

Environment report 2015



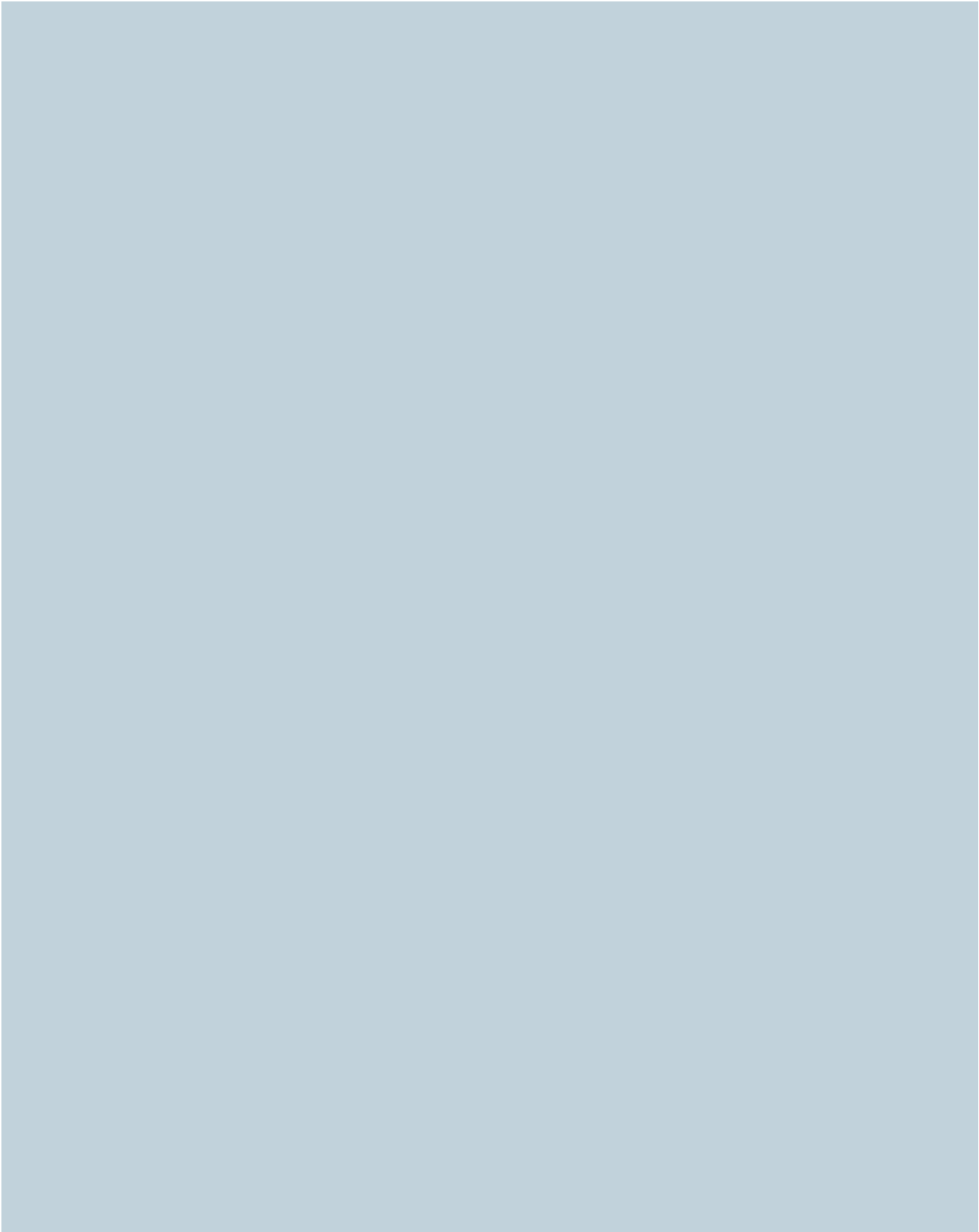


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introduction

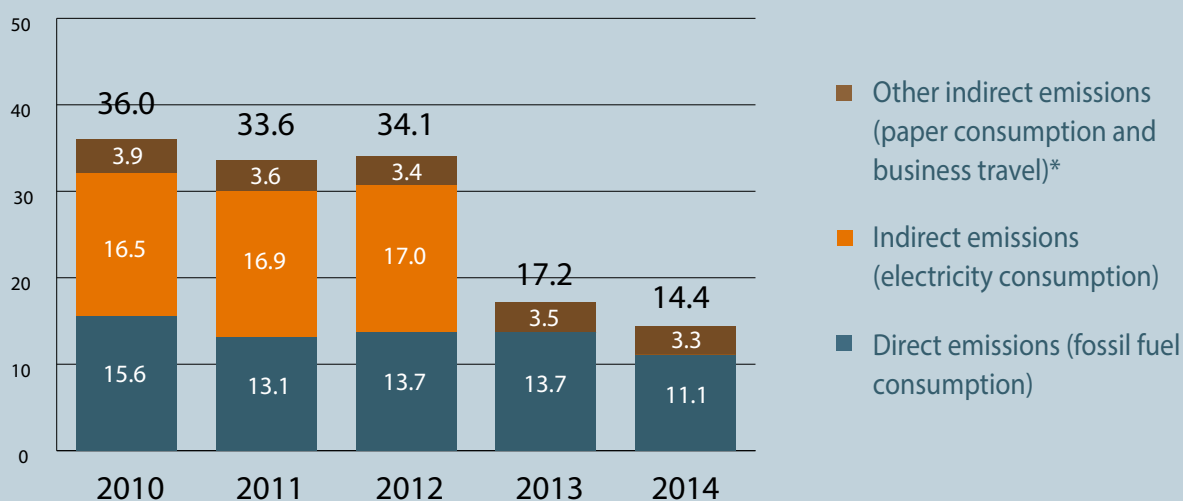
The Bank of Italy has been working to reduce its ecological footprint for several years now, especially in sectors such as banknote production that can have a significant impact on the environment.

The Environmental Policy Document – published by the Bank for the first time in 2008 and updated in 2015 – illustrates the strategic goals to be achieved in this field: sustainable use of resources, optimal waste management, sustainable mobility, green procurement, and an eco-friendly culture. On the basis of these objectives, there is a two-year plan for concrete initiatives to progressively improve the Bank’s environmental performance.

This edition of the Environment Report, in line with the previous years’ reports published on the website, gives an account of the Bank’s environmental impact and includes information from the ‘Report on the Operations and Activities of the Bank of Italy’. Environmental impact is described by means of quantitative indicators, with the aim of providing an overall view both of the improvements achieved over time and of areas requiring greater attention in the future.

FIGURE 1

CARBON FOOTPRINT - BANK OF ITALY Carbon dioxide emissions (thousands of tons of CO₂)



* The data were recalculated using a more precise method of measurement than the one used in the previous editions of the Report.

introduction

The indicators are calculated in reference to national and international guidelines and relate to the Bank's premises indicated in the Methodology section on page 24.

Generally speaking, the Bank's ecological footprint has been reduced in the last five years (Figure 1). CO₂ emissions, already halved in 2013 following the purchase of electricity from renewable sources (which usually achieve zero-emission ratings), were further reduced in 2014.

100%

The share of electricity from renewable sources in 2014

