



EUROPEAN CENTRAL BANK

EUROSYSTEM

2012 update of the ECB's environmental statement



GREEN ECB



This environmental statement provides information to the public and other interested parties on the environmental performance and activities of the European Central Bank (ECB) in 2011 and 2012. It can be found on the ECB's website (in the "Publications" section).

The ECB was first validated under the EMAS¹ scheme in 2010. This environmental statement is the third to be produced within the EMAS validation cycle. It is a follow-up to the consolidated environmental statement for 2010 and is only complete in combination with that document. It contains updated data for 2011, which are compared with 2008, 2009 and 2010 data.

This updated environmental statement was drafted in accordance with EMAS III standards. In 2013 the ECB intends to publish a new consolidated environmental statement.

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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).

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2 Foreword

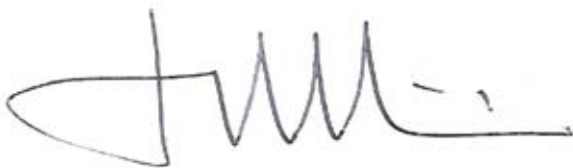
Five years ago the ECB adopted its first environmental policy. The ECB has since faced numerous challenges in its core business, but it has remained committed to fulfilling its obligations with regard to its environmental stewardship.

In 2009 a number of environmental objectives and targets were established by the ECB. Many of these have now been met. We are particularly proud of our achievements in minimising our carbon footprint. Since 2009 we have reduced our carbon emissions by nearly 30%, far exceeding the target set.

Sustainability can only successfully be pursued through global action. We recognise our role as a highly visible institution both in Europe and around the world, and we also embrace our responsibility as a member of the local community. We therefore take great pride in participating in the WWF²'s global "Earth Hour" initiative, side by side with our neighbours in Frankfurt.

As we prepare to move to our modern and highly efficient new premises, the focus of our environmental initiatives must also shift. And before we move, we are looking at how else we can minimise our environmental impact, particularly by involving suppliers in our efforts and raising staff awareness.

As emphasised in the 2010 environmental statement, the ECB aims to be an environmentally aware institution that makes prudent use of natural resources while safeguarding the environment and protecting human health. This is as true now as it was then. As in all of our activities, we embrace the challenge of delivering continuous improvement.



Vítor Constâncio
Vice-President of the European Central Bank

2 WWF, the World Wildlife Fund, is an independent conservation organisation.

3 Environmental performance 2011

As part of the environmental management cycle, the ECB's environmental performance and impact are assessed on an annual basis, with measures to improve its performance being continually developed and introduced.

The ECB's Environmental Management System (EMS) is assessed on a regular basis by means of internal audits, thereby ensuring continuous improvement.

In 2011 the ECB did not identify any new aspects of its activities that had a significant direct or indirect environmental impact. As a result, no modifications were deemed necessary. The ECB carried out one environmental review and ten internal environmental audits in 2011.

The ECB's environmental policy provides the framework for its environmental objectives and activities.

Environmental policy

- The ECB is committed to complying with applicable legal regulations relating to its environmental aspects.
- The ECB is committed to continuously improving its environmental performance and to minimising its ecological footprint.
- In principle, CO₂ emissions caused by the ECB should be reduced, in particular by lowering consumption of energy and natural resources.
- Internal ECB processes should be designed, wherever possible, to be cost-effective and environmentally friendly.
- Staff members are encouraged to contribute actively to achieving the objectives of this policy.

The ECB is convinced that every staff member can contribute to improving the ECB's environmental performance and minimising its ecological footprint. Consequently, a staff training session and two official meetings of the ECB's environmental representatives were organised in 2011. Furthermore, a second "Green Day" staff event took place on 4 October 2011, following the first in 2009. The purpose of the event was to raise awareness of environmental issues among ECB staff and to show the progress made by the "Green ECB" initiative. In addition, the Green Day triggered further networking with and between national central banks, which were also invited to participate.

Relevant information is communicated to ECB staff – e.g. through the Green ECB pages on the intranet and articles in the ECB's staff magazine "Connected". In addition, a leaflet containing basic information about the EMS was prepared for visitors and new staff in 2011, with new staff also being given a short presentation on the ECB's environmental performance and the EMS.

