

EUROPEAN COURT OF AUDITORS



Environmental statement

2021

Full translation of the 2021 Environmental Statement

Update based on 2020 data

About this report

This environmental statement provides stakeholders and the public with information on the ECA's environmental performance and activities for 2020. Its aim is to raise awareness of our environmental management policies.

The ECA was officially registered in the eco-management and audit scheme (EMAS) under reference LU-000004 on 30 March 2017. The certificate issued by the Luxembourg authorities was renewed in early 2020.

This document has been drafted in accordance with the EMAS III Regulation¹, and is available on our *website*.

It was adopted by the EMAS steering committee on 5 October 2021, and verified by *Vincotte* during the external audit on 26 and 27 October 2021.



¹ Commission Regulation (EU) 2018/2026 of 19 December 2018 amending Annex IV to Regulation (EC) No 1221/2009 of the European Parliament and of the Council on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS), and Commission Regulation (EU) 2017/1505 of 28 August 2017 amending Annexes I, II and III to Regulation (EC) No 1221/2009 of the European Parliament and of the Council allowing voluntary participation by organisations in a Community eco-management and audit scheme (EMAS).

Foreword



Still committed to protecting the environment

The ECA is fully committed to protecting the environment, both in its audit activity and in its administrative management. The number of audits related to environmental issues and to the implementation of the UN's 17 Sustainable Development Goals continues to increase year on year.

In 2014, we launched an Eco-Management and Audit Scheme

(EMAS), and the reduction of our environmental impact is now tangible: our energy consumption has fallen, our carbon footprint has improved, and our paper consumption has significantly decreased.

Our environmental performance for 2020 has naturally been affected by the COVID-19 pandemic, which has significantly disrupted not only our professional but also our personal lives. It has also clearly demonstrated the importance of taking action to address climate change.

The climate emergency has led the European Commission, as part of the European Green Deal, to set the ambitious target of net-zero greenhouse gas emissions in Europe by 2050. EMAS is therefore a key initiative in enabling our institution to support the necessary changes, and, in so doing, to build a resilient, socially fair and environmentally-friendly organisation.

We hope that this statement will give you an overview of the work we have all done, both individually and collectively. I would like to thank you all very much for your active support, and I am convinced that we will continue to make progress together in the coming years, united in our commitment to protecting the environment.

Zacharias Kolias Secretary-General

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Analytical summary for 2020

Our main environmental indicators for 2020 are presented in Table 1. Here are the key lessons learned:

- the ECA continues to reduce its environmental impact, and the environmental impact of the pandemic is clearly visible in the 2020 results (see Figure 1);
- unsurprisingly, CO₂ emissions from work-related travel and commuting have fallen drastically on account of the pandemic;
- indicators directly linked to the presence of staff on site, such as paper and water consumption and waste production, have fallen sharply due to mass teleworking since 16 March 2020;
- energy consumption decreased to a lesser extent due to measures taken in the interests of staff health and safety. More than 80 % of the energy consumed in ECA buildings comes from renewable sources.

INDICATOR PER FTE ²			IN ONE YEAR	SINCE 2014
4	Electricity	3.94 MWh/FTE	-14.5 %	-27.7 %
	Heating	3.7 MWh/FTE	-2.4 %	-9.2 %
	Paper	2 288.7 pages/FTE	-69.4 %	-87.1 %
CO 2	Emissions	Total emissions (tCO₂e per FTE)	-35.8 %	-43.4 %
	Waste ³	97.75 kg/FTE	-53.4 %	-40.6 %
:]:	Water ⁴	12.5 m³/FTE	-8.8 %	-7.3 %

Table 1 – Summary of environmental results in 2020

² FTE: full-time equivalent.

- ³ The measurement boundaries are not equivalent between 2014 and 2020.
- ⁴ Water is billed annually. The basis for calculation only takes account of the May 2020 invoice, and so does not fully reflect the impact of the pandemic.



Figure 1 – Environmental impact of the pandemic in 2020

Having achieved all the objectives of the Action Plan for 2017-2019, we adopted a new Action Plan in 2020. This ambitious programme includes an additional general objective and eight new specific quantified targets, and takes account of emerging trends in our organisation, such as the increase in teleworking and the growing impact of the digital transformation of audit processes.

Due to the pandemic, most of the targets and objectives set in the new programme for 2020-2022 have already been met for 2020. However, a rebound is expected for 2021 and 2022, the extent of which will depend on the evolution of the pandemic and of the restrictive measures implemented not only for audit missions but also for work on the ECA's premises.

IV For the first time in 2020, the ECA purchased carbon credits to offset its residual carbon emissions. However, this approach was not satisfactory, and, in response to a recommendation from the administrative committee, the steering committee decided to suspend this type of carbon contribution.

Introduction

This environmental statement is the sixth such annual report published by the ECA. It was prepared in accordance with the requirements of Regulation (EC) No 1221/2009, Annex IV to which was amended by Commission Regulation (EU) 2018/2026 of 19 December 2018.

The first part of this statement presents the ECA and its buildings.

The ECA

01 The ECA is the European Union's external auditor, and has been based in Luxembourg since it was set up in 1977.

02 Through our independent, professional and influential audit work, we assess the economy, effectiveness, efficiency, legality and regularity of EU actions in order to improve accountability, transparency and financial management, thereby bolstering citizens' confidence and effectively addressing the current and future challenges facing the EU.

03 Our aim is to be at the forefront of public finance auditing, and contribute to a more resilient and sustainable European Union which is true to its founding values.

04 Our strategy for 2021-2025 explains how we intend to achieve this by pursuing three strategic goals:

- improving accountability, transparency and auditing arrangements across all types of EU action;
- o targeting our audits on the areas and topics where we can add most value;
- o providing strong audit assurance in a challenging and changing environment.

The ECA's buildings

05 The ECA employs around 950 staff (auditors, translators and administrative staff) from all EU Member States.

It currently owns and occupies three buildings (K1, K2 and K3), located in the heart of the European quarter of Kirchberg in Luxembourg. The total surface area of the premises is 18 473 m².

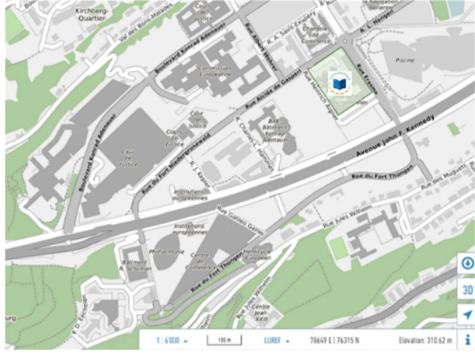


Figure 2 – Map of Kirchberg – 1:6000

Source: geoportal.lu



Figure 3 – Aerial view of the buildings in the European quarter

Table 2 – Detailed information on the ECA's buildings

Building	К1	К2	КЗ
Year of opening	1988	2003	2012
Underground	 three levels 225 parking spaces archives and workshops library 	 two levels 192 parking spaces sports centre 	 two levels 165 parking spaces workshop and printworks kitchen and archives
	 Ground floor: accreditation area and office space 	 Ground floor: office space, entrance hall and conference room with 22 interpreting booths 	 Ground floor: training centre, cafeteria and canteen
Floors	 Six floors of office space including Members' private offices and the Members' meeting room 	- Five floors of office space	 Five floors of office space
	 seventh floor: technical installations 	- sixth floor: technical installations	 sixth floor: technical installations, lounge and reception room

Source: European Court of Auditors

Figure 4 – Aerial view



Environmental management

This section presents the ECA's Environmental Management System.

06 The ECA's environmental management system (EMS) complies with EMAS III standards⁵, and meets the certification requirements of international standard ISO 14001: 2015. Developed by the European Commission, the EU Eco-Management and Audit Scheme (EMAS) is a management tool for organisations to evaluate, report on and improve their environmental performance.

07 The EMS aims to improve the ECA's environmental performance by minimising the impact of its activities on the environment, in particular through more efficient use of energy and natural resources, and better waste management. It helps to make buildings more functional, economical and comfortable for occupants. The EMS also raises the staff's awareness of their environmental impact and of best environmental practice both at work and at home.

How the EMS works

08 We regularly update our environmental analysis to determine the potential impact of our activities on the environment. This analysis covers the following:

- internal and external risks that could affect the EMS or the ECA's ability to achieve environmental objectives (context analysis);
- o stakeholder needs and expectations;
- opportunities related to the ECA's environmental aspects;
- o environmental aspects and impact;
- o legal requirements and other obligations relating to the environment.

09 We identify the most significant risks, and draw a distinction between direct and indirect environmental aspects. This analysis serves to define the environmental policy underlying the multi-objective environmental programme that is drawn up.

⁵ Commission Regulation (EU) 2018/2026 of 19 December 2018 amending Annex IV to Regulation (EC) No 1221/2009 of the European Parliament and of the Council on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS), and Commission Regulation (EU) 2017/1505 of 28 August 2017 amending Annexes I, II and III to Regulation (EC) No 1221/2009 of the European Parliament and of the Council allowing voluntary participation by organisations in a Community eco-management and audit scheme (EMAS).

10 To ensure these objectives are achieved within a reasonable time frame, we devise thematic action plans and adopt the necessary procedures, taking account of the significant aspects identified.

11 Internal EMAS auditors regularly check on the implementation of the environmental programme, and on the EMS's compliance with EMAS and other requirements. Regulatory compliance audits are carried out in all three ECA buildings, and lead to a compliance action plan being drawn up.