The Bank is committed to reducing energy consumption, achieving greater energy efficiency and promoting the use of renewable resources. These objectives are pursued through periodic extraordinary maintenance work on buildings and technological installations and also by means of operational measures.

The most important energy-saving interventions in 2014, which are still under way, involve the Bank of Italy's Genoa branch: following re-roofing to improve thermal insulation, work began on replacing the central heating system – with a new high energy performance system – and the door and window fittings.

Various projects began in 2014 to replace light fittings with LED lamps, which consume less and last longer. In Rome, at Palazzo Koch alone, more than 430 LED lamps have been fitted thus saving about 80,000 kWh of electricity annually.



Photo 1: *Solar energy panels installed at the Banknotes Directorate.*

As regards renewable energy, since 2013 the Bank has bought its electricity exclusively from certified renewable sources. In 2015, the Bank installed its first electricity-producing photovoltaic plant at the Banknotes Directorate (Photo 1).

It is able to produce, completely autonomously, about 36,000 kWh of electricity per year. Two solar energy production systems for domestic hot water were installed respectively at the residential training centre in Perugia and, in addition to the one already in operation, at the Donato Menichella Centre in Frascati.

In February 2014, for the fifth year running, the Bank took part in Energy Saving Day, turning off the external lighting of its buildings and raising staff awareness of how small changes in everyday behaviour can help to protect the environment.

Energy consumption by the Bank in the last five years is illustrated in Figure 2 and includes both electricity (for its office buildings, banknote production plants, and the two data processing centres) and fossil fuels for heating (natural gas and a residual amount of heating oil).

