)		**278**	**299**	**328**	**386**	**390**	**281**	**135**	**189**	**214**		
Commission vehicles fixed asset emissions (tonnes CO_2e)						**5,2**	**3,9**	**4,7**	**4,8**	**4,2**	**0,0**	**0,0**

Vehicle fleet and emissions data - JRC Seville

data - JRC Seville	Trend 2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Fleet vehicles:												
Full Electric		0	0	0	0	0	0	0	0	0	0	0
Hybrid		0	0	0	0	0	0	0	0	0	0	0
Euro 6		0	0	0	0	0	0	0	0	0	0	0
Euro 5		0	0	0	0	0	0	0	0	0	0	0
Euro 4		0	0	1	1	1	1	1	1	1	0	0
Euro 3		0	0	0	0	0	0	0	0	0	0	0
Euro 2		0	0	0	0	0	0	0	0	0	0	0
Euro 1		0	0	0	0	0	0	0	0	0	0	0
Euro 0		0	0	0	0	0	0	0	0	0	0	0
Armoured vehicle		0	0	0	0	0	0	0	0	0	0	0
Other		0	0	0	0	0	0	0	0	0	0	0
Avg No fleet vehicles		**0**	**0**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**0**	**0**
Total kms		4 440	4 356	3 192	4 016	3 859	5 521	714	0	0	0	0
Diesel used (m^3)		0,4	0,3	0,2	0,3	0,3	0,3	0,1	0,0	0,0	0,0	0,0
Petrol used (m^3)		0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Fuel efficiency (litres/100km)		**8,2**	**7,7**	**7,3**	**7,9**	**6,6**	**4,7**	**7,5**	**0,0**	**0,0**	**0,0**	**0,0**
gCO_2e/km (manufacturer)		136	136	136	136	136	136	136	136	136	0	0
tCO_2e diesel combustion		**0,9**	**0,8**	**0,6**	**0,8**	**0,6**	**0,7**	**0,1**	**0,0**	**0,0**	**0,0**	**0,0**
tCO_2e diesel upstream		**0,2**	**0,2**	**0,2**	**0,2**	**0,2**	**0,2**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
tCO_2e petrol combustion		**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
tCO_2e petrol upstream		**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
Total tCO_2e		**1,2**	**1,1**	**0,7**	**1,0**	**0,8**	**0,8**	**0,2**	**0,0**	**0,0**	**0,0**	**0,0**
gCO_2e/km (actual, inc upstream)		**260**	**244**	**232**	**250**	**210**	**149**	**237**	**0,0**	**0,0**	**0,0**	**0,0**
Commission vehicles fixed asset emissions (tonnes CO_2e)						**0,2**	**0,3**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**

Vehicle fleet and emissions data - JRC Ispra

data - JRC Ispra	Trend 2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Fleet vehicles:												
Full Electric		3	21	21	34	36	36	41	50	58	55	55
Hybrid		0	0	0	0	0	0	0	0	0	0	0
Euro 6		0	0	1	2	2	1	5	5	5	7	7
Euro 5		1	1	1	1	1	1	1	1	1	1	1
Euro 4		39	39	39	39	39	39	39	34	27	27	27
Euro 3		43	43	43	29	18	18	18	14	10	10	9
Euro 2		7	7	7	5	4	4	4	2	2	2	2
Euro 1		9	9	9	7	6	6	6	4	4	4	2
Euro 0		2	2	2	4	4	4	4	4	4	4	4
Armoured vehicle		0	0	0	0	0	0	0	0	0	0	0
Other		0	0	0	0	0	0	0	0	0	0	0
Avg No fleet vehicles		**104**	**122**	**123**	**121**	**110**	**109**	**118**	**114**	**111**	**110**	**107**
Total kms		258 622	286 517	240 217	208 053	192 277	200 893	149 008	136 077	145 471	155 537	173 216
Diesel used (m^3)		14	14	12	12	10	11	7,4	7,4	5,6	7,5	7,4
Petrol used (m^3)		14,6	15,0	10,7	8,8	6,9	6,9	4,2	3,5	3,0	3,1	3,2
Fuel efficiency (litres/100km)		**11**	**10**	**9,5**	**10**	**9,0**	**8,7**	**7,8**	**8,0**	**5,9**	**6,8**	**6,1**
gCO_2e/km (manufacturer)		186	158	157	132	111	109	104	91	71	74	74
tCO_2e diesel combustion		**36**	**34**	**30**	**30**	**26**	**26**	**18**	**19**	**14**	**19**	**18**
tCO_2e diesel upstream		**9,5**	**8,9**	**8,0**	**7,9**	**6,8**	**7,0**	**4,8**	**4,9**	**3,4**	**4,6**	**4,5**
tCO_2e petrol combustion		**33**	**34**	**24**	**20**	**16**	**16**	**10**	**8**	**7**	**7**	**7**
tCO_2e petrol upstream		**7,7**	**8,0**	**5,6**	**4,6**	**3,7**	**3,6**	**2,2**	**1,9**	**1,5**	**1,5**	**1,6**
Total tCO_2e		**86**	**85**	**68**	**63**	**52**	**53**	**35**	**33**	**26**	**32**	**31**
gCO_2e/km (actual, inc upstream)		**334**	**297**	**284**	**301**	**272**	**262**	**236**	**244**	**176**	**204**	**182**
Commission vehicles fixed asset emissions (tonnes CO_2e)						**9,6**	**10,0**	**7,5**	**6,8**	**7,3**	**7,8**	**8,6**

Vehicle fleet and emissions data - DG SANTE at Grange

data - DG SANTE at Grange	Trend 2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Fleet vehicles:												
Full Electric		0	0	0	0	0	0	0	0	0	0	0
Hybrid		0	0	0	0	0	0	0	0	0	0	0
Euro 6		0	0	0	0	0	0	0	0	0	0	0
Euro 5		0	1	1	1	1	0	0	0	0	0	0
Euro 4		0	0	0	0	0	0	0	0	0	0	0
Euro 3		0	0	0	0	0	0	0	0	0	0	0
Euro 2		0	0	0	0	0	0	0	0	0	0	0
Euro 1		0	0	0	0	0	0	0	0	0	0	0
Euro 0		0	0	0	0	0	0	0	0	0	0	0
Armoured vehicle		0	0	0	0	0	0	0	0	0	0	0
Other		0	0	0	0	0	0	0	0	0	0	0
Avg No fleet vehicles		**0**	**1**	**1**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**
Total kms		7 674	5 155	2 928	2 928	2 928	0,0	0,0	0,0	0,0	0,0	0,0
Diesel used (m^3)		0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Petrol used (m^3)		0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Fuel efficiency (litres/100km)		**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
gCO_2e/km (manufacturer)		174	174	174	174	174	0,0	0,0	0,0	0,0	0,0	0,0
tCO_2e diesel combustion		**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
tCO_2e diesel upstream		**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
tCO_2e petrol combustion		**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
tCO_2e petrol upstream		**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
Total tCO_2e		**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
gCO_2e/km (actual, inc upstream)		**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
Commission vehicles fixed asset emissions (tonnes CO_2e)						**0,1**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**

Vehicle fleet and emissions data - DG COMM

data - DG COMM	Trend 2014-24	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
tCO_2e combustion (diesel+petrol)							27	8,0	11	14	12	15
tCO_2e upstream (diesel+petrol)							6,7	2,0	2,7	3,5	2,7	3,6
Total tCO_2e							**34**	**10**	**14**	**17**	**14**	**19**
Commission vehicles fixed asset emissions (tonnes CO_2e)							**2,3**	**0,9**	**1,6**	**2,1**	**1,8**	**2,5**

TRAVELS

tonnes CO_2e emissions

	2014	2015	2016	2017	2018
Brussels					
Air travel	50 044	44 044	44 507	44 993	45 617
Air taxi(and helicopter)	132	308	328	501	453
Rail	132	233	182	175	157
Hired car	178	170	183	117	114
Private car	505	510	512	481	484
Total	**50 991**	**45 264**	**45 712**	**46 267**	**46 824**
Luxembourg					
Air travel	2 067	1 752	1 691	1 611	1 878
Air taxi(and helicopter)	8,8	9,9	6,2	6,4	5,3
Rail	396	427	470	421	391
Hired car	126	133	157	145	158
Private car	**2 597**	**2 322**	**2 324**	**2 183**	**2 432**
Total					
Petten					
Air travel	418	308	197	216	226
Air taxi(and helicopter)					
Rail	1,21	2,83	1,11	1,46	1,66
Hired car	2,03	3,79	4,34	1,89	0,00
Private car	1,24	6,70	11,35	12,63	12,00
Total	**422**	**321**	**213**	**232**	**239**
Geel					
Air travel	602	395	496	412	413
Air taxi(and helicopter)					
Rail	1,9	1,5	2,0	2,0	1,3
Hired car	0,1	5,5	3,8	4,1	4,2
Private car	6,8	6,6	6,1	6,4	5,6
Total	**611**	**408**	**508**	**425**	**424**
Seville					
Air travel	465	636	654	662	570
Air taxi(and helicopter)					
Rail	1,05	2,76	2,00	1,57	0,03
Hired car	0,33	0,79	0,58	0,37	0,92
Private car	0,89	0,82	0,57	0,78	0,63
Total	**468**	**640**	**657**	**664**	**572**
Karlsruhe					
Air travel	322	293	263	290	291
Air taxi(and helicopter)					
Rail	2,83	6,55	5,34	4,82	4,29
Hired car	56	60	75	58	61
Private car	39	32	34	37	32
Total	**420**	**391**	**378**	**391**	**388**

Variable emissions' factors

Note new categories defined since 2019

	2019	2020	2021	2022	2023	2024
Brussels						
Air travel (economy)	13.346	1 885	1 703	6 723	9 505	10 836
Air travel (not economy)	19 790	3 094	1 745	10 362	15 987	20 255
Air taxi(and helicopter)	420	667	1 128	1 024	856	617
Rail	524	111	106	310	370	335
Non rail surface travel 1 – Commission vehicle fleet	235	69	138	269	324	452
Non rail surface travel 2 – hire cars, private vehicles, boat, bus, shuttle	539	127	187	422	415	293
	34 855	**5 952**	**5 007**	**19 110**	**27 457**	**32 787**
Luxembourg						
Air travel (economy)	1 011	225	211	451	618	735
Air travel (not economy)	451	60	3,72	180	218	324
Air taxi(and helicopter)	0,1	0,0	2,1	0,0	1,3	0,0
Rail	74	19	15	30	41	39
Non rail surface travel 1 –Commission vehicle fleet	79	20	13	52	55	150
Non rail surface travel 2 – hire cars, private vehicles, boat, bus, shuttle	414	205	201	279	272	216
	2 030	**528**	**445**	**992**	**1 205**	**1 464**
Petten						
Air travel (economy)	140	12	2,5	54	85	113
Air travel (not economy)	67	15	0,15	12	93	77
Air taxi(and helicopter)	0,00	0,00	0,00	0,00	0,00	0,00
Rail	12,76	2,45	0,26	3,03	6,04	6,63
Non rail surface travel 1 –Commission vehicle fleet	0,52	0,00	0,00	0,10	0,05	1,59
Non rail surface travel 2 – hire cars, private vehicles, boat, bus, shuttle	12,19	0,63	0,23	1,49	9,01	5,37
	232	**30**	**3,1**	**70**	**192**	**204**
Geel						
Air travel (economy)	102	9,2	2,4	24	46	69
Air travel (not economy)	153	14	0,00	48	28	31
Air taxi(and helicopter)	0,0	0,0	0,0	0,0	0,0	0,0
Rail	5,9	0,9	1,1	2,1	2,6	2,4
Non rail surface travel 1 –Commission vehicle fleet	5,2	0,7	0,4	2,3	1,7	2,4
Non rail surface travel 2 – hire cars, private vehicles, boat, bus, shuttle	10,4	1,5	5,2	11,6	10,1	7,1
	276	**26**	**9,1**	**88**	**88**	**111**
Seville						
Air travel (economy)	392	61	18	245	390	637
Air travel (not economy)	134	28	0,00	63	90	168
Air taxi(and helicopter)	0,0	0,0	0,0	0,0	0,0	0,0
Rail	6,6	1,5	1,0	6,2	7,8	8,1
Non rail surface travel 1 –Commission vehicle fleet	1,3	0,6	0,0	1,2	0,7	0,8
Non rail surface travel 2 – hire cars, private vehicles, boat, bus, shuttle	8,1	2,7	0,5	8,5	8,4	8,4
	543	**93**	**19**	**324**	**497**	**822**
Karlsruhe						
Air travel (economy)	128	17	6,5	38	51	40
Air travel (not economy)	154	25	0,0	42	96	89
Air taxi(and helicopter)	0,5	0,0	0,0	0,0	0,0	0,0
Rail	14	2,8	3,4	12	11	11
Non rail surface travel 1 –Commission vehicle fleet	3,2	0,0	0,3	1,0	1,7	3,3
Non rail surface travel 2 – hire cars, private vehicles, boat, bus, shuttle	67	23	48	46	44	25
	367	**67**	**58**	**139**	**203**	**168**

