



EUROPEAN CENTRAL BANK

EUROSYSTEM

ECB Environmental Statement 2013



GREEN ECB



This is the European Central Bank's fourth Environmental Statement since the ECB was first validated under the EMAS¹ scheme in 2010. This Statement provides information regarding the environmental performance and activities of the ECB to the public and other interested parties and refers to data for the year 2012. The ECB's Environmental Statements can be found on the ECB's website (in the "Publications" section and on the dedicated [environmental protection page](#)).

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¹ The EU eco-management and audit scheme (established by Regulation (EC) No 1221/2009 of the European Parliament and of the Council).

1 Contents

1	Contents	3
2	Foreword	4
3	ECB's objectives and activities	5
3.1	Main objectives	5
3.2	Organisation	5
4	ECB's premises	6
4.1	ECB's current premises	6
4.2	New ECB premises	6
5	Environmental management at the ECB	8
5.1	Environmental policy	8
5.2	Environmental management organisation	9
5.3	Environmental Management System	12
5.4	Environment-related communication and awareness-raising	13
6	Environmental aspects and impact of the ECB's activities	15
6.1	Energy	15
6.2	Office paper and publications	17
6.3	Office supplies	18
6.4	Cleaning agents and hazardous substances	19
6.5	Water and waste water	19
6.6	Waste and recycling	20
6.7	Business travel	21
6.8	Biodiversity	21
6.9	Banknotes	22
6.10	Public procurement	23
6.11	CO ₂ footprint	23
7	Environmental performance at the ECB	27
7.1	Objectives and targets	27
7.2	Environmental management programme	28
8	Environmental verifier's declaration on verification and validation activities	29

2 Foreword

By implementing an EMAS-certified Environmental Management System (EMS) in 2010, the ECB has made a visible commitment to environmental protection. We have since embraced this responsibility across all levels of our organisation, believing that paying careful attention to our environmental performance is integral to our prominent role as a European institution.

Indeed, since we adopted our first environmental policy in 2007, we have been committed to fulfilling our environmental obligations. Over the years, we have successfully implemented numerous activities and measures to improve our environmental performance and lower our greenhouse gas emissions. A sustainable procurement guideline was adopted in 2012 and is now being gradually implemented. An increasing number of products and services are purchased only upon due consideration of sustainability criteria, thus lowering their environmental impact. Furthermore, in order to avoid large-scale printing, we have decided to make official ECB publications (such as the Monthly Bulletin, the Annual Report and, of course, the Environmental Statement) available online.

As we prepare to move to our modern and highly efficient new premises, the focus of our environmental initiatives has been and will continue to be on behavioural aspects. Each of us has an important role to play in demonstrating our commitment and in improving our environmental performance every day.



Vítor Constâncio
Vice-President of the European Central Bank

3 ECB's objectives and activities

3.1 Main objectives

The European Central Bank and the national central banks of those countries that have adopted the euro together constitute the Eurosystem, the central banking system of the euro area. The euro area comprises the 17 European Union countries that have introduced the euro since 1999.

The main objective of the Eurosystem is to maintain price stability and to safeguard the value of the euro. Furthermore, the ECB is responsible for the strategic planning, coordination and harmonisation of banknotes within the euro area and has the exclusive right to authorise their issuance.

The mission of the European Central Bank

We at the European Central Bank are committed to performing all central bank tasks entrusted to us effectively. In so doing, we strive for the highest level of integrity, competence, efficiency and transparency.

Detailed information on the ECB's mission and tasks is available at www.ecb.europa.eu

3.2 Organisation

The decision-making bodies of the ECB are the Governing Council and the Executive Board. The Governing Council adopts the guidelines and takes the decisions necessary to ensure that the Eurosystem performs the tasks with which it is entrusted and formulates monetary policy for the euro area. It comprises the members of the Executive Board of the ECB and the governors of the national central banks of the 17 euro area countries.

The Executive Board implements monetary policy in accordance with the guidelines and decisions laid down by the Governing Council and has overall responsibility for the management of the day-to-day business of the ECB and its resources. The Executive Board is also ultimately responsible for risk management at the ECB.

In terms of its organisation, the ECB is function-based and is divided into business areas (directorates and stand-alone offices), divisions and sections. This composition is complemented by other structures, such as project teams, working groups and committees. They ensure interdisciplinary competences and cross-organisational perspectives.

In 2012, the ECB provided 2,399 occupied workplaces. Of these, 1,464 were for permanent/ fixed-term staff members² and 935 were for non-ECB staff.

² Staff working on a permanent and fixed-term contract and on the graduate programme.

4 ECB's premises

4.1 ECB's current premises

At present, the ECB rents three high-rise buildings in the city of Frankfurt am Main: the Eurotower, the former Commerzbank building and the Eurotheum. Together they occupy a gross surface area of around 133,000 square metres.

In addition, the ECB's premises contain a conference centre and meeting rooms for ECB meetings and conferences, as well as for European System of Central Banks (ESCB) committee meetings. In 2012 more than 90,000 visitors and guests were welcomed at the ECB in Frankfurt.

The ECB has a staff canteen and dining area in the Eurotower. It also houses a fitness facility, open from 7 a.m. to 9 p.m. on ECB working days. For staff commuting by bicycle the ECB provides about 290 bicycle stands in all three premises. Showers and changing rooms are available for use by staff, many of whom exercise at lunch time.

The Eurotower, built in the 1970s, was fully renovated in 1995, before the ECB moved in. Three combined heat and power systems were installed, each providing 600 kW of thermal power and 450 kW of electrical power. The Eurotheum was built and opened in 2000. It is connected to the district heating system and has operable window elements in each office which allow the windows to be opened, as well as modern absorption chillers and a compressor-chilled water unit for cooling. The Commerzbank, built in the 1970s, is also connected to the district heating system and its technical equipment was renovated in 2003, before the ECB moved in.

In addition, the ECB has official representative offices in Washington and Brussels and rents computer space in the Frankfurt area.

The scope of the EMS comprises all activities at the ECB's main premises in Frankfurt am Main: the Eurotower, the old Commerzbank building and the Eurotheum. The scope of the EMS will be amended in order to take account of the new ECB premises upon their completion and once staff have relocated.

4.2 New ECB premises

In 2002 the ECB made a long-term decision to move from the current three rented buildings in Frankfurt am Main to new premises, following a recommendation by the European Court of Auditors to all European institutions to be more economical in the long term by owning premises rather than renting office space. The employees of the ECB are to be brought together under one roof, where functionality and sustainability play an important role in all phases of the construction project.