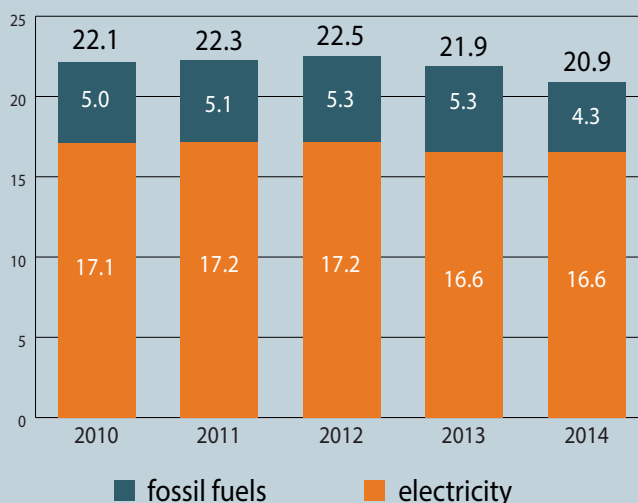
Over 2014 as a whole, total electricity consumption did not change compared with the previous year while there was a significant reduction in the consumption of heating fuels (Figure 2).

-5%

The reduction in tonnes of oil equivalent (TOE) between 2010 and 2014

FIGURE 2

ENERGY – BANK OF ITALY Total energy consumption (thousands of tonnes of oil equivalent)



An analysis of the energy consumption breakdown, given in Figure 3A, shows a reduction in energy consumption (mainly natural gas) at the Donato Menichella Centre in Frascati, which hosts one of the Bank's two data processing centres.

-16%

The reduction in energy consumption at the Bank's branches between 2010 and 2014

The banknote production unit and the Largo Bastia site in Rome, which hosts the second data processing centre, maintained the same levels of consumption as the previous year.

Figure 3B gives the data for the office buildings: energy consumption at Palazzo Koch in Rome and the other offices in the area was about the same as in the previous year, while a reduction of about 9 per cent in consumption was recorded at the Bank's branches compared with 2013.

FIGURE 3A

ENERGY – BANK OF ITALY Total energy consumption (thousands of tonnes of oil equivalent)

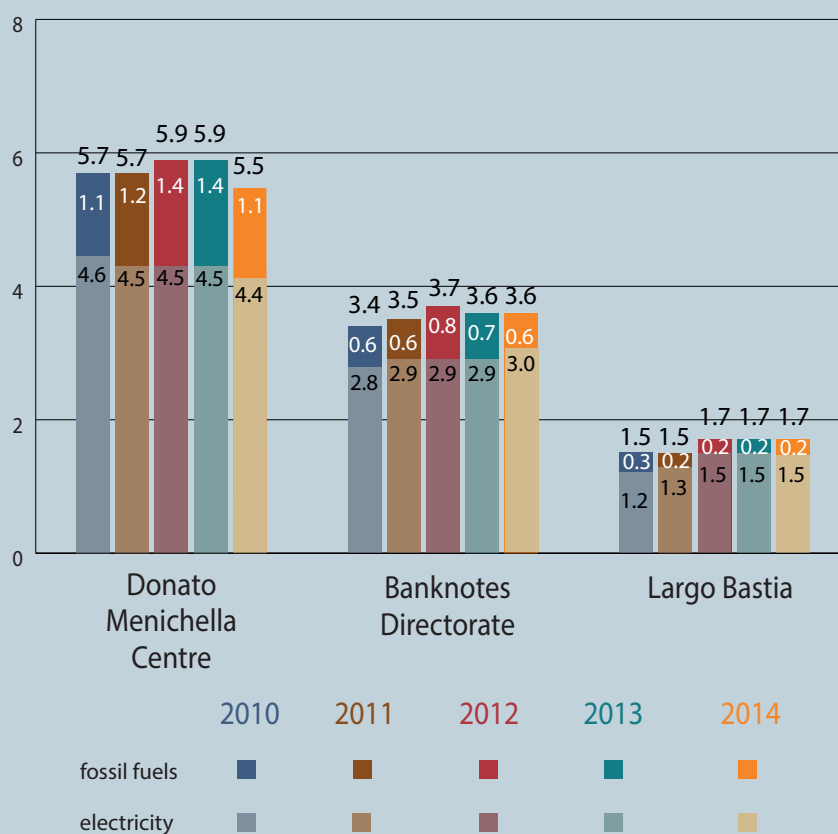
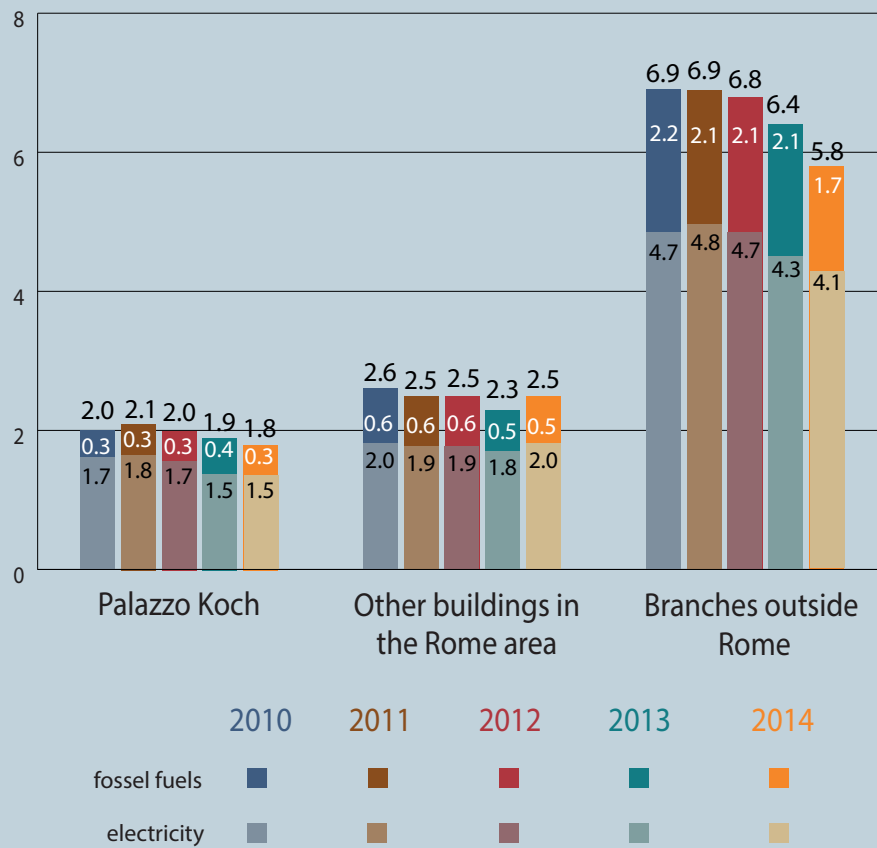