Objectives and targets until the end of 2011³

On the basis of an assessment of its environmental performance and impact, the ECB has established environmental objectives and targets. The table below outlines, in seven categories, the objectives and targets set for year-end 2011. In order to measure the achievement of these targets, selected key figures are monitored and documented in an environmental inventory.

Energy efficiency	Increase in equipment-related energy efficiency and reduction of energy/electrical power consumption. Switch to renewable energy supply in the Eurotower and the Eurotheum.
Material efficiency	Promotion of the paperless office concept. Reduction in office paper consumption of 15% and increase in the share of recycled paper to >50%.
Waste	Reduction of residual waste in ECB offices by following the reuse-reduce-recycle concept.
Biodiversity	Assessment of the ECB's impact on biodiversity and the establishment of objectives for the new ECB premises.
Emissions	Reduction in total carbon footprint of 15%.
Green procurement	Integration of environmental considerations in procurement activities and training of purchasers.
Raising awareness	Increase in environmental awareness among staff and provision of environmental training.

Inventory and key figures

The ECB's ecological impact is ascertained and evaluated by means of an annual environmental inventory. Data are collected on the ECB premises' environmentally relevant input and output streams, namely energy, water, resource consumption and business travel on the input side, and waste, waste water and CO₂ emissions on the output side. Since the ECB's premises are rented and are operated entirely by its landlords, the majority of the inventory data, such as data on energy and water consumption and waste production, are provided by them.

³ Objectives and targets set by the ECB, compared with 2009 data of its environmental inventory.

Comparison of environmental inventory data for 2008, 2009, 2010 and 2011

	2008	2009	2010	2011	Change 2011/2009 (%)
Energy					
Total heating and cooling energy consumption (MWh)	20,087	22,815	24,147	19,608	-14.1%
Total electrical energy consumption (MWh)	21,699	19,498	18,910	19,586	0.5%
of which, renewable electrical energy (MWh)		6,565	6,738	12,658	92.8%
Production of electrical energy (MWh)	3,707	5,333	4,591	3,405	-36.1%
Water⁴					
Fresh water consumption (m ³)	38,413	44,956	43,016	43,466	-3.3%
Waste water (m ³)	38,413	44,956	43,016	43,466	-3.3%
Materials					
Cleaning agents consumption (tonnes)	2.4	1.9	1.2	1.9	-1.1%
Paper					
White paper (thousands of sheets of A4 equivalent)	44	4	0	13	225.0%
Mixed paper (50% recycled, 50% white) (thousands of sheets of A4 equivalent)	22,455	12,330	2,165	423	-96.6%
Recycled paper (100% recycled) (thousands of sheets of A4 equivalent)	2,695	2,660	17,000	17,900	572.9%
ECB publications (white paper) (tonnes)	786	400	550	393	-1.9%
Business travel					
Plane, train and car travel (tonnes of CO ₂)	1,741	1,623	1,515	1,742	7.4%
Waste					
Paper and cardboard waste, recycled (tonnes)	188	149	160	132	-11.8%
Confidential paper waste, recycled (tonnes)	95	92	101	100	8.7%
Residual waste, waste incineration/combusted (tonnes)	201	225	227	229	1.9%
IT waste ⁵ , recycled (tonnes)		29	3	23	-19.5%
Hazardous waste (used batteries and fluorescent tubes) (tonnes)	1.5	11.0	14.3	0.7	-93.4%
Emissions					
Carbon emissions (tonnes of CO ₂)	17,023	13,287	12,254	9,295	-30.0%

4 Water consumption includes all non-technical water used in the ECB's premises that can be directly influenced by staff and suppliers. Waste water is not measured, but is assumed to be equal to fresh water consumption. Waste water and grease from the ECB's canteen is included.