The ECB's new premises will not only create a single base for its operational activities, but also stand as a visible symbol of the ECB's identity. Part of this forward-looking vision for the new premises includes a sustainable design, which is to be 29% more energy efficient than the standard stipulated by the 2007 German energy-saving directive.

The design of the new ECB premises also complies with the European Commission's voluntary EU GreenBuilding Programme³. During the architectural design competition and at all stages of the evaluation procedure, energy efficiency and sustainability issues were important considerations. Throughout the planning and construction phases the ECB used an integrated design process, incorporating considerations relating to local climatic conditions as part of the broader efforts to maximise the efficiency of the building's energy and water consumption.

In 2010 the ECB began construction work on its new premises and future headquarters – due to be completed in 2014 – on the site of the Grossmarkthalle, a listed 20th century building (former wholesale market hall) in Frankfurt am Main. The ensemble will consist of three main building elements, namely the double office tower, the Grossmarkthalle and the entrance building. The energy design of the ECB's new premises comprises the following key features:

- Energy-efficient triple-layered facade for the new high-rise tower and efficient insulation for the facades and the roof of the Grossmarkthalle
- Natural ventilation based on operable facade elements, electric sun shading and low-energy lighting, to provide optimal workplace conditions with maximum use of daylight
- Rainwater capture and recycling
- Use of recycled heat (from the computer centre) and the possibility of using geothermal energy for heating and cooling



View of the new ECB premises from the east. Building work is due to be completed in 2014.

Picture credit: © ISOCHROM.com

³ The GreenBuilding Programme aims at improving the energy efficiency and expanding the integration of renewable energies in non-residential buildings in Europe on a voluntary basis. The programme encourages owners of non-residential buildings to realise cost-effective measures which enhance the energy efficiency of their buildings in one or more technical disciplines (<http://iet.jrc.ec.europa.eu/energyefficiency/greenbuilding>).



Werner Studener *Director General Administration and Environmental Coordinator, on environmental aspects of the building*

During the planning and construction phases of our new premises we have focused on efficient energy and water consumption. At the same time, sustainability in construction encompasses not only environmental issues, technical efficiency and functional requirements, but also urban and natural regeneration. We are transforming the area surrounding the new ECB premises from a car park into a landscaped, green area. This aims to provide a thriving area for local biodiversity and become an important addition to the City of Frankfurt's "green lung".

5 Environmental management at the ECB

5.1 Environmental policy

The overall intentions and direction of the ECB in terms of its environmental performance and objectives are outlined in its environmental policy. A new version of this policy was adopted in early 2013. Since the new ECB premises comply with the highest technological standards in terms of energy efficiency and environmental performance, the new policy concentrates on staff awareness and aspects of behavioural change.

Internal and external staff working at the ECB's premises are invited to incorporate the environmental policy in their daily work and to actively contribute to its objectives.

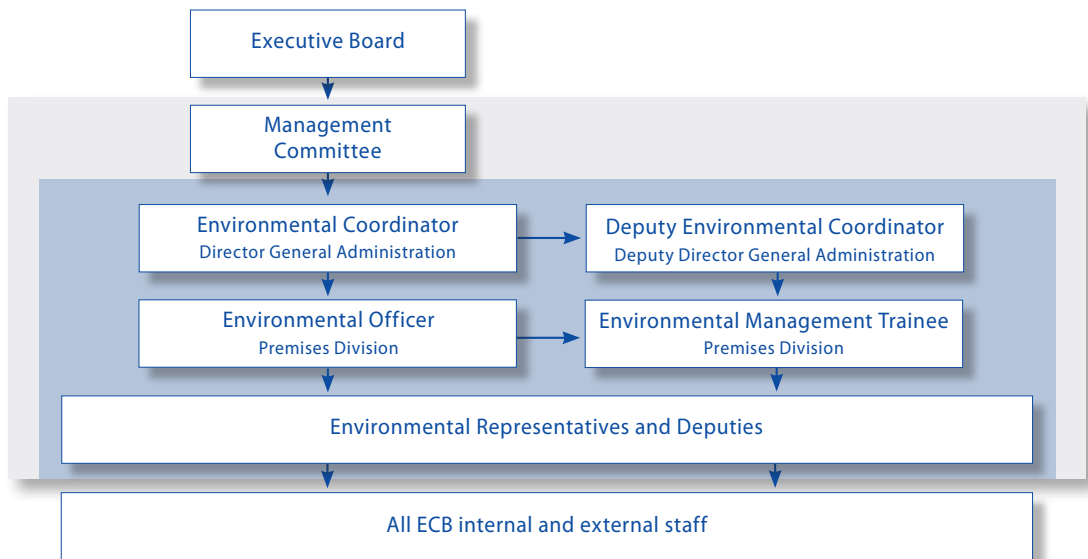
Environmental policy

The ECB is committed to continuously improving its environmental performance and to minimising its ecological footprint by:

- stimulating a sustainable change in the behaviour of all internal and external staff and subcontractors through training, information and action to raise awareness;
- taking measures to reduce carbon emissions in its daily operations and using resources efficiently and responsibly;
- increasingly integrating environmental considerations into procurement procedures, further developing the sustainable procurement guideline and training purchasers;
- promoting transparent communication and dialogue with all interested parties internally and externally with regard to its environmental performance;
- complying with applicable environmental legal regulations.

5.2 Environmental management organisation

Each business area is responsible for adhering to the environmental governance framework. The Green ECB team controls all EMS-relevant aspects and coordinates related activities. It consists of an Environmental Coordinator and an Environmental Officer, both appointed by the Executive Board, as well as the Environmental Representatives and Deputies group, appointed by their area heads.





Veronica Andronache
on her experiences as a Green ECB trainee

My year as a Green ECB trainee has been full of interesting and challenging experiences in a very impressive organisation. It has been an excellent opportunity to apply all the knowledge obtained during my studies and previous work experience.

The multidisciplinary approach specific to environmental management systems provides a rich variety of activities and responsibilities which allow Green ECB trainees to obtain a comprehensive picture of how the organisation works and to further develop their skills. By being directly involved in the running of the entire Environmental Management System, each trainee has the opportunity to work in areas such as environmental communication, event organisation and awareness campaigns as well as data and knowledge management. Green ECB trainees also report at different organisational levels, prepare for internal and external audits, and participate in monitoring activities and processes that have an environmental impact and which are transposed into the organisation's carbon footprint. The traineeship also involves a lot of interaction with colleagues from all business areas and direct contact with senior management, as well as with external parties, such as consultants or counterparts from other organisations.