12 The conclusions of these audits are examined at regular management reviews chaired by the ECA's Secretary-General, as are the performance indicators set to assess the efficiency of the environmental programme.

13 The environmental statement, which is published on the ECA's *website*, sets out the objectives of the institution's environmental programme, and the results achieved.

Scope of the EMS

14 The EMS applies to the ECA's activities in the broadest sense, i.e. the activities of all staff and any other people (e.g. service providers) working on the premises, and covers the entire ECA site, made up of three separate buildings.

BUILDING	TOTAL GROSS SURFACE AREA (m²)*	OCCUPANTS ⁷
К1	23 720	323
К2	18 619	207
К3	28 245	507
No assignment ⁸		25
Total	70 584	1 062

Table 3 – Occupancy of buildings as at 31.12.2020

Governance of the environmental management system

15 The EMAS project undertaken at the ECA owes its success to close cooperation between the EMAS team, the EMAS Steering Committee and internal EMAS auditors, as well as to action taken by individual members of staff.

Their combined efforts ensure that the ECA's EMS operates smoothly, and produces tangible results.

- **16** Figure 5 shows the ECA's environmental governance structure.
- The **ECA's Members** adopt the institution's environmental policy, and are kept informed of the EMS's performance.
- The Administrative Committee is regularly informed of the EMS's progress, and makes suggestions about environmental actions, objectives and goals.

⁶ Total gross surface area calculated in accordance with DIN 277 *measured from the outer perimeter* of the construction elements that mark the boundaries of the building, including coverings, measured at floor level.

⁷ Occupant: any person working at the ECA (staff or external service provider)

⁸ Some new staff, service providers and trainees have not been allocated an office on account of the changes in travel and working conditions resulting from the pandemic.

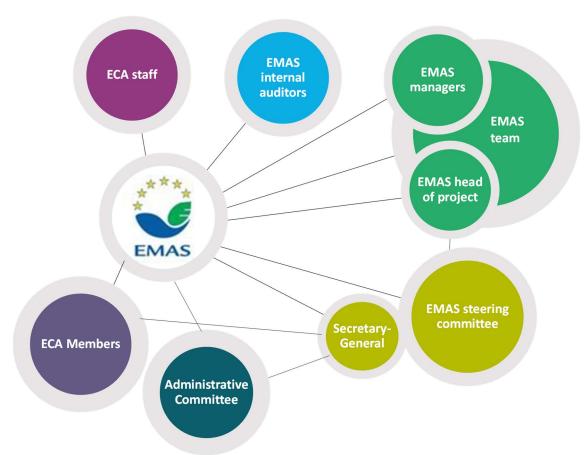


Figure 5: EMAS governance at the ECA

- The EMAS Steering Committee supervises EMS activities, promotes continuous improvement, and is accountable for the system's effectiveness. It sets environmental targets, reviews the environmental policy and action plan, and validates the environmental statement.
- The EMAS Steering Committee is chaired by the Secretary-General, and comprises the directors of the departments involved in environmental management, as well as a representative of the ECA's audit chambers.
- The head of the EMAS project is responsible for coordinating maintenance of the EMS, reporting to the EMAS Steering Committee on progress made in implementing the environmental programme and objectives, and organising awareness-raising campaigns and internal environmental audits.
- The staff responsible for EMAS support the operational monitoring of the EMS within their respective departments, and implement the measures entrusted to them.
- The manager and staff responsible for the EMAS project comprise the EMAS team, and circulate relevant information within the ECA.

- The internal EMAS auditors carry out internal environmental audits in accordance with the audit plan.
- All ECA staff are expected to adhere to the practices adopted under EMAS, and to continually strive to reduce the impact of their daily work on the environment.

Environmental policy

17 The ECA's environmental policy sets out the institution's commitment to continuously improving its environmental performance. This document has been shared with everybody working for the ECA (both its staff and external contractors). It is accessible to the public on the institution's *website*.



THE EUROPEAN COURT OF AUDITORS' ENVIRONMENTAL POLICY

In view of the EU's commitment to the environment, the European Court of Auditors (ECA) has a special responsibility to continually reduce the environmental impact of its activities.

For this reason, the ECA has introduced an environmental management system in line with the EU's EMAS Regulation, under which ECA is committed to:

- minimising the environmental impact of everyday work;
- continuously improving environmental performance;
- complying with all environmentally-relevant lealstation and obligations.

More specifically, the ECA is committed to:

- taking measures to prevent pollution and reduce carbon dioxide emissions;
- promoting the efficient use of energy and taking measures to reduce electricity and water consumption;
- ensuring more efficient use of paper in order to reduce consumption;
- Including environmental criteria in its public procurement procedures;
- introducing best practices with regard to waste management;
- encouraging all staff to act sustainably and contribute actively to achieving the targets of this policy.

The ECA undertakes to implement and pursue this environmental policy, to communicate it to staff, contractors and any other interested parties.

Environmental commitments must translate into specific measures backed by the requisites of human, material and financial resources. The environmental management system should be designed to be cost-effective.

This environmental policy and the environmental management system apply to the activities of the European Court of Auditors in the broad sense of the term, i.e. the activities of all staff and other employees (including subcontractors working on site, staff on missions and travelling to and from work). It covers the three buildings occupied at 12, rue Alcide De Gasperi, Luxembourg.

Luxembourg, 27 February 2018

Eduardo Renz García cretary-General



ehne President

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Analysis of environmental aspects and impact

18 Once a year, the ECA carries out an analysis of the environmental aspects and impact of its activities on the environment. This analysis not only describes environmental aspects, which are categorised as direct or indirect, but also indicates the values attributed to each of them, depending on their significance.

The direct aspects associated with the ECA's activities are those over which the ECA has direct management control. Indirect aspects are those that result from interaction with third parties and which the ECA can only influence.

19 These aspects are assessed using the following criteria to identify those which are significant:

- o frequency of occurrence;
- o seriousness;
- o management.

20 All the significant aspects of the ECA's activities for this year are detailed in Table 4, and take account not only of the measures already in place, but also of the impact of the pandemic. Some aspects are no longer significant in 2020, such as printing documents. Other aspects have been better managed because they are less frequent, i.e. the organisation of and participation in events, visitor travel, business travel, and commuting. Lastly, it should be noted that some new impacts have become more significant, such as the exceptional heating and ventilation measures implemented to safeguard staff health.

ENVIRONMENT	AL ASPECT	ENVIRONMENTAL IMPACT	ACTIVITIES
Air emissions	CO ₂	–Greenhouse effect –Air pollution	 Business travel Commuting by staff and Members Visitor travel Organisation of or participation in events
Energy consumption	-\ <u>_</u>	 Depletion of natural resources Greenhouse effect 	 Building occupancy IT equipment Organisation of or participation in events Heating, ventilation and cooling of premises due to the pandemic
Consumption of natural resources		 Depletion of natural resources Air pollution Ground pollution Noise pollution Reduced biodiversity Ozone layer depletion 	 Printing Business travel Staff commuting Visitor travel Leasing of ECA vehicles Organisation of or participation in events Use of toilet facilities
Water consumption and waste water discharge	: [:	 Depletion of natural resources Water and ground pollution Reduced biodiversity 	 Use of toilet facilities Cleaning, maintenance and renovation work
Waste generation, storage and treatment		 Air, water and soil pollution Depletion of natural resources 	 Cleaning, maintenance and renovation work Office activities

Table 4 – Significant environmental aspects

2020-2022 environmental programme

21 For the 2020-2022 period, the ECA has established a new, even more ambitious environmental programme to address the various themes highlighted by its environmental analysis, and to reduce the impact of the significant environmental aspects of its work. This programme is divided into two parts: an action plan currently comprising 47 actions divided into eight themes, and a communication and training plan based on three objectives.

Environmental management

This section presents the ECA's environmental results for 2017-2019.

The ECA evaluates its environmental performance using the environmental performance indicators in Annex IV to Regulation (EC) No 1221/2009, and the benchmarks of excellence set out in the sectoral reference document (SRD), i.e. Commission Decision (EU) 2019/61.

22 The ECA has already comfortably achieved most of its environmental objectives for 2020-2022, mainly due to the pandemic. A rebound is to be expected for 2021 and 2022, depending on the evolution of the pandemic, which was still ongoing when this document was being drafted.