2019 emission factors applied all years

	2019	2020	2021	2022	2023	2024
Brussels						
Economic Airplane not economy	13.346	1 885	1 703	6 681	9 447	9 048
Air taxi & helicopter	19 790	3 094	1 745	10 308	15 758	16 592
Rail	420	667	1 128	1 024	856	617
Commission vehicle fleet	523	111	105	375	447	432
Non rail surface	520	184	331	549	640	479
	539	128	187	422	415	317
	35 139	**6 068**	**5 200**	**19 360**	**27 562**	**27 485**
Luxembourg						
Economic Airplane not economy	1 011	225	211	448	615	614
Air taxi & helicopter	451	60	3,72	179	216	266
Rail	0,1	0,0	2,1	0,0	1,3	0,0
Commission vehicle fleet	74	19	15	36	49	51
Non rail surface travel	214	75	68	143	148	159
	415	205	203	279	274	242
	2 166	**584**	**502**	**1 086**	**1 302**	**1 332**
Petten						
Economic Airplane not economy	140	12	2,5	53	84	95
Air taxi & helicopter	67	15	0,2	12	92	65
Train & high speed	0,0	0,0	0,0	0,0	0,0	0,0
Commission vehicle fleet	13	2,5	0,3	3,7	7,3	8,6
Non rail surface travel	2,8	0,2	0,4	0,5	1,8	1,7
	12	1,9	0,4	4,3	11	5,8
	234	**31**	**3,7**	**73**	**197**	**176**
Geel						
Economic Airplane not economy	102	9,2	2,4	23	45	57
Air taxi & helicopter	153	14	0,0	48	28	26
Train & high speed	0,0	0,0	0,0	0,0	0,0	0,0
Commission vehicle fleet	5,92	0,91	1,10	2,57	3,13	3,04
Non rail surface travel	6,18	0,88	0,53	2,61	1,95	2,54
	10	1,5	5,2	12	10	7,7
	277	**26**	**9,2**	**88**	**89**	**96**
Seville						
Economic Airplane not economy	392	61	18	243	387	532
Air taxi & helicopter	134	28	0,00	63	90	141
Train & high speed	0,0	0,0	0,0	0,0	0,0	0,0
Commission vehicle fleet	6,6	1,5	1,0	7,5	9,4	10
Non rail surface travel	1,5	0,7	0,0	1,4	0,8	0,9
	8,1	2,7	0,5	8,5	8,4	8,4
	543	**93**	**19**	**324**	**496**	**692**
Karlsruhe						
Economic Airplane not economy	128	17	6,5	38	51	33
Air taxi & helicopter	154	25	0,0	42	95	69
Train & high speed	0,5	0,0	0,0	0,0	0,0	0,0
Commission vehicle fleet	14	2,8	3,4	14	13	14
Non rail surface travel	4,34	0,62	1,02	2,14	2,76	3,45
	67	23	48	46	44	27
	368	**68**	**59**	**142**	**206**	**147**

Ispra						Ispra						Ispra						
Air travel	274	2 282	1 916	1 961	2 091	Air travel (economy)	1 071	149	41	362	658	891	Economic	1 071	149	41	360	654	744
						Air travel (not economy)	899	146	4,0	337	501	585	Airplane not economy	898	146	4,0	335	499	492
Air taxi(and helicopter)						Air taxi (and helicopter)	0,05	0,00	0,00	0,00	0,04	0,04	Air taxi & helicopter	0,05	0,00	0,00	0,00	0,04	0,04
Rail	23	28	23	23	25	Rail	30	5,6	1,5	12	24	19	Train & high speed	29,57	6	2	14	29	25
Hired car	45	13	11	11	12	Non rail surface travel 1 –Commission vehicle fleet	11	2,4	4,1	4,3	2,9	15	Commission vehicle fleet	41	13	29	20	14	16
Private car	109	135	111	114	121	Non rail surface travel 2 – hire cars, private vehicles, boat, bus, shuttle	55	14	13	27	41	34	Non rail surface travel	55	14	13	27	41	36
Navette	224	236	233	238	244														
Total	**674**	**2 694**	**2 294**	**2 347**	**2 493**		**2 066**	**317**	**64**	**742**	**1 227**	**1 544**		**2 096**	**327**	**89**	**756**	**1 237**	**1 313**
Grange						**Grange**							**Grange**						
Air travel	1 142	853	953	927	747	Air travel (economy)	306	43	27	152	190	203	Economic	306	43	27	151	189	170
						Air travel (not economy)	354	183	7,60	318	407	330	Airplane not economy	354	183	7,60	317	405	277
Air taxi(and helicopter)						Air taxi(and helicopter)	0,0	0,0	0,0	0,0	18	0,2	Air taxi & helicopter	0,00	0,00	0,00	0,00	18	0,2
Rail	0,39	1,39	1,46	0,26	0,42	Rail	7,8	0,5	0,8	1,3	2,0	1,5	Train & high speed	7,8	0,5	0,8	1,6	2,5	1,9
Hired car	7,02	5,54	10,61	7,02	6,83	Non rail surface travel 1 –Commission vehicle fleet	58	3,0	1,2	57	72	22	Commission vehicle fleet	66	3,4	1,3	66	82	23
Private car						Non rail surface travel 2 – hire cars, private vehicles, boat, bus, shuttle	9,5	9,2	18	15	5,6	3,8	Non rail surface travel	9,5	9,2	18	15	5,6	4,0
Total	**1 150**	**860**	**965**	**934**	**754**		**736**	**238**	**54**	**544**	**695**	**561**		**743**	**238**	**55**	**551**	**703**	**476**
DG COMM						**DG COMM**							**DG COMM**						
Air travel						Air travel (economy)	132	24	20	66	73	99	Economic	132	24	20	66	72	83
						Air travel (not economy)	95	16	23	25	37	68	Airplane not economy	95	16	23	25	37	57
Air taxi(and helicopter)						Air taxi(and helicopter)	0,2	0,0	8,0	0,5	0,0		Air taxi & helicopter	0,2	0,0	8,0	0,5	0,0	0,0
Rail						Rail	4,4	0,4	2,0	4,3	4,2	2,4	Train & high speed	4,4	0,4	2,0	5,2	7,1	3,1
Hired car						Non rail surface travel 1 –Commission vehicle fleet	2,8	3,8	9,2	25	12	11	Commission vehicle fleet	6,4	7,7	14	34	16	12
Private car						Non rail surface travel 2 – hire cars, private vehicles, boat, bus, shuttle	11	1,0	2,0	3,0	13	4,3	Non rail surface travel	11	1,0	2,1	11	13	4,7
Total							**245**	**45**	**64**	**124**	**140**	**185**		**249**	**49**	**69**	**142**	**146**	**160**
Other sites						**Other sites**							**Other sites**						
Air travel						Air travel (economy)	4 222	628	420	1 469	1 454	1 090	Economic	4 222	628	420	1 460	1 445	910
						Air travel (not economy)	6 402	903	730	2 667	3 024	2 001	Airplane not economy	6 402	903	730	2 653	3 008	1 679
Air taxi(and helicopter)						Air taxi(and helicopter)	252	443	329	133	166	8,5	Air taxi & helicopter	252	443	329	133	166	8,5
Rail						Rail	160	37	32	70	75	42	Train & high speed	160	37	32	84	91	54
Hired car						Non rail surface travel 1 – Commission vehicle fleet	177	40	112	184	152	99	Non rail surface travel	389	40	43	79	81	36
Private car						Non rail surface travel 2 – hire cars, private vehicles, boat, bus, shuttle	389	40	43	79	81	34	Commission vehicle fleet	313	73	209	276	249	104
Total							**11 603**	**2 091**	**1 666**	**4 601**	**4 951**	**3 273**		**11 738**	**2 124**	**1 762**	**4 686**	**5 040**	**2 793**

Annex 8 - Impact of telework

Introductory information

- The data is provided for the eight main EMAS registered sites. The same approach was used for the EC Representations in Member States, but these are reported separately. Consequently, the teleworking data presented for the Commission's overall footprint in Chapter 3 excludes the data for the Representations that are reported in a separate annex

Main sources of information used for teleworking calculation:

• Space heating data and national energy mix by country	Eurostat
• Emissions for space heating by country	Eurostat
• Electrical consumption and emissions of equipment used while teleworking	Commission survey
• Fixed asset contribution for teleworking equipment	DG DIGIT
• Videoconferecing emissions	Research paper, Commission survey
• Domestic teleworking arrangements	Commission Survey
• Paper consumption	Commission Survey
• Waste generation	Commission Survey
• Water consumption	Commission Survey

Table for Figure 6.2 (2024 data)

$kgCO_2e/p$	Space heating	Space cooling	Equipment electricity use	Video-conferencing	Fixed assets	Paper	Total
Brussels	68	0,2	38	10	5	0,3	**121**
Luxembourg	**114**	**1,0**	**56**	**19**	**1,7**	**0,2**	**192**
JRC Petten	**52**	**0,5**	**74**	**22**	**133**	**0,2**	**282**
JRC Geel	**46**	**0,1**	**25**	**11**	**93**	**0,1**	**176**
JRC Seville	**19**	**0,5**	**43**	**20**	**128**	**0,1**	**209**
JRC Karlsruhe	**42**	**0,2**	**45**	**9,5**	**57**	**0,4**	**154**
JRC Ispra	**39**	**1,8**	**48**	**15**	**10**	**0,2**	**114**
Grange	**66**	**0,9**	**102**	**16**	**0,0**	**0,3**	**185**
DG COMM	**36**	**2,2**	**52**	**12**	**7,4**	**0,2**	**110**

Table 1: Summary of teleworking emissions, 2019 - 2024

Totals (tCO_2e)	2 019	2 020	2 021	2 022	2 023	2 024
Space heating	**554**	**6 060**	**5 872**	**3 535**	**2 825**	**3 051**
Space cooling	**2,2**	**19**	**28**	**21**	**16**	**17**
Equipment electricity use	**298**	**2 970**	**3 109**	**1 954**	**1 629**	**1 786**
Videoconferencing	**56**	**602**	**690**	**450**	**376**	**498**
Fixed assets	**198**	**200**	**719**	**481**	**718**	**313**
Paper	**1,6**	**17**	**20**	**13**	**11**	**12**
Total	**1 110**	**9 868**	**10 437**	**6 455**	**5 575**	**5 678**
Per capita* ($kgCO_2e/p$)						
Space heating	15	155	146	87	68	71
Space cooling	0,1	0,5	0,7	0,5	0,4	0,4
Equipment electricity use	7,9	76	77	48	39	42
Videoconferencing	1,5	15	17	11	9,1	12
Fixed assets	5,2	5,1	18	12	17	7,3
Paper	0,0	0,4	0,5	0,3	0,3	0,3
Total	**26**	**231**	**244**	**151**	**131**	**133**

Note electricity based emisssions were lower in 2021 than 2020 due to the high emission factor for electricity in Belgium in 2020.
Although consumption was higher in 2021 than 2020, the emissions were lower.
* Population from Table 1.3, including DG COMM

Table 1a Total teleworking emissions by site

Totals (tCO_2e)	2 019	2 020	2 021	2 022	2 023	2 024
Brussels	719	7 351	7 777	4 680	4 032	4 014
Luxembourg	336	1 646	1 806	1 170	1 013	1 086
JRC Petten	6,4	53	68	39	61	67
JRC Geel	4,0	63	59	36	45	46
JRC Seville	3,2	42	49	76	83	90
JRC Karlsruhe	1,3	112	73	46	42	46
JRC Ispra	32	524	507	351	254	284
Grange	5,7	45	69	37	29	30
DG COMM	2,6	31	29	20	16	15
Per capita ($kgCO_2e/p$)						
Brussels	25	246	254	151	124	121
Luxembourg	65	314	325	205	180	192
JRC Petten	26	213	282	168	269	282
JRC Geel	15	238	224	138	172	176
JRC Seville	8,7	110	125	188	203	209
JRC Karlsruhe	4,1	364	238	150	138	154
JRC Ispra	14	217	205	141	103	114
Grange	33	262	388	203	170	185
DG COMM	21	264	267	161	114	110

Table 1b: Space heating teleworking emissions by site

Totals (tCO_2e)	2018	2 019	2 020	2 021	2 022	2 023	2 024
Brussels	351	4 594	4 472	2 585	2 067	2 250
Luxembourg	180	1 056	1 014	737	603	644
JRC Petten	2,4	21	27	14	11	12
JRC Geel	2,6	44	38	16	13	12
JRC Seville	0,7	10	12	9,8	7,3	8,0
JRC Karlsruhe	0,6	58	33	20	11	13
JRC Ispra	15	241	231	133	96	96
Grange	1,9	22	31	14	11	11
DG COMM	0,8	15	13	7,9	5,6	4,9
Per capita ($kgCO_2e/p$)						
Brussels	12	153	146	84	64	68
Luxembourg	35	201	182	129	107	114
JRC Petten	9,5	84	111	59	49	52
JRC Geel	9,9	164	146	61	48	46
JRC Seville	1,9	27	30	24	18	19
JRC Karlsruhe	2,1	187	110	65	38	42
JRC Ispra	6,2	100	93	53	39	39
Grange	11	126	175	77	64	66
DG COMM	6,4	130	114	63	40	36