5 IT waste monitoring began in 2009.

Comparison of environmental key figures for 2008, 2009, 2010 and 2011

	2008	2009	2010	2011	Change 2011/2009 (%)
Number of allocated workplaces⁶					
Due date December of the respective year	2,140	2,140	2,250	2,256	5.4%
Energy					
Heating and cooling energy consumption per workplace (kWh per year)	9,386.4	10661.2	10731.8	8691.6	-18.5%
Electrical energy consumption per workplace (kWh per year)	10,139.8	9111.0	8404.5	8681.7	-4.7%
Renewable electrical energy (%)		33.7%	35.6%	64.6%	31,0 pp
Water					
Fresh water consumption per workplace (m ³ per year)	17.9	21.0	19.1	19.3	-8.3%
Paper⁷					
Office paper consumption per workplace (sheets of A4 equivalent per year)	11,772	7,007	8,518	8,127	16.0%
Recycled paper share (%)	10.7%	17.7%	88.7%	97.6%	79,9 pp
Waste					
Paper and cardboard waste per workplace (kg per year)	88.0	69.7	71.1	58.3	-16.3%
Confidential paper waste per workplace (kg per year)	44.3	43.2	45.1	44.5	3.1%
Residual waste per workplace (kg per year)	93.8	105.2	101.0	101.7	-3.3%
Emissions					
Carbon emissions per workplace (kg of CO ₂)	7,954.7	6,209.0	5,446.0	4,120.1	-33.6%

Achievement of targets and significant changes 2009-11

Energy efficiency

The target set for 2011 was to increase equipment-related energy efficiency and reduce energy consumption. The ECB is a computing-intensive organisation with huge computer centres and data storage facilities. Consequently, various IT-related activities were initiated – i.e. the virtualisation and renewal of servers and IT appliances. In addition, energy-efficient multi-functional devices (used to copy, scan, print and fax) were rolled out ECB-wide.

In 2011 consumption of electrical energy per workplace was 4.7% lower than in 2009. However, total electrical energy consumption was almost unchanged from 2009.

Since 2009 the electrical energy supplied for the Commerzbank building has been supplied entirely from renewable sources, without giving rise to carbon dioxide emission. The target of switching the ECB's direct electricity supply for the Eurotower and the Eurotheum to renewable

6 The number of "allocated workplaces" is used in many of the calculations (e.g. for the core indicators). It represents the concept of "number of employees" used in EMAS.

7 Measurement of annual consumption based on annual procurement invoices.

energy sources has also been achieved. Since 2011, 100% of the direct electrical energy supply for these two buildings has come from hydropower, as does all of the electrical energy supplied to the construction site for the new ECB premises.

Total energy consumption for heating and cooling was 18.8% lower than in 2010. This was due mainly to the warm winter of 2011-12, which allowed considerable savings to be made in terms of heating.

The general overhaul of the three combined heat and power units situated in the Eurotower, which began in 2010, was continued in 2011. This explains the significant decline in the ECB's production of its own energy.

Material efficiency

In order to achieve the target set for 2011 of increasing to more than 50% the share of recycled paper in total paper consumption, the ECB switched to 100% recycled paper bearing the "Blue Angel" label for internal printing and copying in 2010. However, tasks and reporting relating to the financial crisis have caused an increase in total paper consumption in recent years. Internal paper consumption in 2011 was up 22.3% on 2009. Taking into account the increase in the number of workplaces, paper consumption per workplace increased by 1,121 pages over that period, a 16.0% increase. Consequently, the target set for 2011 of reducing office paper consumption by 15% was not achieved.

As regards the volume of publications, a 28.6% decline was achieved relative to 2010. However, in 2010 an information campaign relating to the enlargement of the euro area necessitated an exceptionally large amount of printed matter. Consequently, the volume of printed publications in 2011 was approximately the same as in 2009.

Waste

The target of reducing residual waste in ECB offices by applying the "reuse-reduce-recycle" concept was not fully achieved. The amount of residual waste per workplace decreased by 3.3%, but the total amount increased by 1.9%. Consequently, measures targeting the reduction of residual waste in ECB offices will continue over the next few years.

The increase seen in confidential waste since 2009 is probably due to procurement procedures for the new ECB premises and the ECB's new confidentiality regime.