Тнеме		GENERAL AND SPECIFIC OBJECTIVES FOR 2020-2022	Target Achieved in 2020?
Energy consumption	-\(-	 Objective 1 – Reducing energy consumption Reduce electricity consumption (MWh) per FTE by 3 % in three years Reduce standardised heating energy consumption (MWh) per FTE by 3 % in three years 	✓
Rational use of resources		 Objective 2 – Reducing consumption of resources Reduce the amount of paper consumed per FTE per year by 20 % in three years Reduce the number of pages printed per FTE per year by 30 % in three years The ratio between the number of items of IT equipment more than five years old and the total number of items of IT equipment must be at least 35 % each year 	S
Air emissions	CO2	 Objective 3 – Reducing CO2 emissions Reduce CO₂ emissions from auditor travel per FTE by 20 % in three years Reduce the number of business trips to Brussels in private cars by 20 % in three years The number of teleworking days and flexible working hours must be at least 15 % of the total number of working days each year Reduce CO₂ emissions from commuting per FTE by 20 % in three years Reduce CO₂ emissions from the ECA's car fleet by 3 % in three years Reduce CO₂ power supply emissions per FTE by 15 % in three years 	\bigotimes

Table 5 – General and specific objectives for 2020-2022

Тнеме		GENERAL AND SPECIFIC OBJECTIVES FOR 2020-2022	Target Achieved in 2020?
Waste		 Objective 4 – Reducing waste generation Reduce waste generation per FTE by 3 % in three years Reduce the generation of non-recycled waste by 5 % in three years Sorted waste must account for at least 75 % of annual waste generation Reduce organic waste generation per FTE by 20 % in three years 	\bigotimes
Green Procurement		 Objective 5 – Increase integration of environmental considerations in procurement procedures The percentage of procurement procedures (above €60 000) classed as "light green" must not exceed 60 % (by number and value) of all procurement procedures with an environmental impact The percentage of procurement procedures (above €60 000) classed as "medium green" must increase to at least 30 % (both in number and value) of all procurement procedures with an environmental impact 	<u>v</u> v
Water	: [:	Objective 6 – Keep water consumption at its reference level – Keep water consumption at its reference level per FTE and per year	\bigotimes
Biodiversity		Objective 7 – Enhancing biodiversity on the premises (new target)	\bigotimes
Compliance with regulatory provisions		Objective 8 – Compliance with regulatory requirements – Ensure that the annual level of non-compliance is zero	S

(Reference year: 2019, excluding data on the ongoing K2 renovation project)

Assumptions and data

23 These results are presented in the form of ratios, as required by Regulation (EU)
2018/2026. The indicators therefore relate to the number of staff, expressed in FTEs.
The number of FTEs is the number of staff in proportion to their working time. On
31 December 2020, the number of FTEs was 936.75.

24 The ECA uses external providers for a number of services (e.g. maintenance of buildings and installations, and IT development). In order to ensure the reliability and reproducibility of data from one year to the next, these providers have not been taken into account in the calculation of indicators since the EMS was set up.

25 We have compared all the 2020 results reported in this statement with those for 2019, which was the reference year for the third EMAS cycle (2020–2022) at the ECA. Data on the current renovation of the K2 building are excluded from these results in order to maintain an equivalent activity boundary.

26 The information needed to monitor the ECA's environmental performance is available from 2014 onwards. We have not compared all the 2019 results reported in this statement with the 2014 results because certain data were unavailable during the first EMAS cycle (2014–2016) and extra indicators were added for the third EMAS cycle.

27 Annex I contains further details on the methodological assumptions made for each theme, and Annex II provides more detailed data on environmental performance.



Figure 6 – The ECA's beekeepers in action

Energy



28 The energy required for the ECA's day-to-day activities comes from natural resources, some of which are non-renewable.

29 The ECA is connected to Luxembourg City's district heating network, which is supplied by a cogeneration plant that runs on 58 % biomass. The heat supplied by the district network is used to heat buildings and produce hot water.

30 Electricity is mainly used for powering IT infrastructure, cooling, ventilation, lighting, operating lifts, catering and printing. The electricity that is purchased comes from 100% renewable resources; for 2020, this was hydroelectric energy produced in Norway.

31 The ECA also uses small quantities of fuel oil to power its generators.

General and specific objectives

- Reduce electricity consumption per FTE by 3 % in three years (reference year: 2019)
- Reduce the consumption of standardised heating energy per FTE by 3 % in three years (reference year: 2019)

Results

Table 6 – Summary of results for energy

ENERGY CONSUMPTION		2020	CHANGE 2019-2020	CHANGE 2014-2020
	Total electricity consumption (MWh)	3 687.46	-13.3 %	-26.6 %
Gross energy	Total heating consumption (MWh)	2 965.02	-9.3 %	-21.2 %
consumption by activity	Adjusted total heating consumption ⁹ (Mwh)	3 469.01	-1.4 %	-20.5 %
	Fuel oil (MWh)	0.00	-100.0 %	-100.0 %
Total gross	Total energy consumption (MWh)	6 652.5	-12.1 %	-24.4 %
energy consumption	Adjusted total energy consumption (MWh)	7 156.5	-5.4 %	-18.6 %

⁹ Heating consumption is adjusted on the basis of *Facteur climatique* f_{klima} (climate factor $f_{climate}$) for the annual meteorological adjustment (see Annex I for details).

	ENERGY CONSUMPTION	2020	CHANGE 2019-2020	CHANGE 2014-2020
	Renewable energy consumption (MWh)	5 407.2	-28.5 %	-38.5 %
	% of renewable energy	81.28%		
Relative	Electricity (MWh per FTE)	3.94	-14.5 %	-27.7 %
energy	Heating (MWh/FTE)	3.17	-10.6 %	-22.4 %
consumption (per FTE)	Heating, adjusted value (MWh/FTE)	3.70	-2.4 %	-9.2 %
	Fuel oil (m³/FTE)	0.00	-100.0 %	-100.0 %

Results analysis

32 In October 2020, the EMAS Steering Committee decided to change the indicator for measuring heating energy consumption to an adjusted heating indicator. Adjusted heating energy consumption makes it possible to take account of the impact of changes in weather for the years concerned (see Annex I), and so increase the focus on heating consumption where it is possible to have an impact.

33 The decrease in total annual energy consumption is mainly due to two factors: the pandemic and particularly mild weather in 2020.

34 With regard to electricity consumption, three trends can be observed in terms of consumption in 2019:

- the level of electricity consumption inevitably decreased in the first months of the pandemic;
- for health reasons, it was necessary to run the ventilation system 24/7 from June onwards. This meant that electricity consumption over the summer months increased not only at night but also during the day;
- some consumption is independent of building occupancy, such as cooling for kitchen freezers or the IT room. For example, high temperatures in August 2020 had a visible impact on the consumption of electricity, which was used for cooling purposes.

35 With regard to standardised energy consumption for heating, the reductions in consumption when buildings were closed in the first quarter of 2020 were offset by the additional consumption required by more intensive use of ventilation systems, as explained above. For example, since the beginning of the pandemic, ventilation facilities have used only fresh air from outside, which has to be heated in winter and cooled in summer before being distributed within the buildings.

36 The ECA can be viewed as a model for the use of renewable energy: 81.28 % of its primary energy consumption in 2020 came from renewable sources.

37 The K2 building is the least energy–efficient, both per FTE and per m². The renovation work which began in late 2020 and will end in 2022 should improve the situation.

38 The fuel tanks for the ECA's generators were filled following a major power cut in 2019, and so no new fuel-oil orders were required in 2020. The generators are not equipped with fuel-oil consumption meters. The method used to measure consumption since 2014 is based on bills rather than consumption estimates, which explains why consumption was regarded as zero.

Actions taken

39 The following measures continued to be applied in 2020, and concerned either all ECA buildings, or individual buildings:

- monitoring the results of studies and checks on the energy performance of buildings with a view to continuous improvement;
- o frequent review and optimisation of lighting settings;
- o regular heating checks to avoid overconsumption;
- o gradual replacement of old laptops with more efficient models and tablets;
- replacement of the car park sectional door with two smaller and faster doors to keep the car park closed or partially closed for longer periods;
- raising staff awareness about overnight electricity consumption by computers while teleworking, asking them to switch off their laptops at home in the evening;
- analysis of the car park lighting system to identify potential savings, such as modified programming or installing LED lighting. A pilot project was introduced at the beginning of 2021 with the aim of using less lighting in the K3 car park.

Measure suspended as a result of the pandemic

• The awareness-raising campaigns using "ECO" Post-it notes to remind staff to switch off lights were suspended because of teleworking. The campaigns may or may not resume, depending on how the pandemic evolves.

Future action

40 The target of reducing both electricity and heating consumption per FTE by 3 % in three years has been set for the 2020-2022 period (reference year: 2019).

41 Further measures to achieve this dual objective are envisaged for the future:

- replacing the K2 installations in the last quarter of 2021 is expected to reduce energy consumption in the building;
- ventilation system operating hours will be reduced as soon as possible in collaboration with the Medical Service and the designated ECA technician;
- following the entry into service of the air-conditioning meters in K3, potential energy-saving options will be analysed;
- an energy audit of K2 and K3 will be carried out in 2022 in order to find potential new solutions for reducing energy consumption.

Material efficiency

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42 In the past, material efficiency management centred on paper use and consumption. Paper is mainly used for two purposes:

- photocopiers and printers for office work (mostly A4, 100% recycled or FSC[®] sourced, 80g/m2). The data are obtained from printer usage records;
- in the production of communication materials to promote ECA activities and products (several types of paper used only by the ECA Printshop or the Publications Office). The data are based on the quantities of printouts ordered.

43 The new environmental programme includes an additional IT equipment lifetime indicator, the aim being to increase the lifespan and use of such equipment at the ECA, and to raise awareness of the problem of using rare earths.

General and specific objectives

- Reduce the **amount of paper** consumed per FTE per year by 20 % in three years (reference year: 2019)
- Reduce the **number of pages** printed per FTE per year by 30 % in three years (reference year: 2019)
- Each year, the ratio between the **number of items of IT equipment** more than five years old and the total number of items of IT equipment must be at least 35 %.