Table 1c: Space cooling teleworking emissions by site

Totals (tCO_2e)	2018	2 019	2 020	2 021	2 022	2 023	2 024
Brussels	0,3	6,4	8,0	7,0	5,7	6,2
Luxembourg	1,5	7,3	9,0	5,9	5,2	5,5
JRC Petten	0,0	0,1	0,2	0,1	0,1	0,1
JRC Geel	0,0	0,1	0,1	0,0	0,0	0,0
JRC Seville	0,0	0,3	0,3	0,2	0,2	0,2
JRC Karlsruhe	0,0	0,3	0,2	0,1	0,1	0,1
JRC Ispra	0,3	4,1	9,6	7,3	4,6	4,6
Grange	0,0	0,2	0,3	0,2	0,2	0,2
DG COMM	0,0	0,6	0,5	0,4	0,3	0,3
Per capita ($kgCO_2e/p$)						
Brussels	0,0	0,2	0,3	0,2	0,2	0,2
Luxembourg	0,3	1,4	1,6	1,0	0,9	1,0
JRC Petten	0,1	0,5	0,6	0,5	0,5	0,5
JRC Geel	0,0	0,2	0,3	0,2	0,1	0,1
JRC Seville	0,1	0,7	0,8	0,6	0,5	0,5
JRC Karlsruhe	0,0	0,8	0,6	0,3	0,2	0,2
JRC Ispra	0,1	1,7	3,9	2,9	1,9	1,8
Grange	0,1	1,0	1,5	1,0	0,9	0,9
DG COMM	0,2	5,2	4,8	3,0	2,0	2,2

Table 1d: Equipment electricity use teleworking emissions by site

Totals (tCO_2e)

	2018	2 019	2 020	2 021	2 022	2 023	2 024
Brussels		167	2 088	2 112	1 367	1 151	1 270
Luxembourg		105	490	602	346	294	317
JRC Petten		3,5	28	35	19	16	18
JRC Geel		1,1	16	17	8,0	6,4	6,7
JRC Seville		2,1	26	30	21	17	18
JRC Karlsruhe		0,6	48	35	20	12	13
JRC Ispra		15	240	231	144	110	120
Grange		2,0	21	35	20	16	16
DG COMM		0,8	13	12	9,1	6,8	7,0

Per capita ($kgCO_2e/p$)

Brussels		5,8	70	69	44	35	38
Luxembourg		21	93	108	61	52	56
JRC Petten		14	112	148	82	70	74
JRC Geel		4,3	60	64	30	24	25
JRC Seville		5,7	68	77	52	41	43
JRC Karlsruhe		1,9	156	114	64	40	45
JRC Ispra		6,4	100	93	58	45	48
Grange		11	122	196	112	97	102
DG COMM		6,6	109	110	72	48	52

Table 1e: Videoconferencing teleworking emissions by site

Totals (tCO_2e)

	2018	2 019	2 020	2 021	2 022	2 023	2 024
Brussels		39	472	546	354	298	329
Luxembourg		14	70	86	59	50	108
JRC Petten		0,4	4,2	5,3	2,8	2,4	5,3
JRC Geel		0,2	3,3	3,5	1,7	1,4	2,9
JRC Seville		0,4	5,5	6,7	4,9	3,8	8,4
JRC Karlsruhe		0,1	5,7	3,8	2,1	1,3	2,8
JRC Ispra		2,2	38	35	22	17	38
Grange		0,2	1,9	2,6	1,6	1,3	2,6
DG COMM		0,1	1,5	1,4	1,1	0,8	1,6

Per capita ($kgCO_2e/p$)

Brussels		1,3	16	18	11	9,2	10,0
Luxembourg		2,7	13	16	10	8,9	19
JRC Petten		1,8	17	22	12	11	22
JRC Geel		0,8	13	13	6,5	5,2	11
JRC Seville		1,0	15	17	12	9,4	20
JRC Karlsruhe		0,2	18	12	6,8	4,2	9,5
JRC Ispra		1,0	16	14	9,0	6,9	15
Grange		0,9	11	15	8,7	7,5	16
DG COMM		0,7	13	13	8,9	5,9	12

Table 1f: IT fixed assets teleworking emissions by site

Totals (tCO_2e)

	2018	2 019	2 020	2 021	2 022	2 023	2 024
Brussels		160	177	623	356	501	149
Luxembourg		35	22	93	21	61	9,8
JRC Petten		0,0	0,0	0,0	3,1	31	31
JRC Geel		0,0	0,0	0,0	10	25	25
JRC Seville		0,0	0,0	0,0	40	55	55
JRC Karlsruhe		0,0	0,0	0,0	4,3	17	17
JRC Ispra		0,0	0,0	0,0	44	25	25
Grange		1,7	0,2	0,0	0,8	0,0	0,0
DG COMM		0,9	0,8	2,7	1,7	2,4	1,0

Per capita ($kgCO_2e/p$)

Brussels		5,5	5,9	20	12	15	4,5
Luxembourg		6,9	4,2	17	3,6	11	1,7
JRC Petten		0,0	0,0	0,0	13	138	133
JRC Geel		0,0	0,0	0,0	39	93	93
JRC Seville		0,0	0,0	0,0	99	134	128
JRC Karlsruhe		0,0	0,0	0,0	14	56	57
JRC Ispra		0,0	0,0	0,0	18	10	10
Grange		9,4	1,4	0,0	4,2	0,0	0,0
DG COMM		7,2	7,0	25	13	17	7,4

Table 1g: Paper use teleworking emissions by site

Totals (tCO_2e)

	2 019	2 020	2 021	2 022	2 023	2 024
Brussels	1,1	14	16	10	8,7	9,6
Luxembourg	0,3	1,7	2,2	1,5	1,3	1,3
JRC Petten	0,0	0,1	0,1	0,0	0,0	0,0
JRC Geel	0,0	0,1	0,1	0,0	0,0	0,0
JRC Seville	0,0	0,1	0,1	0,0	0,0	0,0
JRC Karlsruhe	0,0	0,5	0,3	0,2	0,1	0,1
JRC Ispra	0,1	1,1	1,0	0,7	0,5	0,5
Grange	0,0	0,1	0,1	0,1	0,1	0,1
DG COMM	0,0	0,0	0,0	0,0	0,0	0,0

Per capita ($kgCO_2e/p$)

Brussels	0,0	0,5	0,5	0,3	0,3	0,3
Luxembourg	0,1	0,3	0,4	0,3	0,2	0,2
JRC Petten	0,0	0,3	0,3	0,2	0,2	0,2
JRC Geel	0,0	0,3	0,3	0,2	0,1	0,1
JRC Seville	0,0	0,1	0,2	0,1	0,1	0,1
JRC Karlsruhe	0,0	1,6	1,1	0,6	0,4	0,4
JRC Ispra	0,0	0,5	0,4	0,3	0,2	0,2
Grange	0,0	0,4	0,6	0,4	0,3	0,3
DG COMM	0,0	0,3	0,3	0,2	0,2	0,2

Table 2: Telework energy use (from space heating, cooling and electricity from equipment use)

Totals (MWh)

	2 019	2 020	2 021	2 022	2 023	2 024
Brussels	2 190	27 613	29 398	17 980	14 739	16 123
Luxembourg	983	5 581	5 766	3 924	3 259	3 492
JRC Petten	16	153	195	101	84	92
JRC Geel	16	256	246	110	88	86
JRC Seville	9,0	146	174	129	100	110
JRC Karlsruhe	4,0	345	210	121	71	78
JRC Ispra	104	1,7	1,7	990	730	756
Grange	11	128	175	89	70	70
DG COMM	4,3	80	70	48	35	33
Total	**3 333**	**34 304**	**36 236**	**23 492**	**19 176**	**20 840**

Per capita (kWh/p)

Brussels	76	922	961	581	453	488
Luxembourg	191	1 065	1 037	689	578	617
JRC Petten	66	619	812	440	370	389
JRC Geel	60	963	936	417	333	327
JRC Seville	26	382	446	320	245	255
JRC Karlsruhe	12	1 116	689	395	232	261
JRC Ispra	45	722	670	397	296	303
Grange	63	737	982	491	416	433
DG COMM	**35**	**676**	**639**	**384**	**254**	**244**

Total energy use (office and telework), (MWh)

	2018	2019	2020	2021	2022	2023	2024
office	391 125	390 182	351 804	359 349	303 822	274 373	266 358
telework		3 333	34 304	36 236	23 492	20 840	20 840
Total	391 125	393 515	386 108	395 585	327 314	295 213	287 198
% telework	0,0	0,8	9	9	7,2	7,1	7,3

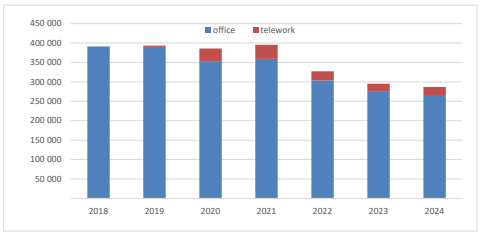


Table 3: Telework water use

	Totals (m^3)					
	2 019	**2 020**	**2 021**	**2 022**	**2 023**	**2 024**
Brussels	7 811	94 710	109 375	70 994	59 802	65 956
Luxembourg	3 311	16 691	20 636	14 143	11 992	12 940
JRC Petten	64	603	757	409	345	377
JRC Geel	46	712	744	367	293	304
JRC Seville	62	939	1 137	827	648	714
JRC Karlsruhe	15	1 333	882	487	298	332
JRC Ispra	414	6 939	6 391	4 147	3 167	3 464
Grange	39	438	614	369	298	299
DG COMM	21	349	327	258	191	192
Total	**11 783**	**122 715**	**140 864**	**92 000**	**77 033**	**84 577**
	Per capita (L/p)					
Brussels	270	3 163	3 574	2 295	1 838	1 996
Luxembourg	644	3 185	3 712	2 482	2 126	2 288
JRC Petten	259	2 442	3 154	1 777	1 514	1 599
JRC Geel	174	2 678	2 830	1 390	1 109	1 151
JRC Seville	169	2 459	2 916	2 052	1 588	1 664
JRC Karlsruhe	47	4 313	2 892	1 591	981	1 108
JRC Ispra	177	2 878	2 582	1 663	1 283	1 389
Grange	222	2 531	3 452	2 027	1 762	1 845
DG COMM	166	2 957	2 977	2 065	1 366	1 409

Total water use (office and telework), (m^3)

	2018	2019	2020	2021	2022	2023	2024
buildings	790 173	691 148	538 762	471 109	473 422	473 147	437 396
telework		11 783	122 715	140 864	92 000	84 577	84 577
Total	790 173	702 931	661 477	611 973	565 422	557 724	521 974
% telework	0,0	1,7	19	23	16	15	16

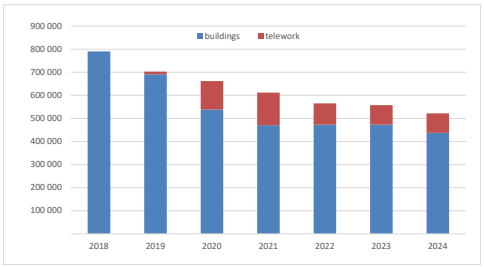
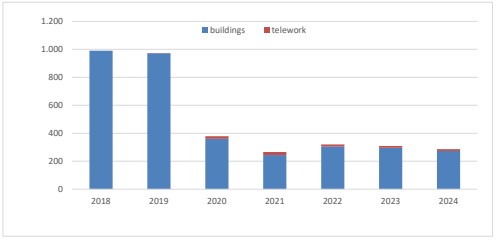


Table 4: Telework paper use

	Totals (tonnes)					
	2 019	**2 020**	**2 021**	**2 022**	**2 023**	**2 024**
Brussels	1,2	15	17	11	9,5	10
Luxembourg	0,4	1,9	2,3	1,6	1,4	1,5
JRC Petten	0,0	0,1	0,1	0,0	0,0	0,0
JRC Geel	0,0	0,1	0,1	0,0	0,0	0,0
JRC Seville	0,0	0,1	0,1	0,0	0,0	0,0
JRC Karlsruhe	0,0	0,5	0,4	0,2	0,1	0,1
JRC Ispra	0,1	1,2	1,1	0,7	0,5	0,6
Grange	0,0	0,1	0,1	0,1	0,1	0,1
DG COMM	0,0	0,0	0,0	0,0	0,0	0,0
Total	**1,7**	**19**	**22**	**14**	**12**	**13**
	Per capita (sheets/person/day)					
Brussels	3,9	3,9	3,9	3,9	3,9	3,9
Luxembourg	3,1	3,1	3,1	3,1	3,1	3,1
JRC Petten	2,2	2,2	2,2	2,2	2,2	2,2
JRC Geel	3,0	3,0	3,0	3,0	3,0	3,0
JRC Seville	2,9	2,9	2,9	2,9	2,9	2,9
JRC Karlsruhe	4,9	4,9	4,9	4,9	4,9	4,9
JRC Ispra	4,0	4,0	4,0	4,0	4,0	4,0
Grange	2,6	2,6	2,6	2,6	2,6	2,6
DG COMM	3,6	3,6	3,6	3,6	3,6	3,6