Further extensive IT restructuring took place in 2011, with further decommissioning of IT servers and other IT equipment. This again resulted in a large quantity of IT waste. However, the ECB has awarded a contract to a supplier for the reuse and disposal of IT equipment in line with environmental legislation. Hazardous waste consists mainly of used batteries and fluorescent tubes. The large quantity of hazardous waste in 2009 and 2010 was the result of batteries from emergency units, which were properly disposed of.

Biodiversity

Office work at the ECB's existing 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 an old industrial area in eastern 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.

Emissions

The ECB's target of reducing its CO₂ emissions by 15% relative to 2009 was achieved. Comparing data for 2009 and 2011 reveals a 30% reduction in carbon emissions resulting from electrical energy, energy used for heating and cooling, business travel and paper consumption. Moreover, given the increase in workplaces, CO₂ emissions per workplace decreased by 33.6%. For further information, see the section on the CO₂ footprint on the next page.

Green procurement

The ECB aims to integrate environmental considerations into its procurement activities and to provide training for its dedicated procurement staff. As a first step, a sustainable procurement guideline containing environmental criteria for five different product groups was finalised in 2011. In addition, a pilot project on integrating environmental criteria into tender documents is currently being carried out. Consideration is being given to providing procurement staff with environmental training as part of their general procurement training.

Raising awareness

In October 2011 a second awareness-raising Green Day event was organised by the ECB. In addition, the concept of staff awareness training was established as part of the ECB's standard training and development platform. The first biannual half-day training sessions took place in 2010 and 2011. Owing to other priorities, one training session at the end of 2011 had to be cancelled.

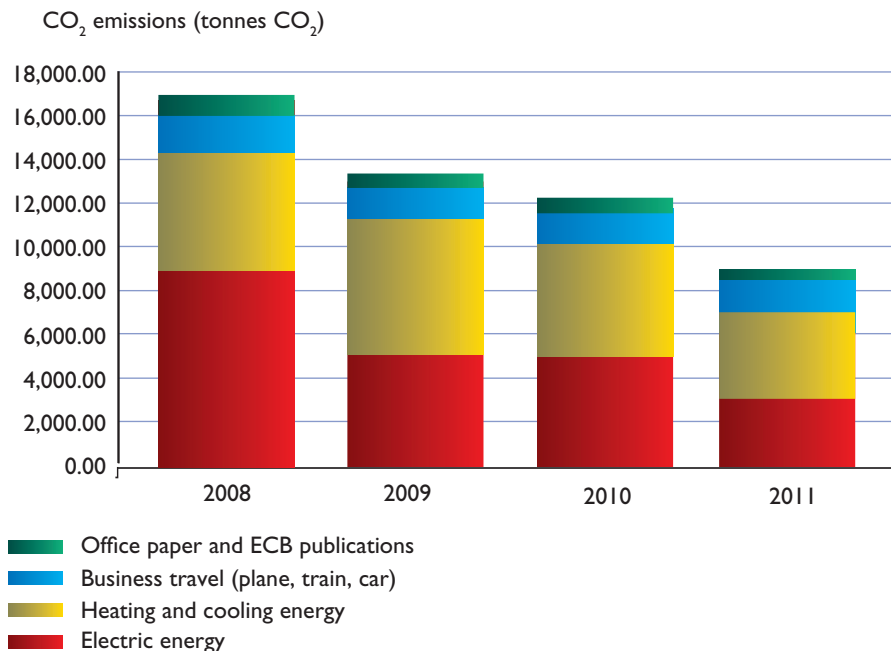
CO₂ footprint in 2011

The ECB's carbon footprint is ascertained on the basis of the environmental inventory figures outlined above.⁸ The calculation includes indirect CO₂ emissions arising from the consumption of electrical energy, energy consumption for heating and cooling, staff business travel and paper consumption. In 2011 the scope of the inventory was extended to include, for the first time, CO₂ emissions resulting from external participants travelling to ECB conferences and special events. In order to ensure that the 2011 footprint remained comparable with those of previous years, the CO₂ emissions estimated for external participants were not included in the graph below.⁹ Other direct CO₂ emissions (e.g. those resulting from the consumption of fuel by the eight ECB cars) were not taken into account, since they are fairly insignificant.