I recommend this traineeship wholeheartedly to anyone who is passionate about sustainability and who believes that it is possible to make a difference.

Organisational structure of the EMS

The specific roles and responsibilities of the Green ECB team are briefly listed in the table below.

Executive Board	<ul style="list-style-type: none"> • Adopts the environmental policy and the environmental governance framework. • Provides resources and appoints an Environmental Coordinator and an Environmental Officer. • Signs off and authorises the publication of the ECB’s annual Environmental Statement.
Management Committee	<ul style="list-style-type: none"> • Sets environmental objectives and is responsible for the environmental management programme. • Provides strategic guidance on EMS-related issues and, where necessary, resolves disputes. • Considers and approves the EMS management review, as well as all documents submitted to the Executive Board.
Environmental Coordinator	<ul style="list-style-type: none"> • Sets strategic environmental goals and supervises policy compliance. • Steers the EMS, assesses environmental performance and ensures the effectiveness of the EMS and the participation of senior management. • Adopts the Environmental Management Handbook (EMH) and any amendments to it.
Environmental Officer	<ul style="list-style-type: none"> • Takes responsibility for the entire EMS in accordance with the standards and coordinates all matters in the field of environmental protection management. • Acts as the internal contact person for environmental issues and incidents with an environmental impact. • Reports to the Environmental Coordinator and the Management Committee on key issues. • Leads the team of Environmental Representatives. • Provides encouragement and advice on local initiatives by business areas on environmental topics. • Advises on the implementation of adequate training measures. • Maintains internal communication, coordinates the Green ECB initiative and leads the Green ECB team. • Maintains the employee suggestion scheme and assesses staff proposals.
Environmental Representatives	<ul style="list-style-type: none"> • Ensure that all the interests of each business area are considered within the EMS and maintain horizontal communication on EMS-related matters. • Support the implementation of the EMS in all ECB business areas and units.



Georgia Blackwell
 DG/H Environmental Representative,
 on her decision to become an
 Environmental Representative

My decision to become a (deputy) Environmental Representative for the ECB’s DG Human Resources, Budget and Organisation was motivated by my personal views and lifestyle choices, such as my being a vegetarian. I have been committed to environmental protection for many years, so when the opportunity arose to help the Green ECB team by joining our existing Environmental Representative as contact and spokesperson within my DG, I saw it as my chance to spread an important message. I believe that individual behaviour can have a big impact and I wanted to help colleagues become aware of the positive difference they could make, through simple changes in behaviour, to the ECB’s environmental footprint. Drawing people into this cause at work also presented the additional benefit of providing them with tips on green action that they could replicate at home and pass on to family and friends. Volunteering as an Environmental Representative presents challenges – initiating change always does – but the possibility of making a real difference far outweighs these and makes the role extremely rewarding.

5.3 Environmental Management System

Five years ago, the ECB developed and implemented an Environmental Management System (EMS), following the international standard EN ISO 14001 and EMAS⁴.

This EMS is fully integrated in the ECB's general governance framework and is outlined in the organisation's Business Practice Handbook (BPH), which applies to all staff. The structure of the EMS is further detailed in the Environmental Management Handbook (EMH), which can be accessed via the BPH. It provides guidance to staff on how to implement the EMS. The EMH contains additional binding rules, processes and operational procedures for maintaining the EMS in accordance with the standards (compliance, verifications, corrective actions, etc.) and integrating specific aspects that have a major impact on the environment (installations and facilities, IT infrastructure and equipment, travel, etc.).

In accordance with the standards, the EMS is subject to internal and external environmental verifications.

In order to avoid deviations from its environmental governance framework, the ECB has established various instruments to monitor and measure environmental performance. Internal environmental verifications are carried out regularly by the Environmental Officer with the support of external experts. All ECB business areas have to be periodically verified at least once in a 36-month certification cycle. A verification schedule has been established to ensure compliance with the standards.

The scope of the EMS comprises all activities at the ECB's main premises in Frankfurt am Main⁵. It will be adapted to the new ECB premises upon their completion.

All activities related to the maintenance and development of the EMS are coordinated and carried out under the title "Green ECB".



⁴ 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).

⁵ The ECB's main premises are the Eurotower, the Eurotheum and the Commerzbank building.

5.4 Environment-related communication and awareness-raising

For external stakeholders, general information on environmental protection at the ECB, as well as the annual Environmental Statements, are made available on the Europa server. The 2012 Statement was downloaded over 16,000 times in the first six months following its publication.

For internal staff and stakeholders, the Green ECB intranet page and an internal interactive communication platform are the central information and communication channels for environmental matters.

In order to ensure that all staff better understand the way the EMS works and to encourage staff members' active participation in the system during their daily work, the ECB provides awareness-raising and training activities. In 2012, one half-day training course was held. Furthermore, there is a monthly presentation of the ECB's environmental activities during the induction sessions for new staff, followed up by an e-mail with quick links to all relevant and important information regarding the EMS.



Frank Hofmann
Environmental Officer, on employee engagement for the EMS

Within the context of taking responsibility for environmental protection, the Green ECB initiative is a new but continuously developing part of our corporate culture and policy at the ECB. By leading this initiative I have learnt that it requires boosting a sense of environmental responsibility among staff and a frank and objective dialogue with stakeholders to achieve sustainable results. Through employee engagement campaigns we demonstrate how important and powerful individual behaviour and contributions are for determining the ecological impact of our institution. Our achievements are positive. We will therefore continue along this path to increase awareness on how we can be more environmentally friendly at work and at home. We have started preparing for the move to the new ECB premises and at the same time preparing to incorporate the new banking supervision function and staff. This will again challenge us with different expectations and approaches regarding sustainability. However, I am looking forward to learning from our new colleagues and together developing environmental management at the ECB in a cross-organisational approach.

In order to raise awareness among ECB employees and to promote a sustainable change in people's behaviour, a "car-free day" was organised by the ECB in September 2012. On that day, a variety of environmentally friendly means of transportation were demonstrated. Furthermore, staff were encouraged to use public transport or bikes to come to work.

As in the previous year, the ECB also participated in the World Wildlife Fund's global "Earth Hour" initiative.

At the end of 2012 a behaviour change pilot campaign was initiated in the TARGET2-Securities (T2S) Programme. The aim of the campaign was to encourage employees to actively reduce their environmental impact at work, while focusing specifically on a reduction in energy consumption. The campaign also aimed at creating an internal success story and a replicable model that could be adopted by other employee groups across the organisation.