Total paper consumption (office and telework), (tonnes)

	2018	2019	2020	2021	2022	2023	2024
buildings	**991**	**972**	**360**	**244**	**306**	**296**	**273**
telework		2	19	22	14	13	13
Total	991	974	379	266	320	309	286
% telework	0,0	0,2	5	8	4	4	5



Annex 9: Scope of the Commission's EMAS system by site (2024)

A) Brussels

Bldg. Code	Address	Useful surface area (PEB, m^2) [a]	Staff [a]	EMAS Registration status	Included in EMAS reporting?	Year of verification	Comment
B232	Rue Breydel 4	11 425	444	BXL 2009/016	yes	2019	
B-28	Rue Belliard 28	14 843	1 198	BXL 2007/009	yes	2019	
B-68	Rue Belliard 68	7 305	0		no		Empty building entering the EC portfolio in 2022 and planned for sale
BERL	Rue de la Loi 200	156 450	2 237	BXL 2005/001	yes	2021	
BRE2	Avenue d'Auderghem 19	19 578	824	BXL 2005/002	yes		
BREY	Avenue d'Auderghem 45	35 868	784	BXL 2009/015	yes	2021	
CCAB	Rue Froissart 36	19 645	539	BXL 2013/049	yes		
CDMA	Rue du Champ de Mars 21	21 590	667	BXL 2009/017	yes	2023	
CHAR	Rue de la Loi 170	55 828	1 398	BXL 2013/050	yes		
CLOV - WILS	Boulevard Clovis 75	9 111	19	BXL 2007/010	yes		
COLE	Rue G.Leman 60	9 961	74	BXL 2011/026	yes	2023	
COVE-COV2	Placer Rogier 16	69 896	2 098	BXL 2014/055	yes		
CSM1	Rue Père de Deken 23	12 866	602	BXL 2011/026	yes	2024	
DAV1	Avenue de Bourget 1-3	12 567	96	BXL 2007/011	yes	2021	
DM24	Rue Demot 24	15 758	502	BXL 2014/055	yes	2022	
DM28	Rue Demot 28	11 638	353	BXL 2013/051	yes	2022	
F101	Rue Froissart 101	8 268	227	BXL 2010/031	yes	2017	
G-12	Avenue de Genève 12	16 789	514	BXL 2011/038	yes		
G--6	Avenue de Genève 6	17 054	400	BXL 2011/039	yes	2010	
J-27	Rue Joseph II 27	13 247	377	BXL 2009/019	yes	2018	
J-30	Rue Joseph II 30	18 890	449	BXL 2009/020	yes	2024	
J-54	Rue Joseph II 54	20 419	415	BXL 2007/012	yes	2016	
J-59	Rue Joseph II 59	9 340	314	BXL 2010/030	yes		
J-70	Rue Joseph II 70	20 013	575	BXL 2010/029	yes	2018	
J-79	Rue Joseph II 79	16 400	396	BXL 2009/021	yes	2016	
J-99	Rue Joseph II 99	8 413	300	BXL 2014/056	yes		
KORT	Industriepark Gullendelle, Vinkstraat 3 3070 KORTENBERG	1 070	15	VL 2015/002	yes		
L102	Rue de la Loi 102	4 756	59	BXL 2013/052	yes		
L107	Rue de la Loi 107	29 901	1 901	BXL 2013/053	yes	2023	
L130	rue de la Loi, 130	38 295	972	BXL 2014/057	yes		
L-15	Rue de la Loi 15	17 306	472	BXL 2013/053	yes		
L-41	Rue de la Loi 41	30 179	801	BXL 2009/022	yes		
L-51	Rue de la Loi 51	12 745	673		yes	2024	
L-56	Rue de la Loi 56	9 640	282	BXL 2012/046	yes	2018	
L-86/L-84	Rue de la Loi 86	13 445	408	BXL 2011/032	yes		
LX40	Rue de Luxembourg 40	7 926	221	BXL 2013/054	yes	2020	
LX46 + MO59	Rue de Luxembourg 46	25 790	806	BXL 2010/023	yes	2020	
MADO	Place Madou, 1	39 992	1 168	BXL 2014/058	yes		
MERO	Av. Tervuren, 41	13 651	425	2020	yes	2024	
MO15	Rue Montoyer 15	11 968	524	2020	yes	2020	
N105	Avenue des Nerviens 105	10 045	292	BXL 2010/025	yes		
NOHE	Chaussée de Vilvorde 142 1120 - Neder-Over-Heembeek	21 892	24		yes	2024	
ORBN	square Frère Orban, 8	24 820	697	BXL 2014/059	yes	2021	
OVER	Dennenboslaan, 54- 3090 OVERIJSE	2 600	7	VL/2015/003	yes	2016	
PALM	Avenue Palmerston 6-14	2 403	0		no		Empty building plannned for sale
RP14	Rond-poinr Schuman 14	530	0		no		Exhibition space
PLB3	Philippe Le Bon 3	17 432	145	BXL 2015/060	yes		
SB34	Simon Bolivar 34	35 463	1 175		no		will enter in EMAS scope in 2025
SC11	Rue de la Science 11	9 158	414	BXL 2005/008	no		
SPA2	Rue de SPA 2	19 483	451	BXL 2012/047	yes	2022	
SPA3	Rue de Spa 3	12 044	502	BXL 2012/048	yes	2023	
TR74	Rue de Trèves, 74	6 091	0		no		Empty building getting in EC park in 2022 and plannned for sale
VM18	Rue Van Maerlant 18	11 123	82	BXL 2010/028	yes	2017	
WALI	Boulevard Clovis 53	5 598	126	BXL 2015/061	yes		
W910	Chaussée de Wavre, 910- 1040 ETTERBEEK	10 310	421	2022	yes		
PXEB	Virtual buildings for externl prestataires	N/A	1 711		no		Staff formerly working in Commission buildings now in non Commission accommodation, not considered in the system

Summary*			
	Buildings registered in EMAS, (No)	49	Including external verification in 2023
	Total 'useful area' of buildings registered in EMAS (m^2)	1 029 217	
	Staff in buildings registered in EMAS	31 717	
	Total number of buildings	55	
	Total 'useful area' of buildings (m^2)	1 090 167	
	Total number of staff	32 532	

*Totals are reported in Tables 1.2 to 1.4

Note (a) Indicative figures

B) Luxembourg

Bldg. Code	Address	Useful surface area (PEB, m^2) [a]	Staff [a]	EMAS Registration status	Included in EMAS reporting?	Year of verification	Comment
ARIA	Route d'Esch 400, L-1471	13 624	503	LU-008	yes	2022	
BECH	Rue Alphonse Weicker 5, L-2721	34 060	818	LU-007	yes	2024	
CPE 1 et 2	Rue Albert Borschette 1, L-1246	4 370	36	n/a	yes	-	Will be replaced
CPE 3	Rue Albert Borschette 5, L-1246	5 218	58	LU-011	yes	2020	
CPE 5	Rue Gaston Thorn 6, L-8268	10 895	58	LU-004	yes	2014	
DRB	Rue Guillaume Kroll 12, L-1882	27 124	803	LU-001	yes	2023	
EUFO	Rue Robert Stumper 10, L-2557	26 098	594	LU-003	yes	2021	
FOYER (HEI)	Rue Heinrich Heine 10-12, L-1720	1 192	4	LU-012	yes	2020	
LACC	Rue Eugène Ruppert 18-20, L-2453	11 292	379	LU-009	yes	2017	
T2	Rue Pierre Frieden 1-7, L-1543	15 342	453	LU-010	yes	2017	
MERP	Rue de Reims 20, L-2417	15 361	765	n/a	yes	2025	under EMAS registration in 2025, counted as EMAS bldg
FISR	Rue Adolphe Fischer 135-137 L- 1521	3 526	10	LU-014	yes	2021	
WIND (DC)	Rue Pierre Flammang 3, L-8399	1 206	5	LU-006	yes	2023	Counted as one building
WIND - Telecom Centre		274					
BETZ (DC)	Parc Audiovisuel et des Télécommunications, L-6832 Betzdorf	2 384	5	LU-013	yes	2019	
KAYL (DC)	210, Rue de Noertzange, L-3670	317	3	n/a	yes	-	In OIL's management since 2024
DRB (DC)	Rue Guillaume Kroll 12, L-1882	244		n/a	yes	-	In OIL's management since 2024
PXEL	Virtual buildings for external prestataires	n/a	405	n/a	no	-	Staff working in non Commission accommodation, not considered in the system

Summary*	
Buildings registered in EMAS, (No)	13
Total 'useful area' of buildings registered in EMAS (m^2)	167 596
Staff in buildings registered in EMAS [b]	5 212
Total number of buildings	16
Total 'useful area' of buildings (m^2)	172 527
Total number of staff	5656

Note (a) Indicative figures

Note (b) Total number of staff deducted by the no of staff in non EMAS bldgs.

C) Remaining main sites* - each of which (except JRC Seville) is defined by a perimeter, rather than by individual buildings in a city centre

Site	Address	Useful surface area (PEB, m^2) (a)	Staff (a)	EMAS Registration status	Included in EMAS reporting?	Year of verification	Comment on scope including exclusions
JRC Petten	Petten, Westerduinweg, 3	19 996	228	NL-001	yes		Nuclear reactor not in scope, run by NRG (Nuclear Research and Consultancy Group)
JRC Geel	Geel, Retieseweg, 111	50 650	264	VL-001	yes		B180 (heating building managed by VITO) out of EMAS
JRC Seville	41092 Sevilla, Calle Inca Garcilaso, 3	8 039	408	ES-001	yes		No exclusions
JRC Karlsruhe	Eggenstein Leopoldshafen, Hermann von Helmholtz Platz, 1	43 710	304	DE-001	yes		No exclusions
JRC Ispra	Ispra, Via Enrico Fermi, 2749	1 592 231	2 494	IT-001	yes		Not included in the scope: • the nuclear reactor named 'Ispra-1'; • the Italian Fire Brigade station; • the Carabinieri offices; • the Italian Post office; • the travel agency; • the bank office; • the ENEA building (a subsidiary site of the Italian national agency for new technologies, energy and sustainable economic development); • the EUROPOL data centre.
DG SANTE at Grange	Dunsany Co. Meath, Grange, 0	12 402	169	IE-001	yes		No exclusions

(a) Indicative figures

* Excluding EC Representations in Member States (see separate Annex)

Bldg. Code	Address	Useful surface area (PEB, m^2	Staff	EMAS registration number	Included in EMAS reporting?	Most recent verification audit
Budapest	az Európai Unió Háza, 1024 Budapest, Lövőház u. 35, Hungary					
Copenhagen	Gothersgade 115, 1123 København, Denmark					
Nicosia	EU HOUSE – 30 Lordou Vyronos Avenue, 1096 Nicosia, Cyprus					
Sofia	ulitsa „Georgi S. Rakovski" 124, 1000 Sofia, Bulgaria					
The Hague	Korte Vijverberg 5, 2513 AB Den Haag, Netherlands					
Valletta	Offices: Dar l-Ewropa, 254 Triq San Pawl, il-Belt Valletta, VLT 1215, Malta					
Valletta	Garage: 60, Triq L-Ibjar, Il-Belt Valletta, VLT 1271, Malta					
Vienna	Haus der Europäischen Union, Wipplingerstraße 35, A-1010 Wien, Austria					

Annex 10: Carbon footprint by site

Table 10.1 Evolution of emissions at the EMAS sites (tonnes CO_2e)

Scope of the Commission's Carbon Footprint, main elements are summrised below.