Results

Table 7 – Summary of results for paper

ΡΑΙ	PER CONSUMPTION	2020	CHANGE 2019-2020	CHANGE 2014-2020
	Pages printed/photocopied (office work)	2 011 891	-67.5 %	-81.2 %
Gross annual	Publications	132 020	-81.5 %	-97.7 %
consumption	Total pages (office work + publications)	2 143 911	-68.9 %	-86.9 %
	Quantity of paper (kg)	9 216.4	-52.7 %	No data

PAF	PER CONSUMPTION	2020	Change 2019-2020	CHANGE 2014-2020
Relative annual consumption	Pages printed/photocopied (office work per FTE)	2 147.7	-67.9 %	-81.4 %
	Total pages (office work + publications per FTE)	2 288.7	-69.4 %	-87.1 %
	Total pages (office work + publications per FTE per day)	9.38	-69.5 %	-87.1 %
	Quantity of paper (kg/FTE)	9.8	-52.7 %	No data

- **44** The new IT equipment lifetime indicator has been calculated as follows:
- o number of devices: 9 058;
- o number of devices catalogued for more than 5 years: 3 592;
- share of IT equipment more than 5 years old: 39.7 % in 2020.

Results analysis

45 Since 2020, the three-year targets for paper have been met and even significantly exceeded. This is mainly due to extensive teleworking since March 2020. With an average of 9.38 pages per working day and per FTE, the amount consumed fell more than threefold in one year, and the 15-pages-per-day-per-FTE benchmark of excellence set in the SRD for the public administration sector was also exceeded.

46 Due, in particular, to server and laptop maintenance, the 35 % target for IT equipment more than 5 years old has been exceeded.

Actions taken

47 In 2020, we continued the measures already in place to reduce paper consumption, and started to introduce new forms of work which will continue in 2021:

- o extensive use of teleworking since 16 March 2020, on account of the pandemic;
- installation of multi-functional devices for printing, scanning and copying using *FollowMe* print technology with double-sided printing configuration;
- implementation of a new IT document management system (PASS: Process to Approve, Sign and Send internal documents);
- o introduction of fully electronic invoices and order form signatures;
- significant development of online (e-learning) courses;
- o use of paper that is 100 % recycled or from sustainable sources;

- o increasing the number of online resources offered by the library;
- raising staff awareness during European Waste Week about the quantities of materials needed to produce a smartphone or laptop, and sharing best practices for switching off computers and thus extending their lifespan.

Measures suspended as a result of the pandemic

• Staff awareness campaigns to reduce paper consumption were suspended on account of teleworking. The campaigns will resume after the pandemic to prevent paper consumption from increasing again, and to ensure that this change in our organisational culture becomes permanent.

Future action

48 The following measures are under consideration, or will be introduced in the future:

- in early 2020, a digital steering committee which included ECA Members was created at the ECA to assess the scope for digitalising audit activities and thus contribute to a decrease in paper use. The team responsible for the project is being set up, and the first effects are likely to be visible in the course of 2021;
- workshops with those involved in purchasing IT equipment, and boosting environmental criteria in calls for tender, should lead to an increase in the lifespan of the IT equipment in question;
- raising staff awareness of rare-earths consumption.

Greenhouse gas emissions



49 Since 2014, the ECA has carried out an annual assessment of its greenhouse gas (GHG) emissions to monitor efforts to reduce its carbon footprint.

50 Every year, we post detailed reports on our carbon footprint on our environmental management *webpage*.

For 2020, our carbon footprint was calculated using two methods:

- the *Bilan Carbone*[®] method, to ensure continuity when comparing results with those of previous years;
- the GHG Protocol method, in order to take account of the fully certified green energy purchased by the ECA, and to initiate a "science-based targets" approach. The aim here is to explore a long-term emissions reduction plan, compatible with both the Paris Agreements and the European Green Deal.

The Steering Committee will decide in early 2022 which method will be used.

51 The scope for calculating emissions resulting from the ECA's activities has been extended to include two new categories, the aim being to propose future areas for improvement:

- overnight hotel stays;
- catered meals.

52 In addition, in order to measure the potential negative impact of the project to digitise audit tasks, a more detailed overview of the IT contribution to emissions has been drawn up. In the past, this overview was based solely on financial data.

53 Lastly, emissions from teleworking were also included for the first time in the 2020 calculation, using a simplified methodology. This took account of the electricity consumed by IT equipment, and of the heating consumed by virtue of staff working from home.

General and specific objectives

- Reduce CO₂ emissions resulting from auditor travel per FTE by 20 % in three years (baseline: 2019);
- Reduce the number of missions to Brussels using private cars by 20 % in three years (baseline: 2019);

- the number of teleworking days and flexible working hours must be at least 15 % of the total number of working days for each year;
- reduce CO₂ emissions from commuting per FTE by 20 % in three years (baseline: 2019);
- reduce CO₂ emissions from the ECA's car fleet by 3% in three years (baseline: 2019);
- reduce CO₂ emissions from catering per FTE by 15 % in three years (baseline: 2019).

Results

54 The share of teleworked days due to the pandemic was 77 %, i.e. well above the 15 % target.

55 The results of the *Bilan Carbone*[®] emissions assessment are presented in Table 8.

Table 8 – Summary of *Bilan Carbone*[®] emissions results

EMISSIONS - <i>Bilan Carbone</i> ® method		2020	CHANGE 2019-2020	CHANGE 2014-2020
Gross annual emissions	Total emissions (tCO ₂ e)	6 145	-34.9 %	-42.6 %
	Total emissions from auditor travel (tCO ₂ e per FTE)	97	-90.7 %	-94.4 %
	Total emissions from commuting (tCO ₂ e per FTE)	179	-84.9 %	-89.1 %
	Total emissions from food (tCO ₂ e per FTE)	48	-83.0 %	-77.4 %
	Total emissions from the ECA car fleet (tCO $_2$ e)	63	-48.5 %	-67.3 %
	Total emissions (tCO ₂ e per FTE)	6.56	-35.8 %	-43.4 %
Relative	Total emissions from auditor travel (tCO₂e per FTE)	0.10	-90.9 %	-93.5 %
annual emissions	Total emissions from commuting (tCO₂e per FTE)	0.19	-85.2 %	-89.2 %
	Total emissions from food (tCO ₂ e per FTE)	0.05	-83.2 %	-77.7 %

EMISS	SIONS - <i>Bilan Carbone</i> ® method	2020	CHANGE 2019-2020	CHANGE 2014-2020
	Total emissions from the ECA's car fleet (tCO_2e per car)	1.91	-48.5 %	-68.3 %

56 The results of the emissions assessment based on the GHG Protocol method are presented in Table 9.

Table 9 – Summary of GHG Protocol emissions results

EMISSIONS - <i>Bilan Carbone</i> [®] method		2020	CHANGE 2019-2020
Gross annual emissions	Total emissions (tCO ₂ e)	3 939	-58.2 %
	Total emissions from auditor travel (tCO ₂ e per FTE)	97	-90.7 %
	Total emissions from commuting (tCO ₂ e per FTE)	179	-84.9 %
	Total emissions from food (tCO_2e per FTE)	47	-83.3 %
	Total emissions from the ECA car fleet (tCO $_2$ e)	63	-48.4 %
	Total emissions (tCO ₂ e per FTE)	4.20	-58.8 %
	Total emissions from auditor travel (tCO ₂ e per FTE)	0.10	-90.9 %
Relative annual emissions	Total emissions from commuting (tCO ₂ e per FTE)	0.19	-48.4 %
	Total emissions from food (tCO₂e per FTE)	0.05	-83.6 %
	Total emissions from the ECA's car fleet (tCO2e per car)	1.9	-48.4 %

	BUSINESS TRAVEL	2020	CHANGE 2019-2020	CHANGE 2014-2020
Gross annual total	Total distance covered for business travel (in km)	586 807	-67.5 %	-91.2 %
	air travel (km)	380 841	-89.2 %	-86.4 %
	travel by private car (km)	49 570	-67.5 %	-80.9 %
Relative annual total	Total distance covered for business travel (in km per FTE)	626.4	-86.6%	-90.3 %
Missions to Brussels	Number of missions to Brussels by private car	63	-85.9%	-

Table 10 – Overview of distances travelled by activity

Results analysis

57 All the targets to be achieved over a three-year period (2020-2022) were comfortably achieved in the first year.

58 The outcome of the *Bilan Carbone*[®] for 2020 was heavily affected by the impact of the pandemic. Unlike in previous years, individual travel does not account for the largest share of emissions. For the *Bilan Carbone*[®] method, the main sources of emissions are goods and services purchased, followed by capitalised goods and, lastly, energy consumed. According to the GHG Protocol method, purchased goods and services naturally account for more than two-thirds of emissions, as this method takes account of the rate of renewable energy used rather than capitalised assets, such as the depreciation of buildings over time in CO₂ equivalent.

59 All emissions related to passenger transport fell sharply when compared to 2019 or 2014, i.e. by between 80 % and 90 %. Emissions from the use of the ECA's vehicles have also decreased, albeit to a lesser extent.

Actions taken

60 In 2020, the ECA took the following measures to reduce emissions:

- o extensive teleworking practised on account of the pandemic;
- o rolling out the MS Teams tool, and authorising the use of Zoom and Webex;
- expanding the fleet of low-CO₂ official cars (hybrid vehicles) following the installation of fast charging terminals;

 a new interinstitutional agreement signed with vel'OH!, which entered into force on 1 January 2021. Staff are entitled to free subscription and journeys of up to 30 minutes.

61 In order to achieve its emissions reduction objectives, the ECA has also implemented various measures in previous years, such as:

- o adopting a missions policy to encourage staff to select direct flights;
- promoting sustainable modes of transport, e.g. carpooling via dedicated sites, or periodic events such as European Mobility Week).