Petra Ulrich (second from left)
TARGET2-Securities Environmental Representative,
on the T2S "Power Off" Energy Saving Campaign

When the T2S team volunteered to participate in a Green ECB pilot campaign, we knew that the campaign's great potential would depend on having our entire team's full commitment. The T2S team, with the support of the Green ECB team, worked together to ensure that we always kept our "Power Off" mission in mind and stayed motivated to achieve our target which, although simple, was not so easy to achieve. In the end we achieved almost 100% "Power Off" for all workplace equipment and received very positive feedback from the whole team. This proved very motivational for team members and resulted in an enhanced team spirit. We hope that the results in T2S will serve as an inspiration to colleagues in all areas and that our experience will encourage everyone to strive for an environmentally friendly working environment.

6 Environmental aspects and impact of the ECB's activities

The ECB monitors the following environmental aspects and evaluates their specific impact on the environment at annual intervals to ensure legal compliance, avoid environmental risks and minimise its footprint.

The Green ECB team monitors the environmental aspects and the impact of operating and maintaining the ECB's premises – energy, emissions, waste, water and waste water, etc. In addition, the consumption of natural resources and the use of cleaning materials are tracked. All data are collected in an environmental inventory.

The data, and more importantly their comparison over the years, are important for assessing, planning and monitoring environmental performance. In 2007, the ECB's environmental aspects were identified for the first time. They are reviewed annually. The following aspects of the organisation's activities that have a significant direct and indirect environmental impact were identified.

6.1 Energy

Heating and cooling energy and electrical consumption are the main environmental aspects at the ECB. They mainly arise from the operation of its premises and technical infrastructure. Heating and cooling energy is supplied both by combined heat and power systems and by district heating. In close cooperation with the ECB's landlords, energy management is undertaken in order to optimise the consumption of energy.

Electricity consumption is generated mainly by ventilation and air conditioning, computer rooms, IT and IT infrastructure (printers, faxes, etc.) and lighting in the offices and common areas. Since 2009, electrical energy for the Commerzbank building has been supplied entirely from renewable resources, without giving rise to carbon dioxide emissions. Since 2011, the entire direct electrical energy supply of the ECB's rented space in the Eurotheum and Eurotower has been generated by hydropower, as is all of the electrical energy supplied to the construction site for the new ECB premises.

Energy	2008	2009	2010	2011	2012	Change 2012/2011 (%)*
Total heating and cooling energy for all ECB premises (MWh)	20,086.8	22,815.0	24,146.6	19,608.3	21,778.2	11.1%
Total electrical energy for all ECB premises (MWh)	21,699.1	19,497.6	18,910.2	19,586.0	19,010.7	-2.9%
- of which renewable electrical energy (MWh)	no data	6,564.8	6,737.9	12,658.1	12,504.5	-1.2%
Production of electrical energy (MWh)	3,706.9	5,332.5	4,591.0	3,405.2	4,041.4	18.7%
Heating and cooling energy per workplace (kWh)	9,386.4	10,661.2	10,731.8	8,691.6	9,081.8	4.5%
Electrical energy per workplace (kWh)	10,139.8	9,111.0	8,404.5	8,681.7	7,927.7	-8.7%
Renewable electrical energy (%)	no data	33.7%	35.6%	64.6%	65.8%	1.1 p.p.**
Electrical energy for external data centre space (MWh)	no data	no data	no data	no data	4,712.0	no data
Ventilation and cooling energy for external data centre space (MWh)	no data	no data	no data	no data	2,332.0	no data

* Figures may not add up due to rounding.

** A percentage point (p.p.) is the unit for the arithmetic difference between two percentages.

In 2012, the total energy consumption for heating and cooling was 11.1% higher than in 2011. This was due mainly to the cold and, therefore, energy-intensive winter of 2012-13. Moreover, increased working time, owing to the financial crisis, required more energy to be consumed in order to provide comfortable working conditions for staff.

From 2010 to 2011 there was a general overhaul of the three combined heating and power units situated in the Eurotower. This explains the significant increase in the ECB's production of its own energy in 2012.

In 2012 the consumption of electrical energy per workplace was 8.7% lower than in 2011. However, total electrical energy consumption has remained almost unchanged since 2009.

As an information-intensive organisation, the ECB depends on vast arrays of servers to run applications and support electronic communications. For 2012 data, the ECB has taken into account the electrical energy, heating, ventilation and cooling required by its external data centre space.

"Plants for Printers" campaign

The ECB is a computing-intensive organisation with large computer centres and data storage facilities. As a result, various IT-related activities have been initiated in order to reduce the related environmental impact. In 2012 energy-efficient multifunctional devices (used to copy, scan and print) were rolled out ECB-wide. In order to encourage staff to return their personal office printers and use the new common multifunctional devices on each floor instead, the Green ECB team took over a local initiative devised by the Environmental Representatives in Directorate General Secretariat and Language Services (DG/SL) and, with the support of DG Information Systems (DG/IS), ran the "Plants for Printers" campaign. The personal printers which were returned in exchange for an office plant were collected by DG/IS for re-use wherever possible and for appropriate e-waste recycling and disposal.



Reetu Kurkijärvi and Mauro Nocca
 DG/SL Environmental Representatives, on the
 "Plants for Printers" campaign

The new multifunctional printers in the corridors attracted a lot of interest and we saw it as a good opportunity to promote their environmental benefits. We wanted to spread the word about cleaner office air, better printing quality, enhanced confidentiality and environmental gains, so we started a campaign to replace the now unnecessary office printers with plants.

Archives and Records Management in DG/SL was our pilot section, and following a huge success (40% of our office printers were replaced with green plants in a matter of days) the "Plants for Printers" campaign was launched throughout the ECB. In the first campaign, 50 plants were given away, and we're looking forward to phase 2.

6.2 Office paper and publications

Publications

The production of official publications as a result of the ECB's duty to provide information constitutes the largest proportion of the ECB's paper consumption.

Publications	2008	2009	2010	2011	2012	Change 2012/2011 (%)
ECB publications (white paper) (tonnes)	786.3	400.1	550.0	392.5	386.6	-1.5%

Consequently, over the last two years, the ECB has reduced the number of publications printed. In 2012, the ECB officially announced that the Annual Report and other official publications will no longer be available in printed form, being provided only in online and downloadable formats.

Office paper

Owing to the nature of its tasks, the ECB's consumption of office paper is rather high and constitutes a significant environmental aspect. In order to reduce its impact, in 2010 the ECB switched to using 100% recycled paper bearing the "Blue Angel" label for internal printing and copying.