⁸ 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 to understand, quantify and manage greenhouse gas emissions (www.ghgprotocol.org).

⁹ CO₂ estimates 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, as well as Deutsche Bahn conversion factors for rail travel and the conversion factor used by the Institute for Energy and Environmental Research for paper consumption.

The ECB's carbon footprint



Comparing data for 2009 and 2011 reveals a 30% reduction in carbon emissions. These reductions were achieved mainly by switching to electricity from renewable energy sources (i.e. hydropower) in 2011 and as a result of the decline in the primary energy factor of the ECB's local heating supplier in 2011. Owing to increased demand for communication in meetings, particularly as a result of the ongoing financial crisis, CO₂ emissions stemming from business travel were up 7.4% on 2009. However, following an assessment of costs and benefits of carbon neutral business travel by train in the scope of the Environmental Management Programme 2010-11 (point 2) all CO₂ emissions and the total energy consumption of all business travel by train with Deutsche Bahn (28.1 tonnes of CO₂) were offset.

CO ₂ emissions on the basis of the Greenhouse Gas Protocol Corporate Standard	2011
Indirect emissions – "Scope 2"	
Electrical energy (tonnes)	2,660.3
Heating and cooling (tonnes)	4,395.3
Scope 2 (tonnes)	7,055.6
Indirect emissions – "Scope 3"	
Business travel (planes, trains and cars; tonnes)	1,742.4
Paper consumption (tonnes)	496.9
Scope 3 (tonnes)	2,239.3
Total for Scopes 2 and 3 (tonnes)	9,294.9

The CO₂ emissions estimated for external participants¹⁰ on the basis of the Greenhouse Gas Protocol Corporate Standard totalled 4,653.3 tonnes of CO₂. The ECB arrived at this figure on the basis of around 22,000 database entries indicating where participants had travelled from, together with assumptions established by the ECB's environmental experts regarding their means of transportation. Taking this into account, the ECB's expanded carbon footprint totals 13,976.3 tonnes of CO₂. However, these emissions may already have been taken into account by the participants' own organisations, so there is the potential for double-counting.

Indirect emissions – Scope 3 (expanded)	
Conference, seminar and workshop participants (tonnes)	4,653.3
Scope 3 (tonnes)	6,892.6
Total for Scopes 2 and 3 (tonnes)	13,948.2

The main impact of the ECB on the environment and about 75% of its carbon footprint are caused by electric, heating and cooling energy. CO₂ emissions have been reduced considerably since 2009, mainly via technical and organisational measures. Although individual targets, such as the reduction of office paper consumption or waste production have not been achieved, the ECB has taken a big step towards reaching its long-term target of reducing its carbon footprint. As a result, its environmental performance has improved significantly.

¹⁰ In 2011, the ECB received over 50,000 visitors and guests, of which approximately 22,000 were invited to conferences and events.

Environmental Management Programmes

The ECB's first Environmental Management Programme was adopted by the Management Committee for the period 2010-11. The table below shows the final status of the measures in that programme at end-2011. Some of the measures in that first programme were, on account of technical difficulties or other issues, not implemented by end-2011. These measures were transferred to the following Environmental Management Programme, which covers the period 2012-13, so that they could be followed up. In addition, new programme measures were proposed for 2012-13 and adopted in accordance with the ECB's environmental framework.