Scope 1 - Own fuel use and direct losses
- Fossil fuel used by the 8 main Commission sites* and the part of the 7 EC Representations occupied by DG COMM
- Fugitive (refrigerant) emissions from the buildings comprising the 8 main Commission sites* and the part of the 7 EC Representations occupied by DG COMM

** For Brussels includes only those buildings in the EMAS scope*

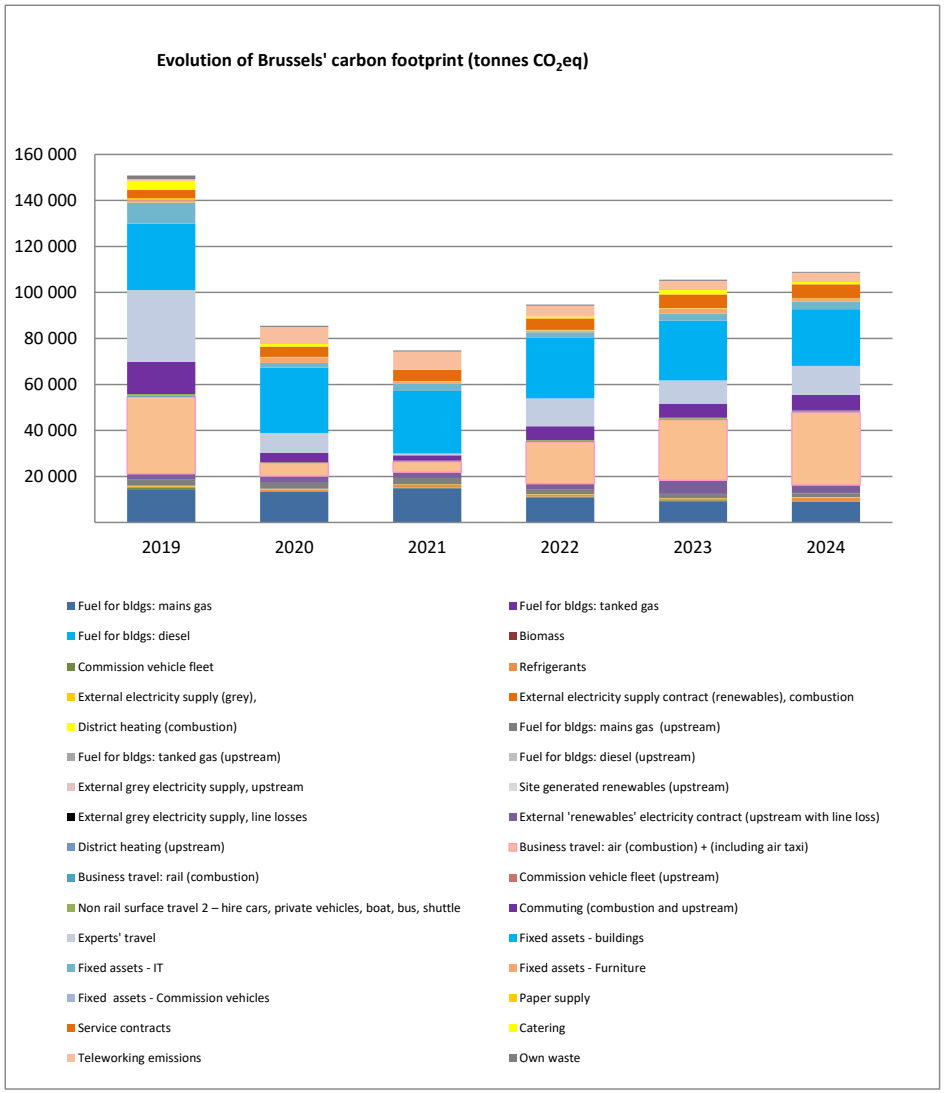
Scope 2 - Purchased energy
- Electricity and district heating used by the 8 main Commission sites* and the part of the 7 EC Representations occupied by DG COMM

Scope 3 - Indirect sources
- Upstream emissions for fossil fuel consumption under Scope 1
- Upstream (embodied emissions of infrastructure) and line losses (transport and distribution) for electricity consumption under scope 1
- Mission travel including emissions for all staff, including upstream (well to tank emissions) for fossil fuel consumption
- Expert travel including emissions for staff engaged on the administrative budget, or for administrative purposes
- Commuting emissions, including upstream, for the staff at the 8 main sites and the EC staff at the 7 EC Representations
- Fixed asset (embodied) energy of buildings for the buildngs at the 8 main Commission sites and the Commission part of the Representations in Member States
- Fixed asset (embodied) energy of IT equipment, for 18 categories of equipment installed at the 8 main sites, and screens and docking stations purchased for teleworking
- Fixed assets (furniture) - 6 categories of furniture purchased at the 8 main sites and the Commisson part of the seven EC Representation in Member States

Other services purchased
- Catering - emissions for 14 categories of food served in Commission catering facilities at the 8 main sites and the seven EC representations in Member States.
- Security - emissions for the security services at the eight main Commission sites and seven EC repersentations in Member states (based on full itme equivalence)
- Office cleaning - cleaning for the security services at the eight main Commission sites and seven EC reprsentations in Member states (based on full time equivanlence)
- Waste manbagement - related to the management of waste collected fromCommisson premises.
- Service contracts - related to the running of the infrastructure of the Commission (in the OIB and OIL in Brussels) and at the JRC sites, and seven EC Representations in Member States, based on contract value

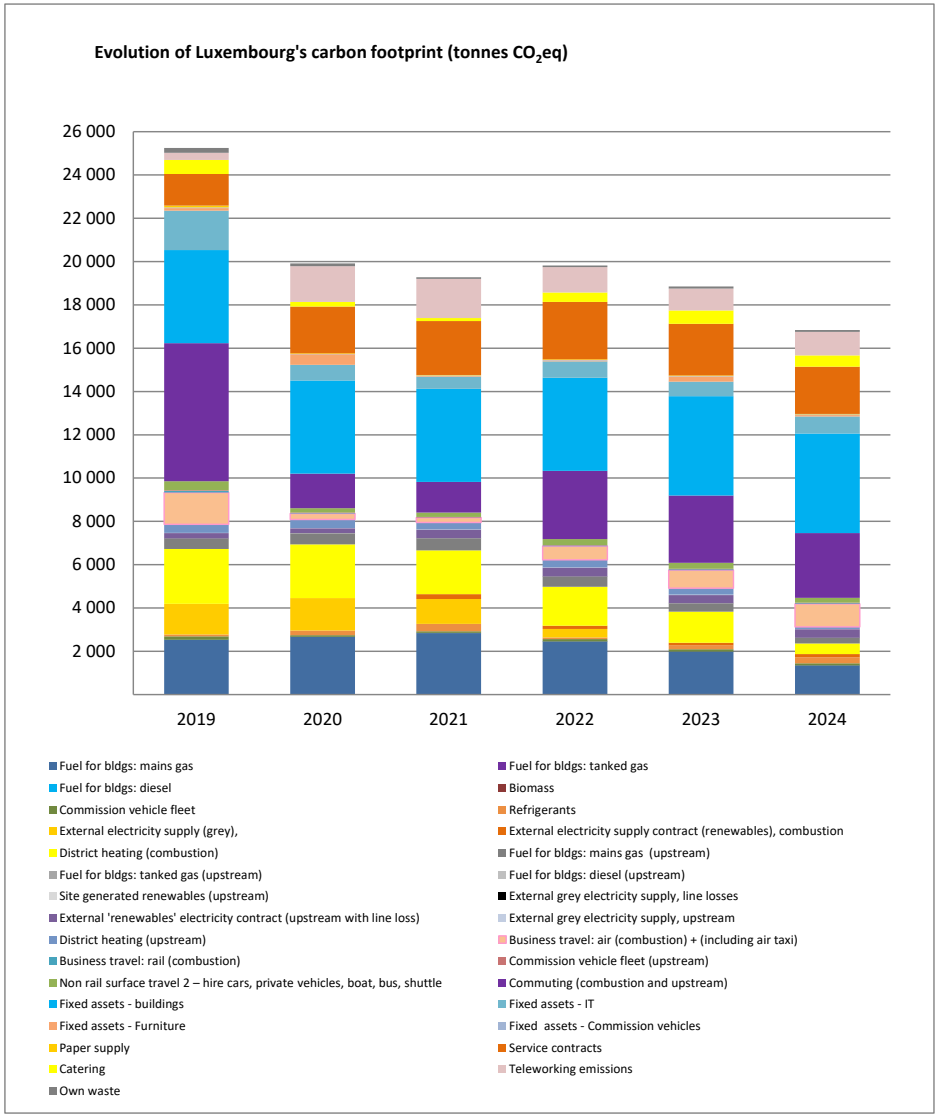
Brussels

Scope and category of emissions	2019	2020	2021	2022	2023	2024
Scope 1: Own fuel use and direct loss	**15 666**	**14 400**	**16 354**	**12 036**	**10 407**	**10 908**
Fuel for bldgs: mains gas	14 464	13 221	14 851	10 860	9 286	8 949
Fuel for bldgs: tanked gas	na	na	na	na	na	na
Fuel for bldgs: diesel	0	0	0	26	67	5
Biomass	na	na	na	na	na	na
Commission vehicle fleet	525	303	339	378	343	230
Refrigerants	677	876	1.163	771	711	1 724
Scope 2: Purchased energy	**277**	**260**	**170**	**178**	**201**	**165**
External electricity supply (grey),	277	260	170	178	201	165
External electricity supply contract (renewables), combustion	0	0	0	0	0	0
District heating (combustion)	na	na	na	na	na	na
Scope 3: Other indirect sources	**134 928**	**70 840**	**58 300**	**82 473**	**94 958**	**97 851**
Fuel for bldgs: mains gas (upstream)	2 752	2 509	2 818	2 061	1 763	1 698
Fuel for bldgs: tanked gas (upstream)	na	na	na	na	na	na
Fuel for bldgs: diesel (upstream)	0	0	0	6	15	1
Site generated renewables (upstream)	1	1	1	1	5	47
External grey electricity supply, upstream	61	60	44	47	46	48
External grey electricity supply, line losses	9	7	5	6	6	6
External 'renewables' electricity contract (upstream with line loss)	2 365	2 958	2 532	2 565	5 926	3 371
District heating (upstream)						
Business travel: air (combustion) + (including air taxi)	33 556	5 645	4 577	18 108	26 349	31 707
Business travel: rail (combustion)	524	111	106	310	370	335
Commission vehicle fleet (upstream)	132	74	81	86	77	51
Non rail surface travel 2 – hire cars, private vehicles, boat, bus, shuttle	539	127	187	422	415	293
Commuting (combustion and upstream)	13 916	4 001	2 366	6 028	6 102	6 782
Experts' travel	31 216	8 730	748	12 141	10 092	12 657
Fixed assets - buildings	28 920	28 381	27 154	26 264	25 910	24 681
Fixed assets - IT	9 096	2 155	3 080	2 485	3 179	3 304
Fixed assets - Furniture	1 107	2 206	1 014	675	2 070	1 059
Fixed assets - Commission vehicles	117	72	88	107	104	96
Paper supply	766	280	185	228	227	205
Service contracts	3 612	4 555	4 872	4 922	5 880	6 129
Catering	3 852	1 085	117	833	1 906	972
Teleworking emissions	719	7 351	7 777	4 680	4 032	4 014
Own waste	1 666	530	548	499	486	394
Sum	**150 871**	**85 499**	**74 824**	**94 686**	**105 566**	**108 923**
Total tonnes CO_2 per person	***5,2***	***2,9***	***2,4***	***3,1***	***3,3***	***3,6***