Office paper	2008	2009	2010	2011	2012	Change 2012/2011 (%)*
White paper (thousands of sheets of A4 equivalent)	44	4	0	13	0	-100.0%
Mixed paper (50% recycled, 50% white) (thousands of sheets of A4 equivalent)	22,455	12,330	2,165	423	261	-38.2%
Recycled paper (100% recycled) (thousands of sheets of A4 equivalent)	2,695	2,660	17,000	17,900	18,461	3.1%
Office paper consumption per workplace (sheets of A4 equivalent per year)	11,772	7,007	8,518	8,127	7,699	-5.3%
Recycled paper share (%)	10.7%	17.7%	88.7%	97.6%	100.0%	2.4 p.p.**

* Figures may not add up due to rounding.

** A percentage point (p.p.) is the unit for the arithmetic difference between two percentages.

In 2012, the number of printed sheets increased by 3.1%. Taking into account the increase in the number of workplaces, paper consumption decreased by 428 sheets per workplace per year. This corresponds to approximately 35 sheets per workplace being consumed every day⁶. The newly installed multifunctional printers on each floor are expected to lead to further reductions in paper consumption, as these require the user to reconfirm the print job before printing. This avoids the printing of documents which are not collected or used later, while at the same time ensuring confidentiality of information. Moreover, staff are encouraged to avoid printing unnecessarily and to print double-sided or in a condensed format.

6.3 Office supplies

There are 441 different articles in the office supplies catalogues, of which 77, or approximately 17.5%, are environmentally friendly. Since 2012, environmentally friendly products in the stationery catalogue are marked with "ECO" in order to make it easier for staff to choose green products. The sustainable procurement guideline includes purchasing criteria for office equipment and supplies which are to be integrated into tender procedures.

⁶ Calculated on the basis of 220 working days per year.

6.4 Cleaning agents and hazardous substances

Only small amounts of chemicals and hazardous substances are in use at the ECB and these are mostly utilised by the ECB's suppliers.

Water treatment

Chemicals are used for the treatment of fresh water and for water softening in the buildings. The amount of chemicals used and the installations are routinely checked in accordance with official regulations. In 2012, 7.9 tonnes of chemicals were used for water treatment.

Cooling agents

Cooling installations for air conditioning in buildings contain cooling agents, such as Tetrafluorethane R134a. Tetrafluorethane is a greenhouse gas that has no significant ozone depletion potential (affecting the ozone layer), but significant global warming potential. As a result, the use of cooling agents that impact the environment, which amounted to approximately 20 kg in 2012, was equivalent to 31.1 tonnes of CO₂.

Hazardous substances	2008	2009	2010	2011	2012	Change 2012/2011 (%)*
Chemicals for water treatment (tonnes)	6.8	9.8	9.0	8.3	7.9	-5.5%
Cooling agents (tonnes)**	no data	no data	no data	no data	0.02	no data

* Figures may not add up due to rounding.

** Monitoring started in 2012.

Cleaning agents

Since 2009, the external cleaning service provider has used biodegradable cleaning agents which are EU Ecolabel certified. Furthermore, all staff working for the service provider have been trained to use and, in particular, properly dose the cleaning agents.

Cleaning agents	2008	2009	2010	2011	2012	Change 2012/2011 (%)*
Cleaning agents (tonnes)	2.4	1.9	1.2	1.9	1.2	-34.2%

* Figures may not add up due to rounding.

6.5 Water and waste water

A significant part of the water consumption can be attributed to the technical installations at the ECB's premises, such as air conditioning systems and, in particular, their humidification systems and open cooling towers. The remainder of the ECB's water consumption is the result of the use of its sanitary installations by staff and visitors, and the operation of the staff canteen⁷ and kitchens.

⁷The ECB's canteen is operated by an external service provider.

The water consumption table below shows the data for all water used for technical and non-technical purposes in the ECB's premises. Waste water is not measured, but is assumed to be equal to fresh water consumption. All waste water is discharged to the public sewer. Efforts to minimise water consumption should reduce both the amount of water consumed and that discharged. Waste water from the canteen, which is run by an external service provider, drains into an interceptor designed to remove grease and oil before it is discharged to the public sewer.

Water	2008	2009	2010	2011	2012	Change 2012/2011(%)*
Non-technical fresh water (sanitary facilities, kitchenettes, canteen) (m ³)	38,412.6	44,956.2	43,016.0	43,466.2	46,117.2	6.1%
Technical fresh water consumption (m ³)	18,853.2	21,335.0	19,697.4	18,090.3	19,554.8	8.1%
Total fresh water consumption (m ³)	57,265.8	66,291.2	62,713.4	61,556.5	65,672.0	6.7%
Waste water (m ³)	38,412.6	44,956.2	43,016.0	43,466.2	46,117.2	6.1%
Non-technical fresh water per workplace (m ³ per year)	17.9	21.0	19.1	19.3	19.2	-0.2%
Total fresh water per workplace (m ³ per year)	26.8	31.0	27.9	27.3	27.4	0.4%

* Figures may not add up due to rounding.

Comparing data from the last four years shows an almost constant consumption of water per workplace.

6.6 Waste and recycling

Waste fractions, such as paper and cardboard, confidential paper waste, glass, used batteries, electronic waste (e-waste) and residual waste are collected separately by the ECB. Due to shared disposal, glass waste amounts are difficult to measure accurately and, therefore, have not been included.

The biggest fraction is residual mixed waste, which is treated by the local waste management company. Paper and cardboard waste is recycled, confidential paper waste is shredded and then recycled, and e-waste is either recycled or disposed of in accordance with German regulations. Organic waste and grease are found mainly at the sites with canteens, which are managed by external service providers and are monitored by the ECB. In 2012, approximately one tonne of grease was collected and disposed of.

Waste	2008	2009	2010	2011	2012	Change 2012/2011 (%)*
Paper and cardboard waste, recycled (tonnes)	188.3	149.1	160.1	131.5	95.1	-27.7%
Confidential paper waste, recycled (tonnes)	94.8	92.4	101.4	100.4	123.8	23.3%
Residual waste, incinerated/ combusted waste (tonnes)	200.8	225.0	227.2	229.4	255.9	11.6%
Electronic waste, recycled (tonnes)	no data	28.6	3.1	23.0	31.7	38.0%
Hazardous waste (used batteries and fluorescent tubes) (tonnes)	1.5	11.0	14.3	0.7	0.9	27.5%
Paper and cardboard waste per workplace (kg per year)	88.0	69.7	71.1	58.3	39.6	-32.0%
Confidential paper waste per workplace (kg per year)	44.3	43.2	45.1	44.5	51.6	16.0%
Residual waste per workplace (kg per year)	93.8	105.2	101.0	101.7	106.7	5.0%

* Figures may not add up due to rounding.