Future action

62 The following measures are either under consideration or will be introduced in the future:

- a Digital Steering Committee that includes ECA Members was set up at the beginning of 2020 to assess the scope for increasing the digitisation of audit activities. This should automatically lead to fewer audit visits as a result of increasing the use of digital communication tools;
- o the promotion of carpooling and shuttles to cut down on the use of private cars;
- additional bicycle spaces and suitable changing rooms for cyclists will be provided in K3;
- encouraging a change in eating habits, e.g. by gradually introducing one vegetarian meal per week in the canteen;
- a new teleworking policy, broader than that of June 2019, should come into effect once the pandemic is over;
- The "Science-Based Targets" approach will highlight new actions or opportunities for reducing emissions, and will serve as a basis for the 2023-2025 action plan.

Carbon contribution

63 Carbon offsetting is a financial mechanism that supports environmental projects to promote the reduction (e.g. a wind project) or sequestration (e.g. a reforestation project) of greenhouse gases in the atmosphere. This action is undertaken after seeking to minimise CO₂ emissions resulting from the ECA's activity. The term "contribution" is preferable to "offsetting" because greenhouse gas emissions cannot be offset. This is an additional commitment made by the ECA in the interests of continuous improvement, but it does not nullify our environmental impact.

64 The ECA purchased carbon credits for the first time in 2020 by taking part in an interinstitutional procurement process led by the European Parliament. The total amount of credits purchased was 11 000 tCO₂e. Emissions from the ECA's activities for 2019 amounted to 7 746 tCO₂e.

65 However, the location and type of project proposed, as well as the operating method, were not convincing in terms of the transparency and traceability of credits, even though they were awarded a gold label. Based on the Administrative Committee's opinion, the Steering Committee therefore decided not to participate in a contribution system for 2021, and to use the remaining 3 254 tCO₂e as the 2020 contribution.

Waste



66 The waste the ECA generates results from catering, office work, and the upkeep and maintenance of its premises and technical facilities.

67 The waste is sorted by the various users (e.g. staff, the logistics team and the service desk), and is collected for centralisation at the delivery bay. Catering and maintenance providers sort and collect the waste resulting from their activities. The waste is then transported to the sites responsible for recycling and/or processing (disposal or recovery).

68 The ECA's waste is sorted into different fractions. The "SuperDrecksKeëscht[®]" quality label awarded to the ECA's waste management system was renewed in September 2020. The system is organised as follows:

- there are no individual bins in offices, only sorting bins in corridors;
- the system for monitoring missions determines the number of meals to be provided;
- a donation programme promotes the reuse and recycling of decommissioned IT equipment that is still in working order;
- o the catering company has detailed statistics on leftovers.

69 In 2020, new waste had to be dealt with as a result of the pandemic (e.g. masks, gloves, and protective clothing). Additional bins have been made available specifically for these items, and collection instructions for staff and service providers have been modified accordingly.

General and specific objectives

- Reduce waste generation per FTE by 3 % in three years (baseline: 2019);
- reduce the generation of non-recycled waste by 5 % in three years (baseline year: 2019);
- o the share of sorted waste must be at least 75 % of annual waste generated;
- o reduce organic waste generation per FTE by 20 % in three years (baseline: 2019).

Results

WASTE		2020	CHANGE 2019-2020	CHANGE 2014-2020
Gross annual amount	Total waste generated (kg), of which:	91 569	-52.7 %	-39.7 %
	food waste (kg)	5 854	-75.2 %	-75.2 %
	hazardous waste (kg)	25 863	-58.5 %	+43.3 %
	non-recycled waste (kg)	37 663	-67.3 %	N/A
	Rate of non-recycled waste	41 %	-30.9 %	N/A
	Proportion of sorted waste	82 %	N/A	N/A
Relative annual amount	Total waste generated (kg)/FTE	97.75	-53.4 %	-40.6 %
	Total food waste generated (kg) per FTE	6.25	-75.5 %	-67.9 %
	Total hazardous waste generated (kg) per FTE	27.61	-60.1 %	+41.2 %
	Total non-recycled waste generated (kg)/FTE	40.21	-67.8 %	N/A

Table 11 – Summary of results for waste

Results analysis

70 Waste generation is strongly correlated with staff being present on site. The yearon-year decrease is therefore very significant, and the targets for the whole period were already achieved in 2020. A rebound is expected in the coming years, depending on how the pandemic evolves.

71 The 2014 results do not include sludge from the oil/water separators due to a lack of data, although these data were systematically collected in subsequent years. Moreover, the measurement boundary is not entirely comparable, as the 2014 Waste Register did not include service providers' waste. The 2014 results are therefore not comparable with the results of subsequent years.

Actions taken

In 2020, a detailed analysis of waste processes led to a specific action plan being drawn up, but implementation was delayed by the pandemic.

In 2020, the ECA took the following measures to improve its waste management system:

- o increase in teleworking;
- collaboration with IMS Luxembourg on the "zero single-use plastic" project. This initiative was unfortunately delayed by the pandemic;
- improve data quality by increased waste-weighing and including suppliers' waste in ECA statistics;
- o improved recycling of cartridges and toners;
- o improved final-destination data;
- o regular checks on the quality of waste sorting in ECA buildings;
- more staff awareness campaigns, in particular following the introduction of new bins for personal protective equipment when buildings were reopened.

Future action

72 These targets could be achieved by the following measures:

- promoting the consumption of water from water fountains or kitchenettes, rather than from plastic bottles;
- o promoting the use of greener office supplies;
- o continuing the ECA's teleworking policy;
- continuing to raise awareness of the problem of food waste and single-use plastic packaging.

Green Procurement



73 The type, quantity and nature of goods and services which the ECA purchases affect its environmental footprint. We therefore pay particular attention to environmental clauses in our public procurement procedures.

74 Public procurement is sustainable when a public authority seeks to purchase goods and services with the lowest possible negative environmental and social impact over their whole lifespan.

General and specific objectives

- The percentage of procurement procedures (above €60 000) classed as "light green" must not exceed 60 % (by number and value) of all procurement procedures with an environmental impact;
- the percentage of procurement procedures (above €60 000) classed as "medium green" must increase to at least 30 % (by number and value) of all procurement procedures with an environmental impact¹⁰.

Results

Table 12 – Results for 2020

N	NUMBER OF PUBLIC PROCUREMENT PROCEDURES			
	top green	0		
	medium green	1		
Number	light green	1		
	not green	1		
	Percentage of not green or light green contracts	67 %		
	Percentage of medium green and top green contracts	33 %		

¹⁰ For more details on methodological assumptions, see Annex 1.

N	NUMBER OF PUBLIC PROCUREMENT PROCEDURES			
	top green	0		
	medium green	€ 473 990.00		
Value	light green	€ 560 000.00		
	not green	€ 143 230.20		
	Percentage of not green or light green contracts	59.74 %		
	Percentage of medium green and top green contracts	40.26 %		

Results analysis

75 The new target set for 2020 has been met both by number and by value for the *medium green* and *top green* contracts. However, for *light green* or *non-green* contracts, the objective has been achieved by value, but not by number. In 2020, the number of contracts was limited, and some existing contracts had to be extended due to the pandemic, given the lack of visibility for the future.

76 In addition, new contracts such as for the purchase of disposable masks and hand sanitiser had to be considered. The ECA followed the standards recommended by the Luxembourg government and by its own Medical Service, the aim being to prioritise staff safety over greener solutions for such contracts.

Actions taken

77 To ensure that specific targets are met, the ECA promotes green public procurement by:

- regularly monitoring procurement procedures to ensure that they include environmental criteria;
- organising campaigns to raise staff awareness of green public procurement, e.g. articles on the intranet and relevant seminars;
- providing training in green public procurement for all departments involved in procurement procedures;
- o increasing the weightings for environmental requirements in award criteria;
- assessing procurement procedures by the Green Public Procurement Helpdesk, and supporting the incorporation of green criteria at every stage of the procedure.

Future action

If possible, the ECA will continue to apply these measures in future, in such a way as to reflect the evolution of the pandemic and the priority given to staff safety.

Water



78 Catering, the use of lavatories, cooling, and office cleaning account for most of the ECA's water consumption from the municipal network.

79 In line with its environmental policy, the ECA is committed to promoting the efficient use of water and preventing pollution.

General and specific objectives

Maintain water consumption per FTE per year at its baseline level (reference year: 2019).

Results

Table 13 – Summary of results for water consumption

WA	JUNE 2020	CHANGE JUNE 2019 - JUNE 2020	CHANGE JUNE 2014 - JUNE 2020	
Gross annual consumption Total consumption (m ³)		11 707.0	-6.7 %	-5.9 %
Relative annual	Total consumption (m ³ /FTE)	12.5	-8.1 %	-7.3 %
consumption	Total consumption (m ³ /FTE/day)	0.05	-8.4 %	-7.3 %

Results analysis

80 These results do not take full account of the impact of the pandemic, which will only be visible in the next report, since water billing is annual and the latest bill was issued only in June 2020. The volume of water consumed, 12.5m³/FTE/year, remains above the baseline figure of 6.4m³/FTE/year as recommended in the SRD.

81 Rainwater consumption fell by almost 80 % compared to 2019. The newly installed rainwater collection tank mainly supplies the K3 terrace water feature, which has been temporarily closed due to the pandemic.

Actions taken

82 To achieve this objective, we implemented the following measures:

- o water pressure for individual taps was reduced in all ECA buildings;
- water-efficient solutions were installed, e.g. such as leak detection systems and automatic sensor taps as part of the K2 renovation work.

Future action

- **83** The following measures are envisaged:
- assessing whether a second rainwater storage tank should be installed in K2 for watering the gardens;
- raising staff awareness of the need for more rational water use ("green office" best practices).