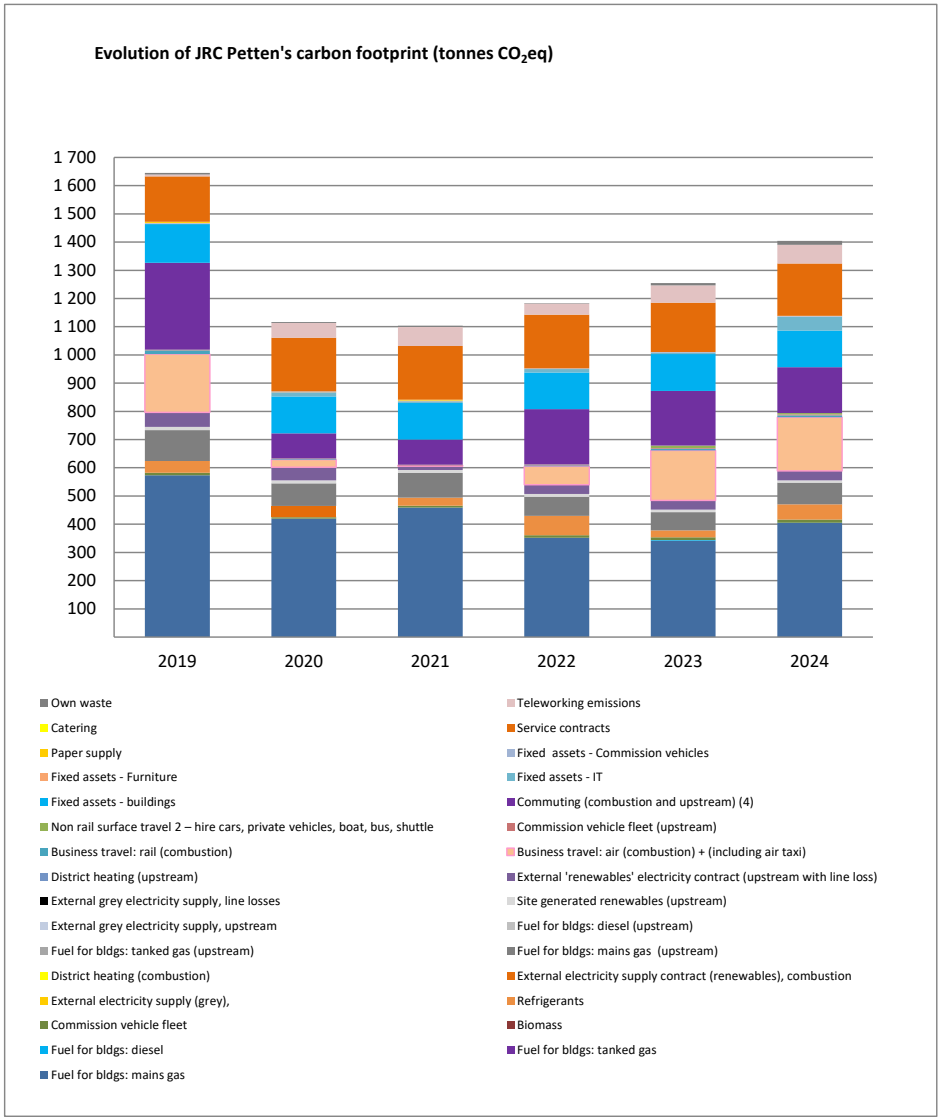
Luxembourg

Scope and category of emissions	2019	2020	2021	2022	2023	2024
Scope 1: Own fuel use and direct loss	**2 776**	**2 955**	**3 264**	**2 635**	**2 268**	**1 724**
Fuel for bldgs: mains gas	2 532	2 665	2 839	2 454	1 984	1 344
Fuel for bldgs: tanked gas	na	na	na	na	na	na
Fuel for bldgs: diesel	2	1	1	1	2	1
Biomass	0	8	8	6	6	4
Commission vehicle fleet	153	71	80	102	97	91
Refrigerants	89	211	336	73	178	284
Scope 2: Purchased energy	**3 945**	**3 987**	**3 401**	**2 343**	**1 565**	**635**
External electricity supply (grey),	1 416	1 503	1 153	393	0	0
External electricity supply contract (renewables), combustion	0	0	225	155	125	143
District heating (combustion)	2 528	2 484	2 023	1 794	1 440	492
Scope 3: Other indirect sources	**18 669**	**13 129**	**12 730**	**14 969**	**15 063**	**14 631**
Fuel for bldgs: mains gas (upstream)	482	506	539	466	377	255
Fuel for bldgs: tanked gas (upstream)						
Fuel for bldgs: diesel (upstream)	0	0	0	0	0	0
Site generated renewables (upstream)	5	10	10	11	11	7
External grey electricity supply, upstream	151	169	134	136	57	158
External grey electricity supply, line losses	9	7	6	5	2	6
External 'renewables' electricity contract (upstream with line loss)	247	218	402	402	378	393
District heating (upstream)	399	392	320	348	298	102
Business travel: air (combustion) + (including air taxi)	1 462	284	217	631	838	1 059
Business travel: rail (combustion)	74	19	15	30	41	39
Commission vehicle fleet (upstream)	40	18	20	24	23	21
Non rail surface travel 2 – hire cars, private vehicles, boat, bus, shuttle	414	205	201	279	272	216
Commuting (combustion and upstream)	6 372	1 599	1 420	3 149	3 107	2 994
Fixed assets - buildings	4 298	4 298	4 298	4 298	4 589	4 605
Fixed assets - IT	1 829	728	565	762	679	786
Fixed assets - Furniture	108	484	36	34	228	62
Fixed assets - Commission vehicles	39	16	20	27	26	28
Paper supply	80	32	21	33	25	24
Service contracts	1 464	2 160	2 494	2 654	2 386	2 188
Catering	642	213	132	427	617	521
Teleworking emissions	336	1 646	1 806	1 170	1 013	1 086
Own waste	216	126	76	83	96	82
Sum	**25 389**	**20 070**	**19 396**	**19 947**	**18 896**	**16 989**
Total tonnes CO_2 per person	***4,9***	***3,8***	***3,5***	***3,5***	***3,3***	***3,0***



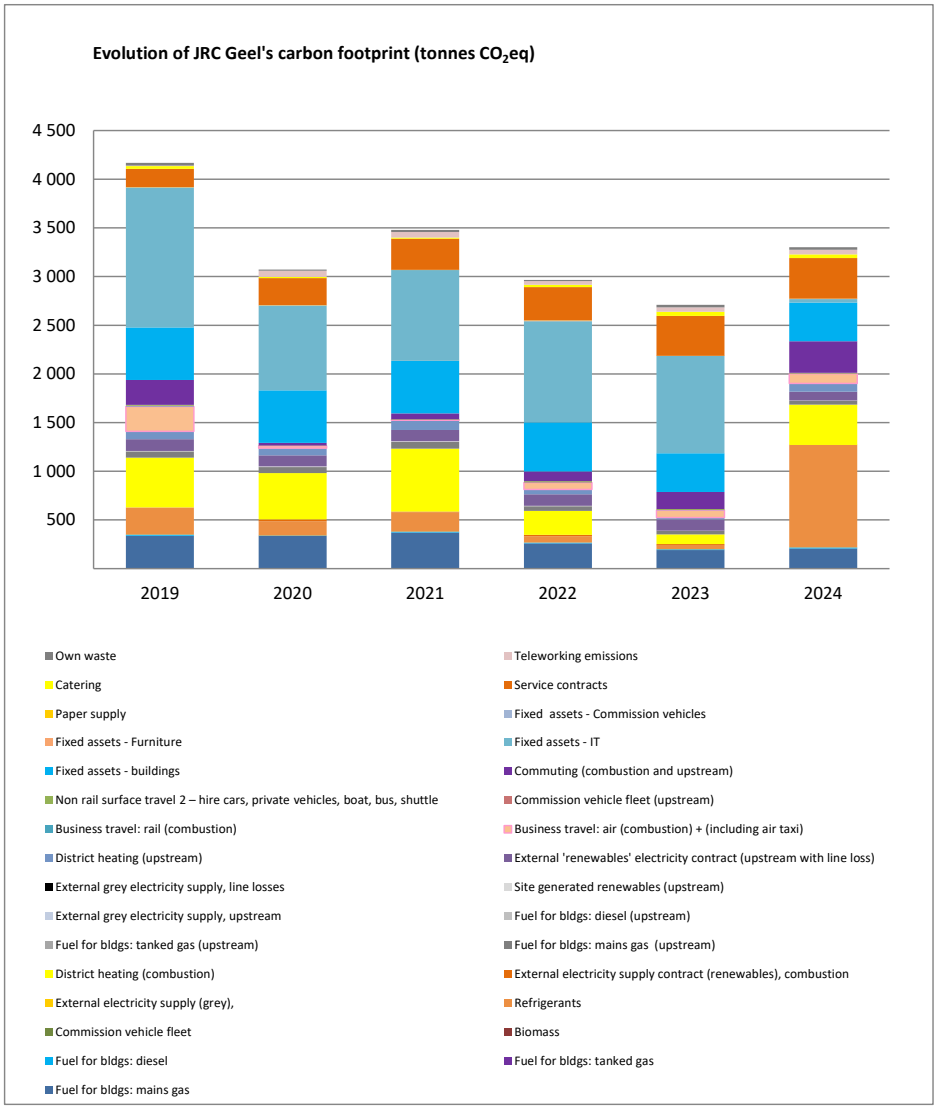
JRC Petten

Scope and category of emissions	2019	2020	2021	2022	2023	2024
Scope 1: Own fuel use and direct loss	**624**	**427**	**494**	**430**	**378**	**470**
Fuel for bldgs: mains gas	574	420	459	352	342	404
Fuel for bldgs: tanked gas	na	na	na	na	na	na
Fuel for bldgs: diesel	0	0	0	0	2	1
Biomass	na	na	na	na	na	na
Commission vehicle fleet	8	4	7	9	10	11
Refrigerants	42	2	28	69	24	54
Scope 2: Purchased energy	**0**	**38**	**0**	**0**	**0**	**0**
External electricity supply (grey),	0	0	0	0	0	0
External electricity supply contract (renewables), combustion	0	38	0	0	0	0
District heating (combustion)	na	na	na	na	na	na
Scope 3: Other indirect sources	**1 021**	**652**	**609**	**754**	**876**	**934**
Fuel for bldgs: mains gas (upstream)	109	80	87	67	65	77
Fuel for bldgs: tanked gas (upstream)						
Fuel for bldgs: diesel (upstream)	0	0	0	0	0	0
Site generated renewables (upstream)	11	11	10	11	8	8
External grey electricity supply, upstream	0	0	0	0	0	0
External grey electricity supply, line	0	0	0	0	0	0
External 'renewables' electricity contract (upstream with line loss)	52	46	14	33	32	33
District heating (upstream)	na	na	na	na	na	na
Business travel: air (combustion) + (including air taxi)	207	27	3	65	177	191
Business travel: rail (combustion)	13	2	0	3	6	7
Commission vehicle fleet (upstream)	2	1	2	2	2	3
Non rail surface travel 2 – hire cars, private vehicles, boat, bus, shuttle	1	1	0	1	9	5
Commuting (combustion and upstream) (4	308	89	89	195	194	162
Fixed assets - buildings	138	130	130	130	130	130
Fixed assets - IT	0	15	5	12	5	49
Fixed assets - Furniture	2	1	1	0	0	1
Fixed assets - Commission vehicles	2	1	2	2	2	2
Paper supply	4	0	3	0	0	0
Service contracts	160	190	190	190	174	185
Catering	0	0	0	0	0	0
Teleworking emissions	6	53	68	39	61	67
Own waste	6	3	5	2	8	14
(Other category) - Ispra	na	na	na	na	na	na
Sum	**1 646**	**1 117**	**1 104**	**1 184**	**1 255**	**1 404**
Total tonnes CO_2 per person	***6,6***	***4,5***	***4,6***	***5,1***	***5,5***	***5,9***