The amount of paper and cardboard waste decreased by 27.7% between 2011 and 2012, while confidential paper waste increased by 23.3%.

In 2012, total residual waste increased by 11.6% compared with 2011. Taking into account the rise in the number of allocated workplaces, this increase amounts to only 5.0% per workplace.

As a result of the replacement of a significant number of computers with high-performance and energy-efficient laptops, as well as the replacement of smartphones, electronic waste increased by 38%.

6.7 Business travel

The environmental impact of business travel consists in fuel consumption and related CO₂ emissions. Direct contacts and exchanges of information with the national central banks and with third parties are a key component of the ECB's core business. Therefore, business travel at the ECB is responsible for 1,748.8 tonnes of CO₂. Wherever possible, business trips are substituted with telephone and video conferencing. Clear specifications for business trips require staff to use the train for short journeys. The ECB does not provide company cars to staff.

6.8 Biodiversity

Office work at the ECB's existing rented premises has no significant impact on biodiversity, with no specific environmental aspects being identified for further consideration. However, the ECB's new premises are currently being built on the site of a former wholesale market in what was an industrial area to the east of Frankfurt. The site is being completely renovated, turning it into a green area with all manner of local flora and fauna. Sustainability objectives were included in the planning specifications and continue to play an important role during construction.

The landscape around the new ECB premises will be home to more than 700 trees – over 20 different species. The design for the open space is such that it evokes the natural contours of the river Main, picking up on typical elements of the flood plain and transforming them into a diversified park landscape.

6.9 Banknotes

The ECB has the exclusive right to authorise the issuance of banknotes within the euro area. The ECB has carried out a detailed health and safety assessment of euro banknotes. Independent test results have confirmed that the euro banknotes are safe from a health and environmental perspective.

In order to monitor the environmental impact of the euro banknotes, the ECB has implemented an Environmental Management System in accordance with international standard ISO 14001 for the complete banknote supply chain. Furthermore, it is investigating ways of further reducing their environmental impact.

Detailed information on the environmental impact of the euro banknotes is provided on the ECB's website (in the section entitled [“The Euro”](#)).



Volker Pottman

Banknotes Expert and Environmental Representative, on the environmental impact of euro banknotes

In 2003 the ECB undertook an assessment, following international standard ISO 14040 ff., to identify the environmental impact of the euro banknotes. It was found that the environmental impact of the euro banknotes during their complete life cycle (production, storage, circulation and end-of-life treatment) was equivalent to each European citizen driving a car one kilometre or leaving a 60W light bulb switched on for half a day. Since then the ECB has implemented an Environmental Management System for banknotes, in cooperation with the banknote production industry.

6.10 Public procurement

The procurement of goods and services has an important impact on the environmental performance of any organisation. Therefore, sustainable procurement has an important role to play within an Environmental Management System. The ECB is already integrating environmental considerations into its procurement activities. In 2012, it implemented a Sustainable Procurement Guideline containing environmental criteria for five different product groups. The Central Procurement Office is actively promoting the integration of sustainable criteria among the main procuring business areas and this year staff have received awareness training on sustainable procurement and on how to implement the guideline when preparing tender documents. Since April 2013, training on sustainable procurement has been incorporated in the ECB's internal procurement training modules for dedicated procurement staff.

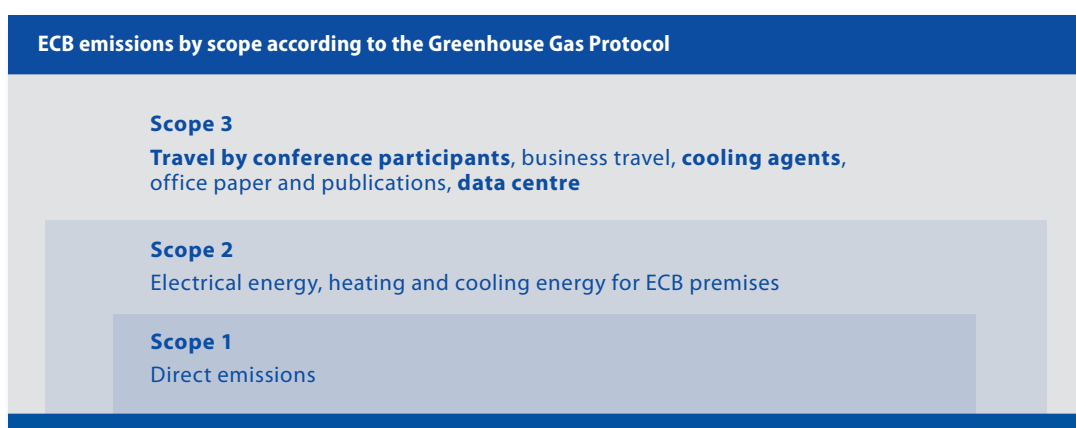
Rosemary Cowlard

ECB Central Procurement Office and Environmental Representative, on the Sustainable Procurement Guideline

The Sustainable Procurement Guideline provides hands-on guidance on how to incorporate social and environmental criteria in tender documents and achieve value for money while promoting our common objectives as regards sustainable development. The Central Procurement Office is fully committed to supporting the ECB in improving its environmental performance.

6.11 CO₂ footprint

The ECB's carbon footprint is calculated on the basis of the environmental inventory figures outlined above⁸. A breakdown of the ECB's emissions by scope according to the Greenhouse Gas Protocol⁹ is illustrated in the chart below.



⁸ CO₂ equivalents were calculated using approved conversion factors obtained from the ECB's energy suppliers for heating, cooling and electrical energy, and the UK government's Department for Environment, Food and Rural Affairs (DEFRA) for flight kilometres, Deutsche Bahn conversion factors for rail travel and the conversion factor used by the Institute for Energy and Environmental Research (IFEU) for paper consumption.