Other environmental and systematic aspects

Green Canteen

84 The ECA has one canteen, two cafeterias and one reception room.Catering is managed by an external contractor whose contract imposes high environmental standards. In 2020, catering activities were

reduced, and the number of meals consumed at the ECA fell by around 80 %. However, it was possible to keep in place most of the measures that had previously been introduced.

85 Some measures were taken to safeguard staff health despite having a negative environmental impact: the quantity of single-use packaging increased in both the canteen and the cafeteria, for example.

Future action

86 The following future actions are planned:

- the "ECA plastic-free" project to reduce the volume of single-use plastics will continue;
- changes in eating habits will be gradually encouraged with a view to offering one vegetarian meal per week;
- the quality of data on waste and the number of vegetarian meals served will be improved.

Biodiversity



87 Although the impact on biodiversity was not considered significant,

protecting biodiversity is one of the targets for 2020-2022, even if it has not been quantified.

Figure 7 – Renovated green area in front of K1



Table 14 – Areas occupied by buildings and green areas

BIODIVERSITY	2020	CHANGE 2019-2020
Total area occupied (m ²)	18 473	-1.1 %
Total non-permeable area (m ²)	16 442	
Green areas (m2)	2 031	-9.5 %
Green areas/total surface area occupied (%)	10.99%	

Analysis

88 The slight reduction in the area of land the ECA occupies is explained by the fact that plots of land located outside the ECA site were handed back to the Luxembourg authorities in July 2020, the aim being to reflect current urban planning practices.

Actions taken

89 The following actions have been taken to preserve biodiversity:

- the ECA added clauses on the following aspects to outsourcing contracts: products and methods used to maintain green areas, labelling requirements for catering and cleaning services, and green procurement by suppliers;
- the ECA finished renovating the green areas in front of K1 at the beginning of 2020, and now practises late mowing there;
- despite the pandemic, the beekeeping club continued to operate, and harvested its first honey in 2020.

Future action

- Work on a communal vegetable plot was due to start in 2020, but this was postponed due to the pandemic. A plot management group has been set up, and planting beds will be prepared by the end of 2021.
- In order to raise staff awareness of the state of forests in Luxembourg and of the importance of protecting biodiversity, an active training initiative to take place in the last quarter of 2021 will involve planting trees with Luxembourg's *natur&ëmwelt* foundation.

Communication and awareness-raising



90 The ECA uses every possible means of communication to raise staff awareness of environmental issues. These means include training, conferences, knowledge-sharing sessions such as *"Savoir +"* presentations, online training, videos, social media, intranet news

items, events organised by or with other institutions, and regular updates to the intranet page for the environment.

91 A compulsory online course, which was last updated in 2020, is available to all new staff. Staff are also regularly offered training on the use of environmental protection equipment (e.g. spill kits for the car park), the EMAS internal audit, and the EMAS system.

92 The ECA takes part in a number of annual events:

- "Earth Hour", the largest public mobilisation event for the planet organised by the World Wildlife Fund (WWF);
- "European Mobility Week", the aim of which is to influence, over time, the resolution of mobility and urban transport problems;
- "European Week for Waste Reduction", the aim of which is to promote waste sorting and recycling;
- o conferences organised by the interinstitutional Green Procurement Helpdesk.

Main awareness-raising activities in 2020

93 Awareness-raising activities for 2020 were very different from those in previous years. A number of regular communication and awareness-raising measures were rendered obsolete by building closures and long-term teleworking, so no on-site events could be organised. However, online events proved very successful, and were regularly attended by more than 100 people.

94 Nine environment-focused events were held in 2020:

- o a "Savoir +" presentation introducing the new partnership with IMS Luxembourg;
- three lectures were organised in collaboration with the other EU institutions in Luxembourg as part of Mobility Week. The ECA's lecture concerned urban mobility.

Figure 8 – Rob Hopkins tried to answer the question "How to live together in a one-planet world?" at a virtual lecture



Source: ECA

- During the European Week on Waste Reduction, a campaign to raise awareness of "invisible" waste and a lecture about plastic waste were organised. The lecture was attended by 182 people from various EU institutions.
- 111 people attended a discussion led by Rob Hopkins about the transition movement and opportunities for group action at local level.
- In December 2020, Professor Johan Rockstrom of the Potsdam Climate Institute gave a lecture specifically intended for the ECA's Members: "Planetary stewardship in the Anthropocene: towards a climate-resilient Europe". The lecture outlined the current state of the planet from an environmental and climate-change perspective. At the Members' recommendation, it was subsequently offered to all staff in 2021.

95 The "ECA plastic free" project to cut down on single-use plastics at the ECA was launched in 2019. The first communication and awareness-raising activities took place in 2020, despite being delayed by the pandemic.

Legal compliance



96 To ensure compliance with environmental legislation (including conditions for awarding operating permits), and in keeping with its environmental commitments, the ECA has established a comprehensive register of applicable regulations, and performs regular compliance audits.

97 The ECA holds operating permits for its three buildings, issued by Luxembourg's Environment Agency. The permit reference details are given in Annex I.

Actions taken

98 We will continue to implement the following measures, which are already in place:

- in the event of an incident that could affect the environment or endanger human health and safety, the ECA must immediately inform Luxembourg's Environment Agency;
- the ECA keeps a register of applicable regulations for monitoring purposes and updates it regularly, and also subscribes to an interinstitutional regulatory monitoring system;
- any new rules or changes to environmental regulations applicable to the ECA are sent to the department concerned at least every month;
- the environmental regulatory compliance database is accessible to the various departments concerned;
- as required by the EMAS III standards¹¹, the ECA monitors certain other compliance obligations arising from contracts, agreements and requests through regular compliance audits;
- the ECA declares that it fully complies with the requirements of the applicable environmental legislation and its operating permits.

¹¹ Commission Regulation (EU) 2017/1505 of 28 August 2017 amending Annexes I, II and III to Regulation (EC) No 1221/2009 of the European Parliament and of the Council on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS).

Conclusions and future guidelines

99 The ECA achieved and even comfortably exceeded almost all its targets for 2020-2022 in a single year. The decrease in the ECA's impact on the environment since 2014 has been tangible, and there has been a genuine change in our organisational culture, as evidenced by the dramatic fall in paper consumption. However, care must still be taken to ensure that these good results continue beyond the pandemic.

100 For the first time, purchases of goods and services account for the largest share of the annual *Bilan Carbone*[®] exercise. This poses a new challenge for the ECA in its quest to continuously improve its environmental impact by consolidating its green procurement policy.

101 Lastly, we will need to learn from the pandemic by considering how best to organise our office space in the future, in a world where teleworking seems to have won over a large number of staff. We will also need to introduce an action plan to set a trajectory for emissions reductions that is compatible with the Paris Agreement and the European Green Deal.

Annexes

Annex I – Variables used to calculate environmental performance indicators

Number of people

All headcount data given in this statement are reported as the average number of fulltime equivalents (FTEs) for the year. This variable only includes ECA staff, and thus excludes contractors. It is used to calculate the relative annual consumption of water, electricity, heating and paper, along with the relative annual waste and greenhouse gas emissions generated.

Table 15 – Change in number of FTEs

Year	FTEs
2014	922.9
2019	923.2
2020	936.75

Number of working days

Figures on working days at the EU institutions in Luxembourg are published per year for weekdays only, i.e. excluding weekends and bank holidays. This variable is used to calculate relative annual water consumption.

Table 16 – Change in number of working days

Year	Working days
2014	244
2019	243
2020	244

Energy

- The electricity and heating consumption data used in this report come from invoices issued by energy suppliers.
- We cross-checked these data against consumption data recorded by the metering system installed in the ECA buildings.

- We calculated the percentage of renewable energy based on the energy distribution reported by *LuxEnergie*, the heating supplier, also taking account of fuel oil.
- We only use fuel oil to operate our back-up generators. The quantities used are negligible compared to other energy types.
- o Degree days

The concept of unified summer/winter degree days makes it possible to take into account the temperature of every day of the year in question, and thus put the energy consumed in heating or cooling into perspective in relation to climatic conditions and meteorological variations. This concept is very useful for highlighting the effect of the measures taken, even when the weather in a given year is unfavourable in terms of consumption.

If, for example, thermal insulation measures have been put in place, but a particularly severe winter leads to an increase in consumption, the use of degree days negates the weather effect and allows the effect of changing the insulation to be shown. The same principle applies to cooling during heat waves.

The calculation is based on the following formula:

standardised consumption (MWh) = fKlima × actual consumption

The climate factor (f_{Klima}) is set by ministerial decree and represents the ratio between normal degree days and unified degree days for a given year.

Table 17 – Climate factor change

Year	f _{Klima}
2014	1.16
2019	1.07
2020	1.17

Paper

• Reported paper consumption data come from supplier statistics on the number of pages printed or photocopied (including publications). We compare these data against our internal inventory of paper stocks, although we consider the former more reliable.

Greenhouse gas emissions

- The carbon balance for 2020 was calculated by *Argest* and *Eco'Act* using version V.8.1 of the *Bilan Carbone*[®] and the GHG Protocol method.
- These methods take into account the following gases:
 - the Kyoto Protocol gases: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), sulphur hexafluoride (SF₆), hydrofluorocarbons (C_nH_mF_p, C_nF_{2n+2}) and nitrogen fluoride (NF₃);
 - other non-Kyoto Protocol gases;
 - water vapour emitted by planes at very high altitude.