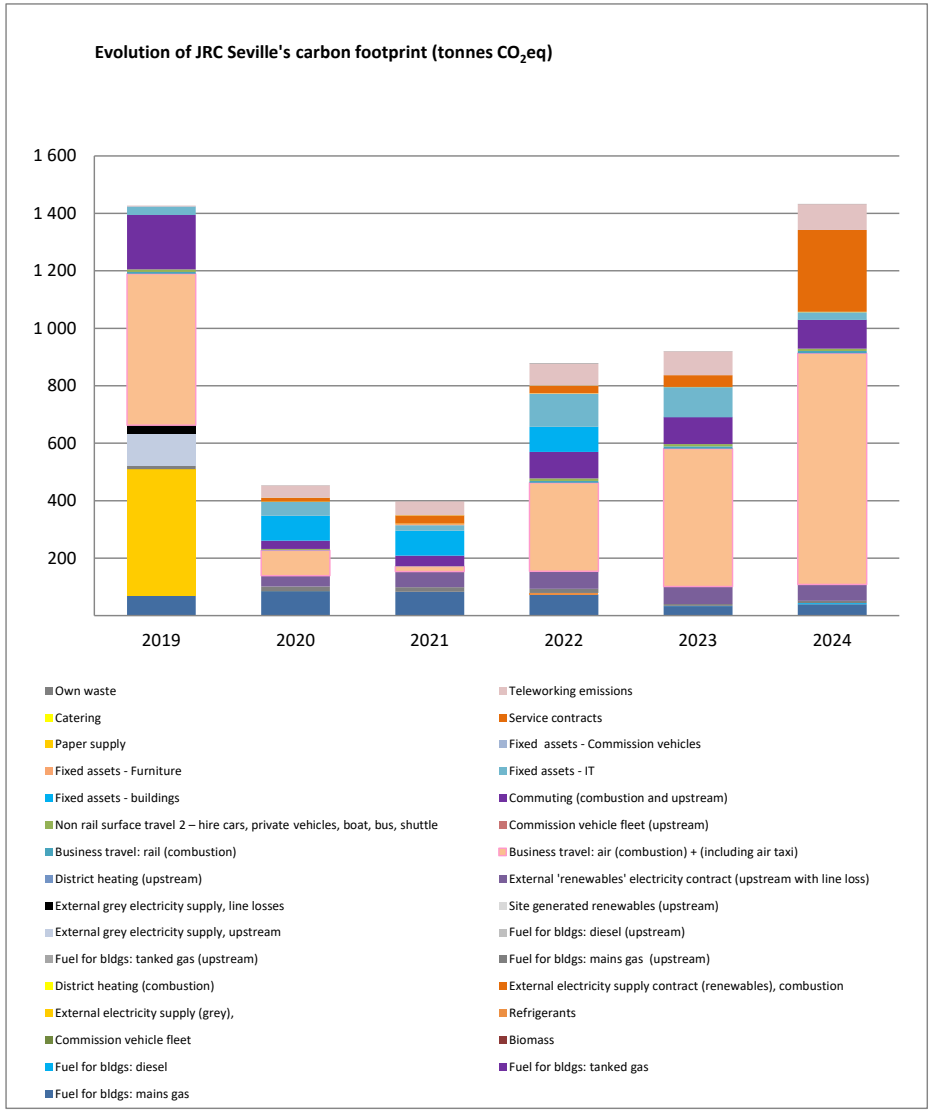
JRC Geel

Scope and category of emissions	2019	2020	2021	2022	2023	2024
Scope 1: Own fuel use and direct loss	**628**	**485**	**577**	**331**	**236**	**1 271**
Fuel for bldgs: mains gas	337	335	371	260	191	208
Fuel for bldgs: tanked gas	na	na	na	na	na	na
Fuel for bldgs: diesel	9	2	7	7	7	7
Biomass	na	na	na	na	na	na
Commission vehicle fleet	5	4	3	3	4	3
Refrigerants	278	143	195	62	35	1 052
Scope 2: Purchased energy	**511**	**496**	**655**	**261**	**114**	**414**
External electricity supply (grey),	0,00	0,00	0,00	0,00	0,00	0,00
External electricity supply contract (renewables), combustion	0	21	10	15	15	1
District heating (combustion)	511	475	644	246	99	414
Scope 3: Other indirect sources	**3 030**	**2 090**	**2 248**	**2 374**	**2 360**	**1 616**
Fuel for bldgs: mains gas (upstream)	64	64	70	49	36	40
Fuel for bldgs: tanked gas (upstream)						
Fuel for bldgs: diesel (upstream)	2	0	2	2	1	2
Site generated renewables (upstream)	3	5	4	1	2	2
External grey electricity supply, upstream	0	0	0	0	0	0
External grey electricity supply, line losses	0	0	0	0	0	0
External 'renewables' electricity contract (upstream with line loss)	121	114	118	120	115	88
District heating (upstream)	81	75	102	48	20	86
Business travel: air (combustion) + (including air taxi)	255	23	2	72	74	99
Business travel: rail (combustion)	6	1	1	2	3	2
Commission vehicle fleet (upstream)	1	1	1	1	1	1
Non rail surface travel 2 – hire cars, private vehicles, boat, bus, shuttle	10	2	5	12	10	7
Commuting (combustion and upstream)	256	26	58	100	176	325
Fixed assets - buildings	538	540	540	504	396	396
Fixed assets - IT	1 438	872	933	1 040	1 000	36
Fixed assets - Furniture	2	2	0	6	0	2
Fixed assets - Commission vehicles	1	0	0	0	0	0
Paper supply	4	1	2	2	2	2
Service contracts	187	277	319	342	411	418
Catering	28	13	11	24	41	37
Teleworking emissions	4	63	59	36	45	46
Own waste	29	11	20	14	27	26
(Other category) - Ispra	na	na	na	na	na	na
Sum	**4 169**	**3 071**	**3 479**	**2 966**	**2 711**	**3 302**
Total tonnes CO_2 per person	***15,9***	***11,5***	***13,2***	***11,2***	***10,3***	***12,5***



JRC Seville

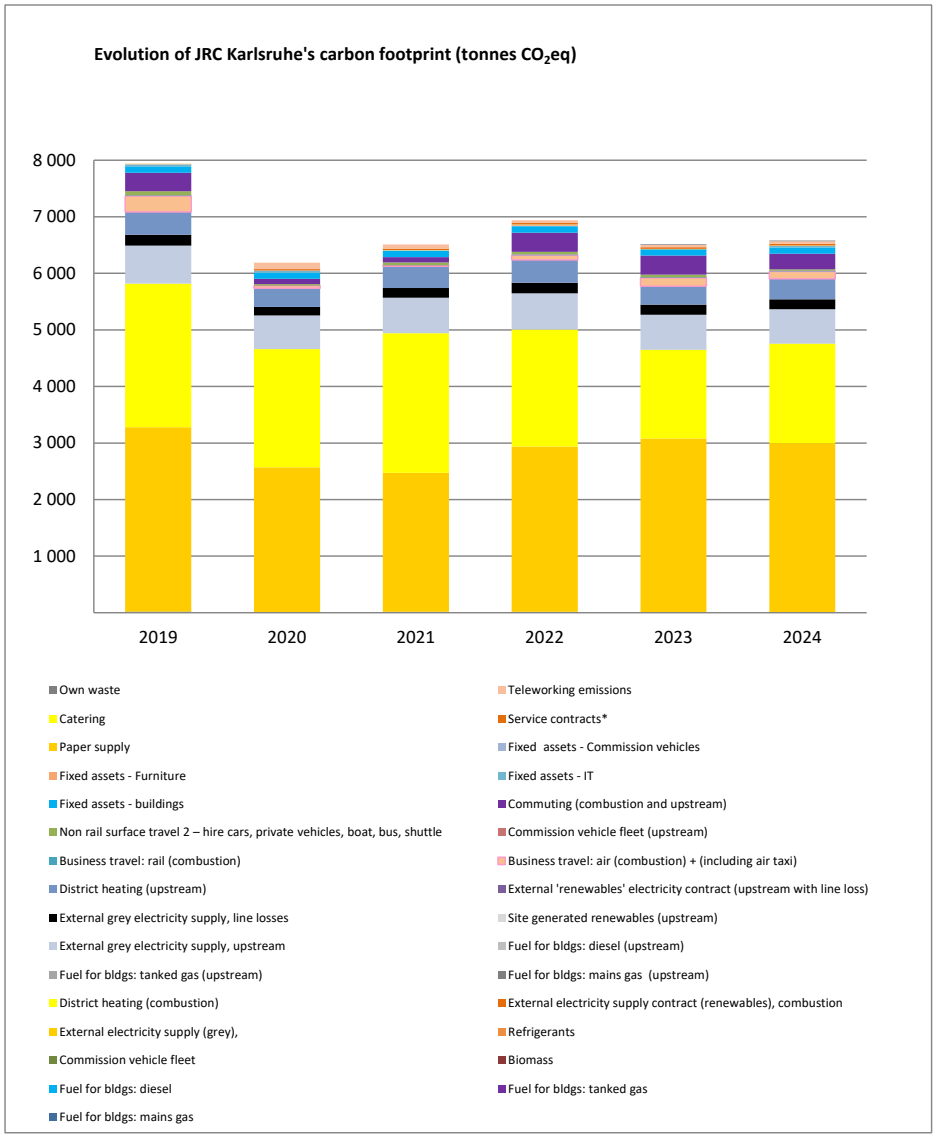
Scope and category of emissions	2019	2020	2021	2022	2023	2024
Scope 1: Own fuel use and direct loss	**69**	**85**	**83**	**79**	**34**	**44**
Fuel for bldgs: mains gas	69	85	83	73	33	40
Fuel for bldgs: tanked gas	na	na	na	na	na	na
Fuel for bldgs: diesel	0	0	0	1	1	4
Biomass	na	na	na	na	na	na
Commission vehicle fleet	1	0	0	0	0	0
Refrigerants	0	0	0	5	0	0
Scope 2: Purchased energy	**440**	**0**	**0**	**0**	**0**	**0**
External electricity supply (grey),	440	0	0	0	0	0
External electricity supply contract (renewables), combustion	0	0	0	0	0	0
District heating (combustion)	na	na	na	na	na	na
Scope 3: Other indirect sources	**918**	**368**	**316**	**799**	**886**	**1 389**
Fuel for bldgs: mains gas (upstream)	13	16	16	14	6	8
Fuel for bldgs: tanked gas (upstream)	na	na	na	na	na	na
Fuel for bldgs: diesel (upstream)	0	0	0	0	0	0
Site generated renewables (upstream)	na	na	na	na	na	na
External grey electricity supply, upstream	112	0	0	0	0	0
External grey electricity supply, line losses	29	0	0	0	0	0
External 'renewables' electricity contract (upstream with line loss)	0	37	55	61	61	57
District heating (upstream)						
Business travel: air (combustion) + (including air taxi)	527	88	18	308	480	805
Business travel: rail (combustion)	7	1	1	6	8	8
Commission vehicle fleet (upstream)	0	0	0	0	0	0
Non rail surface travel 2 – hire cars, private vehicles, boat, bus, shuttle	8	3	1	8	8	8
Commuting (combustion and upstream)	190	29	36	93	94	100
Fixed assets - buildings	0	87	87	87	0	0
Fixed assets - IT	29	48	19	115	104	27
Fixed assets - Furniture	0	0	4	1	0	0
Fixed assets - Commission vehicles	0	0	0	0	0	0
Paper supply	0	2	2	1	1	1
Service contracts	0	13	28	26	40	285
Catering	0	0	0	1	0	0
Teleworking emissions	3	42	49	76	83	90
Own waste	0	1	1	1	1	1
(Other category) - Ispra	na	na	na	na	na	na
Sum	**1 428**	**454**	**399**	**878**	**920**	**1 433**
Total tonnes CO_2 per person	***3,9***	***1,2***	***1,0***	***2,2***	***2,3***	***3,3***



JRC Karlsruhe

Scope and category of emissions	2019	2020	2021	2022	2023	2024
Scope 1: Own fuel use and direct loss	**20**	**13**	**17**	**17**	**10**	**7**
Fuel for bldgs: mains gas	na	na	na	na	na	na
Fuel for bldgs: tanked gas	na	na	na	na	na	na
Fuel for bldgs: diesel	3	3	3	3	3	3
Biomass	na	na	na	na	na	na
Commission vehicle fleet	17	10	15	14	8	4
Refrigerants	0	0	0	0	0	0
Scope 2: Purchased energy	**5 797**	**4 649**	**4 926**	**4 991**	**4 638**	**4 753**
External electricity supply (grey),	3 260	2 556	2 454	2 920	3 071	2 991
External electricity supply contract (renewables), combustion	0	0	0	0	0	0
District heating (combustion)	2 537	2 093	2 472	2 071	1 566	1 762
Scope 3: Other indirect sources	**2 119**	**1 527**	**1 568**	**1 930**	**1 869**	**1 821**
Fuel for bldgs: mains gas (upstream)	na	na	na	na	na	na
Fuel for bldgs: tanked gas (upstream)	na	na	na	na	na	na
Fuel for bldgs: diesel (upstream)	0	0	0	0	0	0
Site generated renewables (upstream)	na	na	na	na	na	na
External grey electricity supply, upstream	674	594	626	641	620	604
External grey electricity supply, line losses	192	151	170	187	181	176
External 'renewables' electricity contract (upstream with line loss)	0	0	0	0	0	0
District heating (upstream)	401	331	391	402	324	365
Business travel: air (combustion) + (including air taxi)	282	42	7	81	147	129
Business travel: rail (combustion)	14	3	3	12	11	11
Commission vehicle fleet (upstream)	4	3	4	3	2	1
Non rail surface travel 2 – hire cars, private vehicles, boat, bus, shuttle	67	23	48	46	44	25
Commuting (combustion and upstream)	328	94	94	341	339	277
Fixed assets - buildings	111	111	111	111	111	111
Fixed assets - IT	35	32	9	8	0	29
Fixed assets - Furniture	3	0	0	19	5	5
Fixed assets - Commission vehicles	4	5	5	4	0	0
Paper supply	2	0	1	2	2	2
Service contracts*	0	27	27	27	27	27
Catering	0	0	0	0	0	0
Teleworking emissions	1	112	73	46	42	46
Own waste	0	0	0	0	15	14
(Other category) - Ispra	na	na	na	na	na	na
Sum	**7 936**	**6 189**	**6 511**	**6 938**	**6 517**	**6 581**
Total tonnes CO_2 per person	***25,2***	***20,0***	***21,3***	***22,7***	***21,4***	***21,9***