Environmental Management Programme for 2010-11	Year	Status	Information
3. Consideration of a "sustainable investment" pension investment choice for ECB staff	2011	Transferred ¹¹	In the process of being implemented. Began to be considered in 2011.
4. Consideration of opportunities for reusing IT equipment, and/or local disassembly solutions	2011	Completed	Disposal and reuse agreement concluded with supplier.
5. Establishment of "power-off policy" for non-IT equipment	2010	Completed	Policy established in the ECB's Business Practice Handbook.
7. Increase of energy efficiency of equipment in computer rooms	2010-11	Completed	Virtualisation in computer rooms almost completed.
8. Increase of energy efficiency of office IT equipment and adjustment of procurement guidelines accordingly	2010-11	Completed	Criteria proposed in the sustainable procurement guideline.
9. Implementation of remote IT power management system	2010	Transferred ¹¹	In the process of being implemented. Relaunched as part of migration to Windows 7.
10. Implementation of eco-rating system in stationery catalogue	2010	Transferred ¹¹	On hold. Implementation to be considered when the system is next upgraded.
11. Implementation of briefing on the environmental policy and the EMS in the newcomers' induction sessions	2010	Completed	Presentations to new staff began in January 2012.
12. Implementation of specific green procurement training for purchasers	2011	Transferred ¹¹	In the process of being implemented. Training included in pilot phase, which is set to end in 2012.
14. Implementation of a map, containing EMS-related information on technical plants and equipment in the premises	2011	Completed	"Eco-maps" produced for all ECB premises.
17. Increase the use of telephone-conferencing and video-conferencing	2011	Completed	Sustainable increase in requests recorded.
19. Implementation of staff awareness campaigns and of subsequent Green Day at the ECB	2010-11	Completed	Activities to improve staff awareness took place in 2011, as did the ECB's second Green Day.

Programme measures completed earlier were noted in the 2011 update of the ECB's environmental statement: www.ecb.int/pub/pdf/other/ecb_environmental_statement_2011en.pdf

¹¹ Carried forward to the ECB's Environmental Management Programme for the period 2012-13.

New objectives and targets until 2013

On the basis of a subsequent assessment of its environmental aspects and impacts in 2012, the ECB has updated its environmental objectives and targets. The table below outlines, in six categories, the objectives and targets set for 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 of 15%. Promotion of online publications. Reduction in paper consumption of official publications of 15%.
Waste	Reduction of residual waste in ECB offices by following the reuse-reduce-recycle concept.
Emissions	Reduction in total carbon footprint of 10%.
Green procurement	Integration of environmental considerations in procurement activities and training of purchasers.
Raising awareness	Increase in environmental awareness and drive behaviour change among staff.

Environmental Management Programme 2012-13 with measures to meet the objectives and targets

Environmental Management Programme for 2012-13		Year	Energy efficiency	Material efficiency	Waste	Biodiversity	Emissions	Raising awareness
Transferred measures from the programme for 2010-11								
1.	Implement remote IT power management system	2012-13	x				x	
2.	Consider introducing a "sustainable investment" option for the investment of ECB staff pensions	2012-13						x
3.	Establish green procurement training aimed specifically at procurement staff	2012						x
4.	Implement eco-rating system in stationary catalogue	2013			x			x
New measures								
5.	Encourage staff to use public transport when commuting to and from work	2013					x	x
6.	Provide staff with detailed information on sustainability opportunities at work and home	2012-13	x	x	x		x	x
7.	Further develop internal communication by systematically improving environmental awareness-raising	2012						x
8.	Consider opportunities for increasing the use of state-of-the-art real-time communication tools, e.g. video-conferencing (including small-scale solutions), shared screens, etc.	2012-13	x				x	x
9.	Strengthen the role of the ECB's environmental representatives ¹²	2012						x
10.	Establish sustainability specifications for the construction of the child-care facility for the new ECB premises and for the child-minding facility at the European School Frankfurt	2012	x			x		x
11.	Further develop the sustainable procurement framework and guideline, based on the results of the pilot phase	2012-13	x	x	x	x	x	x
12.	Assess the publication of ECB documents online and their use	2012		x				x
13.	Develop a plan for migrating the EMS to the new ECB premises	2013	x	x	x	x	x	x
14.	Incorporate environmentally relevant information in the CAFM ¹³ system for the new ECB premises	2013	x	x	x	x	x	x

¹² In particular, by implementing a mandate for the members of the group with organisational responsibilities.

¹³ Computer-Aided Facility Management (CAFM) is the support of facility management by information technology, including graphical visualisation of processes and data.

4 Environmental verifier's declaration

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 this updated environmental statement for 2012.

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, we 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 scopes mentioned in the environmental statement.

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

Done at Frankfurt am Main on 26 June 2012



Prof. Dr.-Ing.
Jan Uwe Lieback
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