Waste

- The following waste fractions are sorted at the Court:
 - glass;
 - plastic, metal, wooden and composite (PMC) packaging;
 - printer toner (refilled and recycled by suppliers), packaging contaminated with hazardous products;
 - organic waste;
 - paper/cardboard;
 - bulky items;
 - mixed municipal waste;
 - ceramics;
 - electrical and electronic waste, batteries, neon lighting tubes;
 - edible fats and oils, and oil/water separator sludge.
- Waste generation data are mostly taken from official statistics provided by Luxembourg City and the *SuperDrecksKëscht*, which disclose details of waste type, disposal method and the relevant European waste code.
- Reported quantities of glass, mixed recyclable packaging and organic waste are based on ECA records and estimates provided by Luxembourg City.
- Additionally, we weigh all food waste, comprising unsold food, leftovers from canteen users' plates, waste from receptions, and waste from all sold items. However, the total amount of organic waste collected by the city is estimated, not weighed.

Green Procurement

• The results in this report are based on the ECA Procurement Service's evaluation of whether environmental considerations were taken into account in planning and conducting a tendering procedure, both in the contract itself and when monitoring contract execution.

- Methodology used for contracts where the award criterion is both quality and price:
 - Light green contracts: the weighting for environmental criteria as a proportion of the total (price and quality) is less than 10 %.
 - Medium green contracts: the weighting for environmental criteria as a proportion of the total is 10 % or more.
 - Top green: the weighting of environmental criteria as a proportion of the total is 25 % or more.

Water

- Reported water consumption data come from invoices issued by the water supplier.
- We cross-checked these data against consumption data recorded by the metering system installed in ECA buildings.
- Relative annual water consumption is based on working days.

Legal compliance

Table 18 - List of operating permits

BUILDING	REGISTRATION NUMBER	DATE OF ISSUE
К1	Order 1/16/0160	8 June 2017
К2	Order 1/20/0043	24 February 2021
КЗ	Order 3/19/0224	28 November 2019

Annex II – Detailed results of calculations of environmental performance indicators

Energy

Table 19 – Multi-year comparison

ENERGY	2017	2018	2019	2020	
Gross energy	Total electricity consumption (MWh)	4 353.4	4 357.3	4 252.9	3 687.46
consumption by activity	Total heating consumption (MWh)	3 446.5	3 408.2	3 270.2	2 965.02
	Fuel oil (MWh)	6.4	16.0	41.5	0.0
	Total energy consumption (MWh)	7 806.3	7 781.5	7 564.6	6 652.5
Total gross energy consumption	Renewable energy consumption (MWh)	7 799.9	7 765.5	6 074.4	5 407.2
	% of renewable energy	99.92 %	99.79 %	80.30 %	81.28 %
	Electricity (MWh per FTE)	4.71	4.70	4.61	3.94
Relative energy consumption (per	Heating (MWh/FTE)	3.73	3.68	3.54	3.17
FTE)	Heating, corrected value (MWh/FTE)	3.73	3.68	3.54	3.70
	Fuel oil (m³/FTE)	0.65	1.62	4.22	0.0

BUILDING	READING (kWh)	ESTIMATE BASED ON TOTAL INVOICE (kWh)	FTE	CONSUMPTION (kWh per FTE)	M²	CONSUMPTION (kWh per m²)
К1	871 130	903 231	323	2 697	26 051	35
К2	995 804	1 032 499	207	4 811	21 562	48
КЗ	1 689 478	1 751 735	507	3 332	33 877	52
ECA	3 556 412	3 687 465	1 037	3 556	81 490	44

Table 20 – Estimated electricity consumption by building for 2020

The data in blue are estimated on a pro-rata basis using site readings and the total consumption invoiced by the supplier.

Table 21 – Heating consumption by building for 2020

BUILDING	INVOICED CONSUMPTION (kWh)	FTE	CONSUMPTION (kWh per FTE)	SURFACE AREA (m²)	CONSUMPTION (kWh per m²)
K1	1 049 190	323	3 248.27	26 051	40.27
К2	775 340	207	3 745.60	21 562	35.96
К3	1 140 490	507	2 249.49	33 877	33.67
ECA	2 965 020	1 037	2 859.23	81 490	36.39

Paper

Table 22 – Multi-year comparison

PAP	PAPER CONSUMPTION			2019	2020
	Pages printed/photocopied (office work)	7 689 929	7 675 136	6 183 794	2 011 891
Gross annual consumption	Publications	460 696	402 076	711 922	132 020
	Total pages (office work + publications)	8 150 625	8 077 212	6 895 716	2 143 911
	Pages printed/photocopied (office work per FTE)	8 325	8 280	6 698.22	2 147.7
Relative annual	Total pages (office work + publications per FTE)	8 823	8 714	7 469.36	2 288.7
consumption	Total pages (office work + publications per FTE per day)	36.5	36	30.74	9.38

Greenhouse gas emissions

Table 23 – Multi-year emissions comparison

GREE	GREENHOUSE GAS EMISSIONS		2018	2019	2020
	Total emissions (tCO ₂ e)	9 659.8	8 896.8	9 430.3	6 145.0
Gross annual	Total emissions from auditor travel (tCO2e per FTE)	1 133.6	1 092.7	1 046.0	97.0
emissions	Total emissions from ECA car fleet (tCO $_2$ e)	159.9	141.5	122.4	63.0
	Total emissions (tCO₂e per FTE)	10.46	9.60	10.21	6.56
Relative annual emissions	Total emissions from auditor travel (tCO2e per FTE)	1.23	1.18	1.13	0.10
	Total emissions from ECA car fleet (tCO2e/car)	4.7	4.3	3.7	1.91

The data for previous years were recalculated using the assumptions for calculating the 2020 carbon footprint.

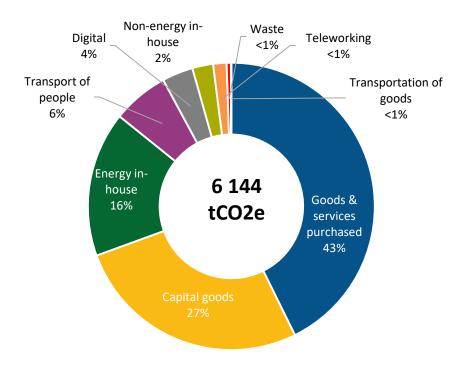
Table 24 – Multi-year comparison of kilometres travelled by activity

BUSINESS TRAVEL		2016	2019	2020
Gross annual	Total distance covered for business travel (in km):	5 798 154	4 317 152	586 807
total	by air (km)	4 229 964	3 528 447	380 841
	by private car (km)	482 000	152 723	49 570
Relative annual total	Total distance covered for business travel (in km per FTE)	6 277.09	4 676.3	626.4

CATEGORY	Sum of CO ₂ emissions (tCO ₂ e) 2020
Capitalised goods	1 644
Energy in-house	1 004
Non-energy in-house ¹²	143
Goods and services purchased	2 623
Transport of persons	390
Transport of goods	3
Waste	29
Teleworking	93
Digital	215
Grand total	6 144 ¹³

Table 25 – Details of emissions for 2020 (Bilan Carbone® method)

Chart 1 – Breakdown of emissions 2020 (Bilan Carbone® method)



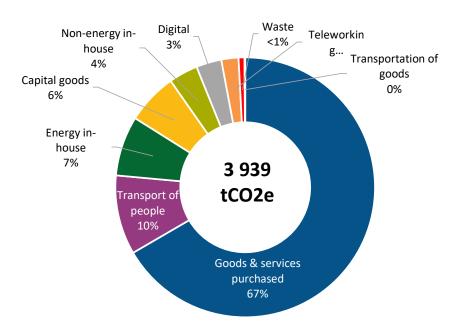
¹² "Non-energy in-house" takes into account the impact of installations containing refrigerants (e.g. cooling systems and cold storage for catering).

¹³ Inconsistent total due to rounding in the *Bilan Carbone*[®] calculation.

Table 26 – Detail of emissions for 2020 (GHG Protocol method), compared with 2019

CATEGORY	SUM OF CO₂ EMISSIONS (tCO₂e) 2019	SUM OF CO ₂ EMISSIONS (tCO ₂ e) 2020
Capitalised goods	1 829	250
Energy in-house	1 787	293
Non-energy in-house ¹⁴	47	143
Goods and services purchased	2 001	2 623
Transport of persons	3 550	390
Transport of goods	5	3
Waste	25	29
Teleworking	0	84
Digital	197	124
Grand total	9 431	3 939

Chart 2 – Emissions allocation for 2020 (GHG Protocol method)



¹⁴ "Non-energy in-house" takes into account the impact of installations containing refrigerants (e.g. cooling systems and cold storage for catering).