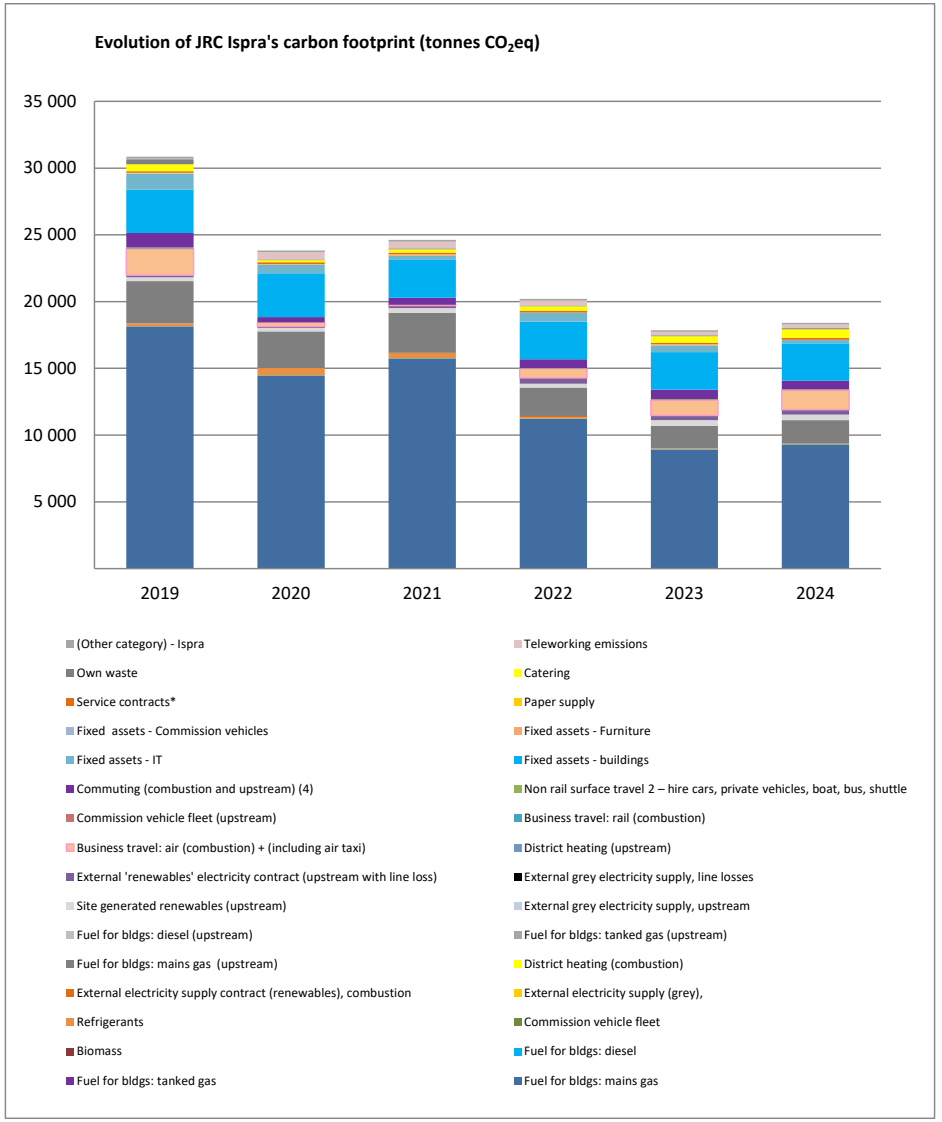
* Approach under revision



JRC Ispra

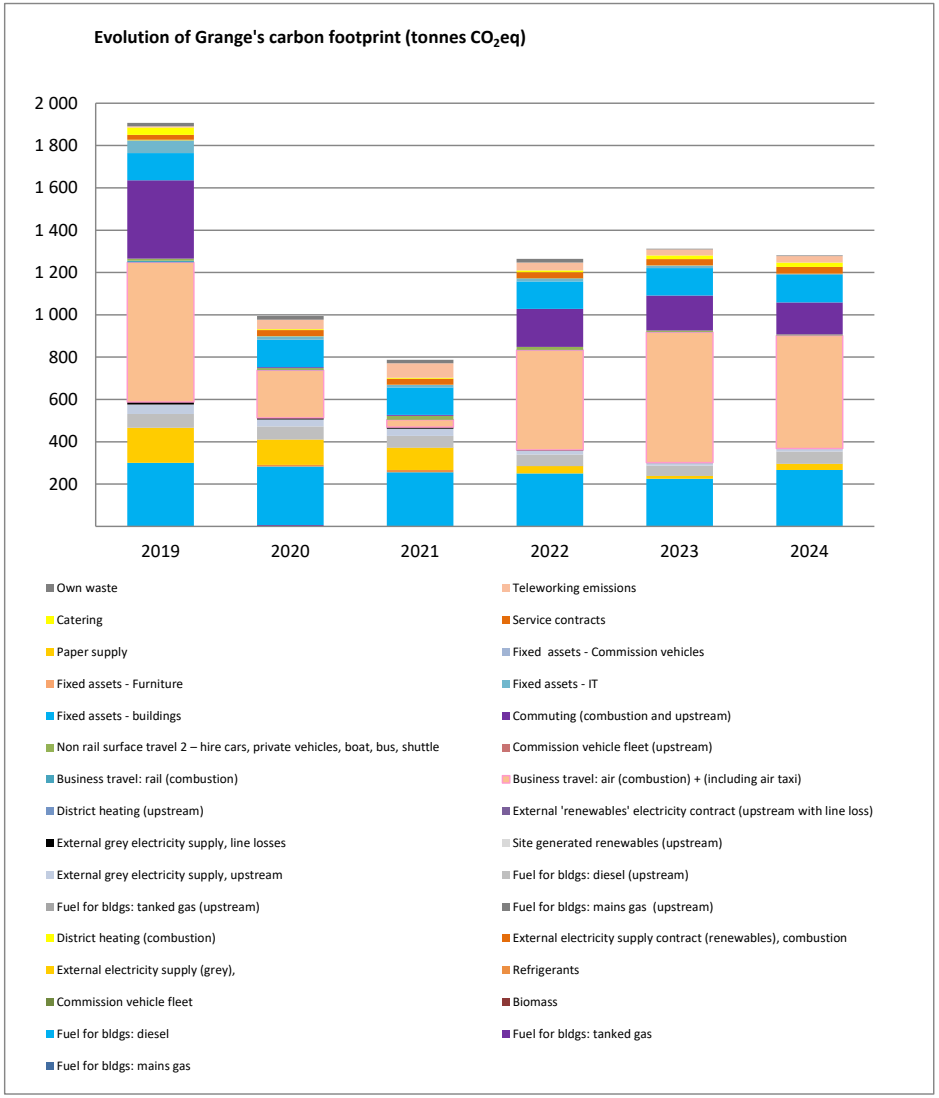
Scope and category of emissions	2019	2020	2021	2022	2023	2024
Scope 1: Own fuel use and direct loss	**18 382**	**15 024**	**16 089**	**11 319**	**8 993**	**9 357**
Fuel for bldgs: mains gas	18 101	14 432	15 727	11 225	8 914	9 285
Fuel for bldgs: tanked gas	na	na	na	na	na	na
Fuel for bldgs: diesel	31	23	20	12	15	12
Biomass	na	na	na	na	na	na
Commission vehicle fleet	42	28	27	21	26	25
Refrigerants	208	540	315	62	39	35
Scope 2: Purchased energy	**0**	**0**	**78**	**113**	**0**	**0**
External electricity supply (grey),	0	0	0	0	0	0
External electricity supply contract (renewables), combustion	0	0	78	113	0	0
District heating (combustion)	na	na	na	na	na	na
Scope 3: Other indirect sources	**12 467**	**8 803**	**8 463**	**8 771**	**8 866**	**9 057**
Fuel for bldgs: mains gas (upstream)	3 159	2 739	2 984	2 130	1 692	1 762
Fuel for bldgs: tanked gas (upstream)						
Fuel for bldgs: diesel (upstream)	7	5	4	3	3	3
Site generated renewables (upstream)	288	253	364	287	433	413
External grey electricity supply, upstream	0	0	0	0	0	0
External grey electricity supply, line losses	0	0	0	0	0	0
External 'renewables' electricity contract (upstream with line loss)	146	113	183	422	339	363
District heating (upstream)	na	na	na	na	na	na
Business travel: air (combustion) + (including air taxi)	1 970	295	45	699	1 160	1 476
Business travel: rail (combustion)	30	6	2	12	24	19
Commission vehicle fleet (upstream)	11	7	7	5	6	6
Non rail surface travel 2 – hire cars, private vehicles, boat, bus, shuttle	55	14	13	27	41	34
Commuting (combustion and upstream) (4	1 096	388	514	662	704	641
Fixed assets - buildings	3 248	3 283	2 835	2 822	2 816	2 804
Fixed assets - IT	1 190	641	319	661	512	245
Fixed assets - Furniture	22	33	92	11	52	8
Fixed assets - Commission vehicles	10	7	7	7	8	9
Paper supply	27	11	10	12	12	8
Service contracts*	134	133	130	132	135	135
Catering	516	161	231	327	484	647
Teleworking emissions	32	524	507	351	254	284
Own waste	385	48	73	57	69	77
(Other category) - Ispra	143	143	143	143	124	124
Sum	**30 849**	**23 826**	**24 631**	**20 202**	**17 859**	**18 414**
Total tonnes CO_2 per person	***13,2***	***9,9***	***10,0***	***8,1***	***7,2***	***7,4***

* Approach under revision



Grange

Scope and category of emissions	2019	2020	2021	2022	2023	2024
Scope 1: Own fuel use and direct loss	**301**	**291**	**267**	**250**	**225**	**267**
Fuel for bldgs: mains gas	na	na	na	na	na	na
Fuel for bldgs: tanked gas	0	6	1	1	1	1
Fuel for bldgs: diesel	301	277	255	249	224	265
Biomass	na	na	na	na	na	na
Commission vehicle fleet	0	0	0	0	0	0
Refrigerants	0	8	12	0	0	0
Scope 2: Purchased energy	**165**	**120**	**106**	**35**	**13**	**29**
External electricity supply (grey),	165	120	106	35	13	29
External electricity supply contract	0	0	0	0	0	0
District heating (combustion)	0	0	0	0	0	0
Scope 3: Other indirect sources	**1 441**	**583**	**415**	**979**	**1 074**	**985**
Fuel for bldgs: mains gas (upstream)	na	na	na	na	na	na
Fuel for bldgs: tanked gas (upstream)	0	1	0	0	0	0
Fuel for bldgs: diesel (upstream)	66	60	56	54	49	57
Site generated renewables (upstream)	0	0	0	0	0	0
External grey electricity supply, upstream	45	33	33	18	12	12
External grey electricity supply, line losses	11	7	8	4	3	3
External 'renewables' electricity contract (upstream with line loss)	0	0	0	0	0	0
District heating (upstream)	na	na	na	na	na	na
Business travel: air (combustion) + (including air taxi)	660	225	34	471	615	533
Business travel: rail (combustion)	8	0	1	1	2	1
Commission vehicle fleet (upstream)	0	0	0	0	0	0
Non rail surface travel 2 – hire cars, private vehicles, boat, bus, shuttle	10	9	18	15	6	4
Commuting (combustion and upstream)	370	5	5	179	167	152
Fixed assets - buildings	129	129	129	129	129	129
Fixed assets - IT	60	16	12	15	12	6
Fixed assets - Furniture	0	0	0	0	0	0
Fixed assets - Commission vehicles	0	0	0	0	0	0
Paper supply	3	1	1	1	1	1
Service contracts	23	29	29	29	30	32
Catering	34	4	4	8	17	21
Teleworking emissions	6	45	69	37	29	30
Own waste	17	17	17	17	4	4
(Other category) - Ispra	na	na	na	na	na	na
Sum	**1 907**	**994**	**788**	**1 264**	**1 313**	**1 281**
Total tonnes CO_2 per person	***10,8***	***5,7***	***4,4***	***6,9***	***7,8***	***7,9***



DG COMM

Scope and category of emissions	2019	2020	2021	2022	2023	2024
Scope 1: Own fuel use and direct loss	**54**	**30**	**39**	**39**	**31**	**37**
Fuel for bldgs: mains gas	27	22	28	26	19	21
Fuel for bldgs: tanked gas						
Fuel for bldgs: diesel	0	0	0	0	0	1
Biomass						
Commission vehicle fleet	27	8	11	14	12	15
Refrigerants	0	0	0	0	0	0
Scope 2: Purchased energy	**186**	**157**	**163**	**149**	**143**	**114**
External electricity supply (grey),	113	89	89	78	79	61
External electricity supply contract	0	0	0	0	0	0
District heating (combustion)	73	68	74	71	65	53
Scope 3: Other indirect sources	**490**	**288**	**278**	**319**	**341**	**373**
Fuel for bldgs: mains gas (upstream)	5	4	5	5	4	4
Fuel for bldgs: tanked gas (upstream)						
Fuel for bldgs: diesel (upstream)	0	0	0	0	0	0
Site generated renewables (upstream)	0	0	0	0	0	0
External grey electricity supply, upstream	14	11	11	12	11	10
External grey electricity supply, line losses	6	5	5	3	3	3
External 'renewables' electricity contract (upstream with line loss)	3	4	4	6	6	6
District heating (upstream)	11	11	12	14	13	11
Business travel: air (combustion) + (including air taxi)	227	40	51	92	110	167
Business travel: rail (combustion)	4	0	2	4	4	2
Commission vehicle fleet (upstream)	7	2	3	3	3	4
Non rail surface travel 2 – hire cars, private vehicles, boat, bus, shuttle	11	1	2	3	13	4
Commuting (combustion and upstream)	32	32	32	32	32	32
Fixed assets - buildings	107	107	107	107	107	107
Fixed assets - IT	37	31	7	11	13	2
Fixed assets - Furniture	15	2	2	2	1	1
Fixed assets - Commission vehicles	2	1	2	2	2	2
Paper supply	3	4	4	3	2	1
Service contracts	0	0	0	0	0	0
Catering	0	0	0	0	0	0
Teleworking emissions	3	31	29	20	16	15
Own waste	3	2	2	2	2	1
(Other category) - Ispra						
Sum	**731**	**474**	**480**	**507**	**515**	**523**
Total tonnes CO_2 per person	***5,9***	***4,0***	***4,4***	***4,1***	***3,7***	***3,8***