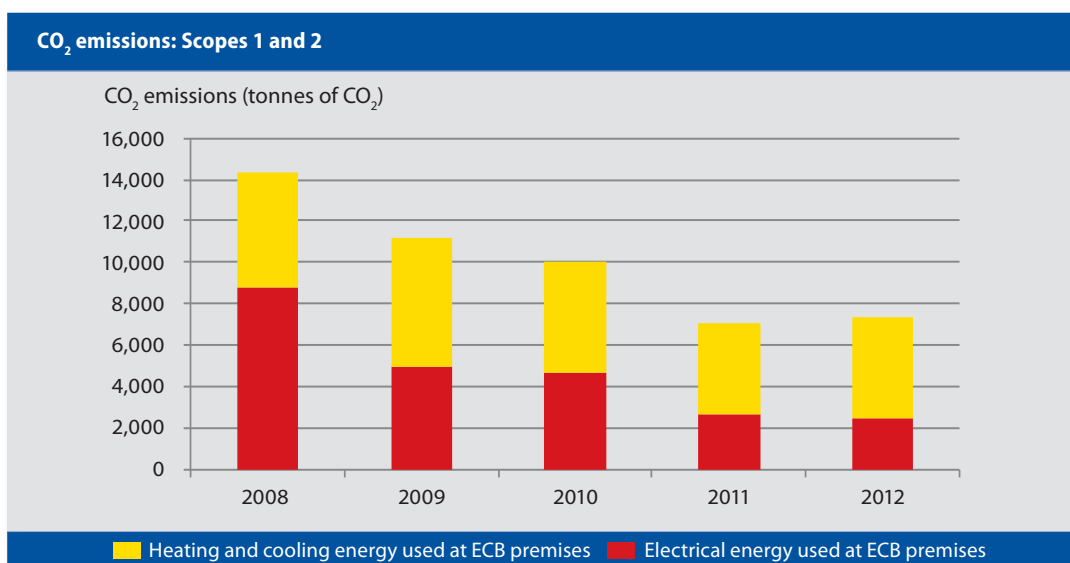
⁹ The calculation of the CO₂ footprint is in line with the standards laid down in the Greenhouse Gas Protocol (GHG Protocol). The GHG Protocol focuses on the accounting and reporting of greenhouse gas emissions. It is the most widely used international accounting tool for government and business leaders wanting to understand, quantify and manage greenhouse gas emissions (www.ghgprotocol.org).

In 2011, the footprint calculation included indirect emissions (Scope 2) arising from the consumption of electrical energy and energy consumption for heating and cooling and elements of Scope 3 emissions, namely staff business travel, office paper consumption and ECB publications. For the first time, Scope 3 emissions were expanded to include CO₂ emissions resulting from travel by external participants to ECB conferences and special events.

With the aim of increasing transparency, Scope 3 was further expanded in 2012 to include CO₂ emissions from the external data centre space (electrical energy, ventilation and cooling) and from cooling agents used at the ECB premises.

Direct CO₂ emissions (Scope 1), such as those resulting from the consumption of fuel by the eight ECB cars, were not taken into account, since they are fairly insignificant.

CO ₂ emissions on the basis of the GHG Protocol	2008	2009	2010	2011	2012
Direct emissions – Scope 1					
Scope 1 (tonnes)	no data	no data	no data	no data	no data
Indirect emissions – Scope 2					
Electrical energy at ECB premises (tonnes of CO ₂ equivalent)	8,831.5	4,953.3	4,662.0	2,660.3	2,504.9
Heating and cooling of ECB premises (tonnes of CO ₂ equivalent)	5,495.8	6,215.8	5,408.5	4,395.3	4,871.7
Scope 2 (tonnes)	14,327.3	11,169.1	10,070.5	7,055.6	7,376.6



Since 2009 CO₂ emissions from electrical energy usage in the ECB premises have been reduced considerably. This has been achieved mainly via technical and organisational measures, as well as through the switch to hydropower for the entire direct electrical energy supply of the ECB's three rented premises.

A comparison of the 2011 and 2012 CO₂ emissions from electrical energy used at the ECB premises reveals a 5.8% reduction in the related carbon emissions. Given the increased number of workplaces, the CO₂ emissions from electrical energy per workplace have decreased by 11.4%.

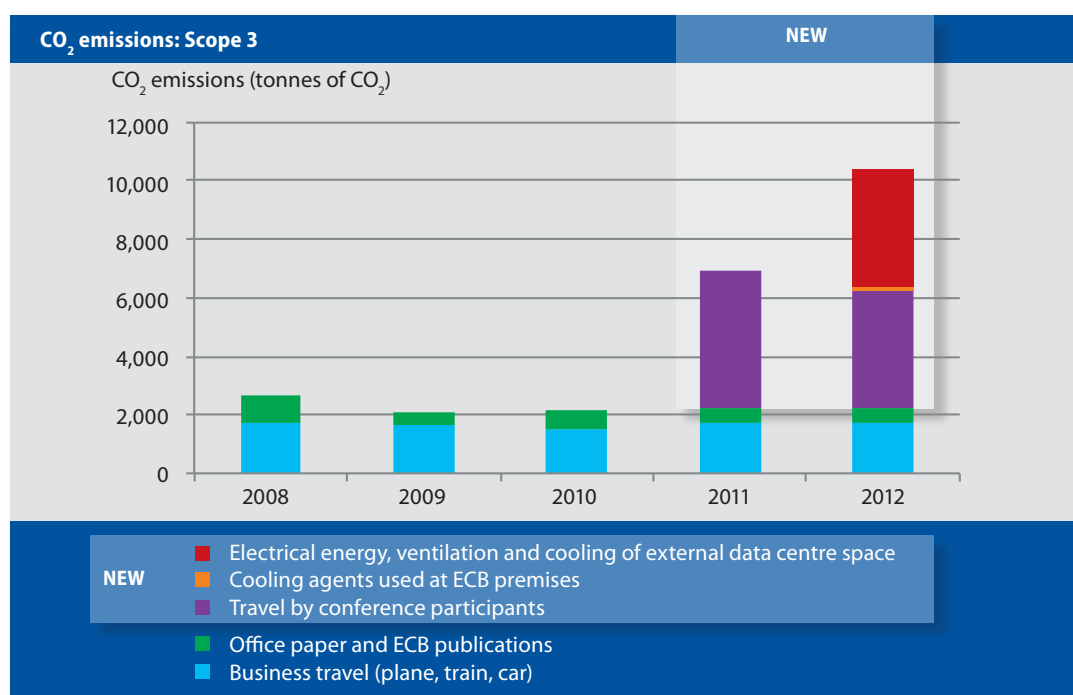
Owing to the increased need for heating energy, attributable to the long winter, related CO₂ emissions have increased by 10.8%. However, the heating and cooling energy per workplace has only increased by 4.3%.