Green Procurement

Table 27 – Multi-year comparison

PRC	BER OF PUBLIC OCUREMENT OCEDURES	2017	2018	2019	2020
	Top green	p green O		2	0
	Medium green	2	3	1	1
	Light green	2	1	1	1
	Not green	0	0	0	1
Number	Percentage of "not green" or "light green" contracts	50%	50%	25%	67%
	Percentage of "medium green" and "top green" contracts	50%	50%	75%	33%
	Top green	€ 0.00	€ 7 724 924.35	€9585450.19	0
	Medium green	€ 4 756 295.85	€ 183 885.85	€ 150 000.00	€ 473 990.00
	Light green	€ 1 733 533.40	€ 148 000.00	€ 513 567.00	€ 560 000.00
	Not green	€ 0.00	€ 0.00	€ 0.00	€ 143 230.20
Value	Percentage of "not green" or "light green" contracts	26.71 %	1.84 %	1.46 %	59.74 %
	Percentage of "medium green" and "top green" contracts	73.29 %	98.16 %	98.54 %	40.26 %

Waste

Table 28 – Multi-year comparison

١	WASTE GENERATED		2018	2019	2020
	Total waste generated (t), of which:	184.6	176.4	179.3	91.5
Gross annual	food waste (t)	22.6	23.6	23.6	5.86
amount	paper and cardboard waste (t)	51.8	46.8	43.92	24.78
	mixed municipal waste (t)	36.24	34.52	37.58	16.40
	hazardous waste (t)	59.5	61.2	63.0	25.8
	Total waste generated (kg)/FTE	199.8	190.34	194.2	97.75
Relative annual amount	Total food waste generated (kg) per FTE	24.4	25.45	25.6	6.25
uniount	Total hazardous waste generated (kg) per FTE	64.9	66.08	69.1	27.61

Table 29 – Quantity of waste generated in 2020 (by fraction)

WASTE CODE	OFFICIAL DESCRIPTION	QUANTITY (KG) 2020	TREATMENT 2020	QUANTITY (KG/FTE)
130208	Other motor, gearbox and lubricating oils	4.3	destruction	0.0
130507	Grease and oil mixture from oil/water separators	10 620.0	destruction	11.3
150 101	Paper/cardboard packaging	15 498.0	recycling	16.5
150 102	Plastic packaging	486.0	recycling	0.5
150 103	Wooden packaging	2 480.0	destruction	2.6
150 103	Wooden packaging	92.0	recycling	0.1
150106	Mixed packaging	1 104.5	recycling	1.2
150110	Packaging containing residues of or contaminated by hazardous substances	61.3	recycling	0.1
150202	Absorbents, filter materials (including oil filters not specified elsewhere), cloths for wiping, and protective clothing contaminated by dangerous substances	1.0	destruction	0.0

WASTE CODE	OFFICIAL DESCRIPTION	QUANTITY (KG) 2020	TREATMENT 2020	QUANTITY (KG/FTE)
150203	Absorbents, filter materials, cloths for wiping, and protective clothing other than those mentioned under 15 02 02	309.0	recycling	0.3
160215	Hazardous components removed from scrapped equipment	41.0	destruction	0.0
170411	Cables other than those mentioned under 17 04 10	83.5	recycling	0.1
170904	Mixed construction and demolition waste other than those mentioned under 17 09 01, 17 09 02 and 17 09 03	375.0	destruction	0.4
200108	Biodegradable kitchen and canteen waste	5 853.6	recycling	6.2
200201	Biodegradable waste	8 700.0	recycling	9.3
200301	Mixed municipal waste	16 400.0	destruction	17.5
200306	Waste from sewer cleaning	1 800.0	destruction	1.9
150107	Glass packaging	1 600.0	recycling	1.7
160103	End-of-life tyres	28.0	recycling	0.0
170107	Mixtures of concrete, bricks, tiles and ceramics other than those mentioned under 17 01 06	480.0	destruction	0.5
1702012 01138	Wood	284.5	recycling	0.3
170407	Mixed metals	303.5	recycling	0.3
170604	Insulation materials other than those mentioned under 17 06 01 and 17 06 03	7.0	destruction	0.0
170802	Food oils and fats	381.0	destruction	0.4
190809	Grease and oil mixture from oil/water separation containing only food oils and fats	5 073.7	destruction	5.4
190809	Grease and oil mixture from used oil/water separation containing only food oils and fats	8 877.3	recycling	9.5
200101	Paper and cardboard	9 288.0	recycling	9.9
200102	Glass	211.0	recycling	0.2

WASTE CODE	OFFICIAL DESCRIPTION	QUANTITY (KG) 2020	TREATMENT 2020	QUANTITY (KG/FTE)
200121	Fluorescent tubes and other mercury- containing waste	67.2	recycling	0.1
200133	Batteries and accumulators mentioned under 16 06 01, 16 06 02 and 16 06 03, and unsorted batteries and accumulators containing these batteries	43.0	recycling	0.0
200135	Scrapped electrical and electronic equipment containing hazardous components other than those mentioned under 20 01 21 and 20 01 23	575.3	recycling	0.6
200139	Plastics	71.9	recycling	0.1
200140	Metals	369.5	recycling	0.4
ANNUAL TOTAL		91 569.0		97.8
Recycling	Recycling rate			59%
Sorting ra	te			82%

Code red: Hazardous waste

Water

Table 30 – Multi-year comparison

WATER	CONSUMPTION	JUNE 2017	JUNE 2018	JUNE 2019	JUNE 2020
Gross annual consumption	Total consumption (m ³)	12 205	12 502	12 548	11 707
Relative annual	Total consumption (m ³ /FTE)	13.2	13.5	13.59	12.50
consumption	Total consumption (m³/FTE/day)	0.06	0.1	0.06	0.05

Biodiversity

Table 31 – Multi-year comparison

BIODIVERSITY	2017	2018	2019	2020
Total occupied area (m ²)	18 687	18 687	18 687	18 473
Total non-permeable area (m ²)	16 442	16 442	16 442	16 442
Green spaces (m ²)	2 245	2 245	2 245	2 031
Green spaces/Total area occupied (%)	12 %	12 %	12 %	11%

Verification data

Not applicable for translations

Glossary

Acronym	Definition		
Bilan Carbone®	Bilan Carbone [®] is the most widely used approach to recording and reducing greenhouse gas emissions in France, and is based on the method used by ADEME (the French Environment and Energy Management Agency).		
BREEAM	The "BRE Environmental Assessment Method", developed by the Building Research Establishment, makes it possible to assess the environmental performance of buildings during their construction.		
Call for tender/public procurement	Purchase of goods or services by a public authority in exchange for remuneration. A public procurement procedure leads to a public contract being concluded.		
Carbon Credit	Promoters of GHG emission reduction or sequestration projects which meet specific criteria may be granted "carbon credits". A carbon credit is a unit equivalent to one tonne of avoided or sequestered CO ₂ .		
EMAS	Eco-Management and Audit Scheme		
EU	European Union		
European Green Deal	 The European Green Deal is a European Commission action plan. It aims to transform the EU into a modern, resource-efficient and competitive economy, ensuring: net greenhouse gas emissions end by 2050; economic growth is decoupled from resource use; 		
	o no one is left behind.		
FSC®	The FSC [®] label is an environmental label that certifies that timber comes from forests or plantations managed responsibly and sustainably (i.e. management that meets the social, economic, ecological and cultural needs of present and future generations).		
FTE	Full-time equivalent		

Acronym	Definition
GHG Protocol	The GHG Protocol is an international protocol providing a framework for measuring and managing greenhouse gas emissions from private- and public-sector activities, developed by the World Business Council for Sustainable Development (WBCSD) and the World Resources Institute (WRI).
Green procurement helpdesk (GPP Helpdesk)	Advice service on green public procurement, outsourced by the EU institutions.
Green public procurement criteria	 "Not green": the invitation to tender does not include any reference to environmental aspects. "Light green": the invitation to tender includes a reference to the environmental aspects of the contract, but it does not affect the procurement process and will not have an environmental impact during the performance of the contract. "Medium green": the invitation to tender includes significant environmental clauses designed to reduce the environmental impact of the contract. "Top green": this final category corresponds to environmental best practices.
Hazardous waste	All waste identified as potentially hazardous to the environment, health and/or safety, all or part of which can be recycled, such as electronic equipment, toner cartridges, packaging soiled with hazardous products, etc.
Household and similar waste	Non-hazardous unsorted waste from households or from industrial enterprises, skilled trades, shops, schools, public services, hospitals and tertiary services, when collected under the same conditions as household waste. This includes towels and packaging soiled with food leftovers. In Luxembourg, this type of waste is incinerated with added fuel due to its high moisture content.
ISO 14001	This standard sets out a series of requirements specific to the establishment of an environmental management system within an organisation, regardless of its size and area of activity.
IT (information technology)	IT equipment: networks, equipment, programmes, etc.

Acronym	Definition
Paris Agreement	The Paris Agreement, often called the 'Paris Climate Agreement', is an international treaty on global warming adopted in 2015. It covers climate change mitigation and adaptation, and the financing of climate change actions. The long-term temperature objective of the Paris Agreement is to keep the global average temperature increase well below 2°C when compared with pre-industrial levels, and preferably to limit the increase to 1.5°C, the consensus being that this would significantly reduce the impacts of climate change.
Primary energy	A primary energy source is a form of energy present in nature that can be used directly without transformation.
Rare earths	Rare earths are electromagnetic metals that share certain similar properties, and have an atomic number between 57 and 71. They are metallic in appearance and are malleable. Contrary to what their name might suggest, they are not all rare. Many of rare earths are used to manufacture electronic equipment.
Savoir+	In-house knowledge-sharing organised by Professional Training. Sessions last 30-45 minutes and take place over breakfast at 9.15 on Friday mornings.
Science-based target	Methodology for defining a clear greenhouse gas emissions reduction trajectory developed by the World Wide Fund for Nature (WWF) and the World Resources Institute (WRI). Targets are considered to be "science-based" if they are in line with what the most recent climate science deems necessary to meet the goals of the Paris Agreement, i.e. limiting global warming to below 2°C above pre-industrial levels, and pursuing efforts to limit warming to 1.5°C.

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