Indirect emissions – Scope 3 (expanded)		2008	2009	2010	2011	2012
	Business travel (car, train, plane) (tonnes of CO ₂ equivalent)	1,741.4	1,622.5	1,514.8	1,742.4	1,748.8
	Office paper and ECB publications (tonnes of CO ₂ equivalent)	954.3	495.6	668.3	496.9	491.2
NEW	Travel by conference participants (tonnes of CO ₂ equivalent)	no data	no data	no data	4,653.3	4,059.8
	Cooling agents used at ECB premises (tonnes of CO ₂ equivalent)	no data	no data	no data	no data	31.1
	Electrical energy, ventilation and cooling of external data centre space (tonnes of CO ₂ equivalent)	no data	no data	no data	no data	4,085.5
Scope 3 (tonnes)		2,695.7	2,118.1	2,183.1	6,892.6	10,416.4

The CO₂ emissions from business travel and paper consumption (office paper and ECB publications) were largely unchanged from the previous year. All CO₂ emissions and the total energy consumption for all business travel by train with Deutsche Bahn (30.9 tonnes of CO₂) were offset.

In 2012, the ECB received around 90,000 visitors and guests, of which approximately 20,000 were invited to conferences and events. The CO₂ emissions estimated for these amounted to 4,059.8 tonnes of CO₂. This figure was calculated on the basis of database entries indicating where participants had travelled from, as well as assumptions regarding the means of transportation. Moreover, these emissions may have already been taken into account by the participants' own organisations, so there is the potential for double-counting.

The use of cooling agents for air conditioning in buildings corresponded to 31.1 tonnes of CO₂ in 2012.



As stated above, Scope 3 emissions were further expanded to include the CO₂ emissions of the external data centre space. These facilities have a high energy consumption and thus contribute 4,085.5 tonnes of CO₂.

7 Environmental performance at the ECB

Since the establishment of the EMS, the ECB has not only attempted to reduce its carbon footprint in absolute terms, but also looked further into new aspects where it could have an impact. In view of its organisational values, in particular transparency and accountability, which support the sharing of information with a sense of openness and responsibility, the ECB has continuously increased the scope of reporting and monitoring of its carbon emissions.

As a result of the move to the new premises in 2014, the operation of the ECB premises is expected to be based on high technical standards. Therefore, environmental awareness-raising and behavioural change will continue to be the focus of the ECB's environment-related objectives and measures.

7.1 Objectives and targets

On the basis of an assessment of its environmental aspects and impact in 2012, the ECB has updated its environmental objectives and targets. The table below outlines, in six categories, the objectives and targets set until the end of 2013 (baseline: 2011 inventory data).

Energy efficiency	Increase in equipment-related energy efficiency and reduction of energy/electrical power consumption.
Material efficiency	Promotion of the paperless office concept. Reduction in office paper consumption by 15%. Promotion of online publications. Reduction in paper consumption of official publications by 15%.
Waste	Reduction of residual waste in ECB offices by following the reuse-reduce-recycle concept.
Emissions	Reduction in total carbon footprint by 10%.
Green procurement	Integration of environmental considerations in procurement activities and training of purchasers.
Raising awareness	Increase in environmental awareness and drive towards a change in behaviour among staff.

7.2 Environmental management programme

In order to further increase environmental performance in accordance with the objectives and targets set by the Executive Board, an environmental management programme containing concrete measures has been formulated.

The current environmental management programme was adopted in accordance with the ECB's environmental framework for the period 2012-13. The table below shows the status of the measures in the programme at the end of 2012.

Environmental management programme for 2012-13		Year	Status	Information
1.	Implement remote IT power management system	2012-13	ongoing	Launched with Windows 7 migration
2.	Consider introducing a "sustainable investment" option for the investment of ECB staff pensions	2012-13	ongoing	Follow-up initiated
3.	Establish green procurement training aimed specifically at procurement staff	2012-13	ongoing	Information sessions; training organised by the Central Procurement Office
4.	Implement eco-rating system in stationery catalogue	2012-13	completed	Marked with "ECO" in product names
5.	Encourage staff to use public transport when commuting to and from work	2012-13	completed	Induction sessions; ECB car-free day 2012; Green Day 2013
6.	Provide staff with detailed information on sustainability opportunities at work and home	2012-13	completed	Environmental staff training, Green ECB community blog on DARWIN (the ECB's Enterprise Content Management System); T2S employee awareness pilot
7.	Further develop internal communication by systematically improving environmental awareness-raising	2012-13	completed	Pilot phase successfully completed
8.	Consider opportunities for increasing the use of state-of-the-art real-time communication tools – video conferencing (incl. small-scale solutions), shared screens, etc.	2012-13	completed	Pilot successfully completed. General applicability under evaluation
9.	Strengthen the role of the ECB's Environmental Representatives	2012	completed	Strengthened mandate implemented
10.	Establish sustainability specifications for the construction of the childcare facility for the new ECB premises and for the child-minding facility at the European School Frankfurt	2012	completed	Sustainability specifications included
11.	Further develop the sustainable procurement framework and guideline, based on the results of the pilot phase	2012-13	completed	Sustainable Procurement Guideline finalised for implementation at end of 2012
12.	Assess the publication of ECB documents online and their use	2012	concept phase	Opportunities are currently being investigated
13.	Develop a plan for migrating the EMS to the new ECB premises	2013	ongoing	Preparations have been initiated
14.	Incorporate environmentally relevant information in the CAFM* system for the new ECB premises	2013	ongoing	Tool is being implemented

* CAFM – Computer-aided Facility Management.

8 Environmental verifier's declaration on verification and validation activities

Prof. Dr.-Ing. Jan Uwe Lieback, with EMAS environmental verifier registration number DE-V-0026, accredited and licensed for scopes 64.1 and 84.1, declares to have verified the whole of the European Central Bank (ECB), registration number D-125-00045, at its site at Kaiserstrasse 29, 60311 Frankfurt am Main, Germany (Eurotower), as indicated in the Environmental Statement for 2013.

The European Central Bank meets 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).

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;
- 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 Environmental Statement of the ECB reflect a reliable, credible and correct image of the organisation's activities within the scope mentioned in this 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. This document shall not be used as a stand-alone piece of public communication.

Done at Frankfurt am Main on 12/07/2013



Prof. Dr.-Ing.
Jan Uwe Lieback
Verifier DE-V-0026



Dr. Imke Schneider
Verifier DE-V-0333

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¹⁰ **Personal data and e-mail privacy policy:**

Legal basis – The policy on the protection of individuals with regard to the processing of their personal data by the Community institutions and bodies is based on Regulation (EC) No 45/2001 of the European Parliament and of the Council of 18 December 2000. The ECB processes personal data in accordance with this Regulation.

Data Protection Officer – Within the ECB, the Data Protection Officer ensures that the provisions of the above Regulation are applied and advises controllers on fulfilling their obligations (see Article 24 of the Regulation).