FIGURE 3B

ENERGY – BANK OF ITALY

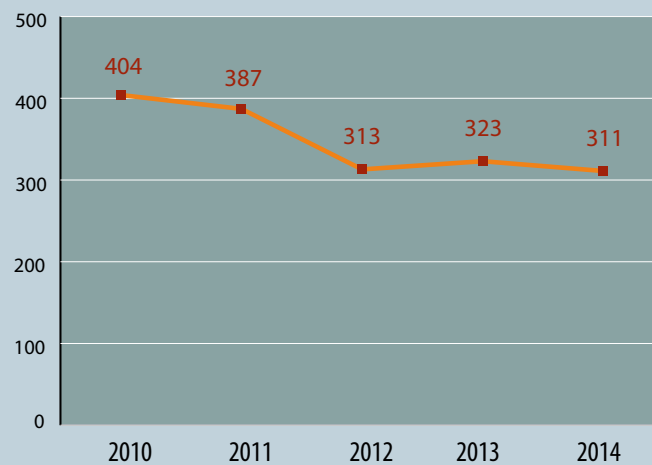
Total energy consumption (thousands of tonnes of oil equivalent)



In the Bank's buildings water is used mainly for domestic purposes. When possible, non-potable water is used for irrigating the green areas or for industrial purposes.

FIGURE 4

WATER – BANK OF ITALY
Consumption of potable water in the period 2010-2014
(thousands of cubic metres)



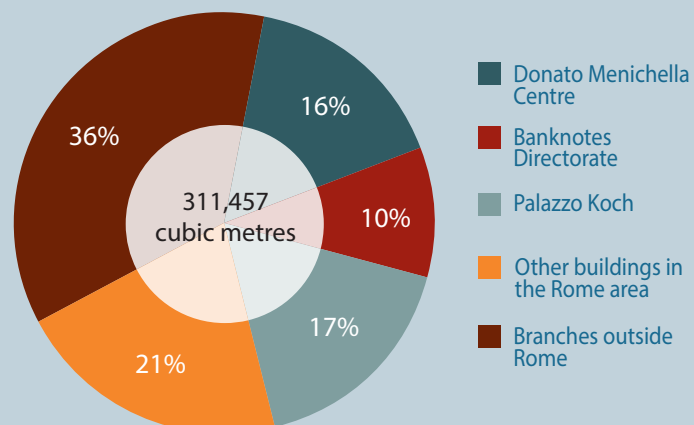
-23%

The reduction in the Bank's potable water consumption from 2010 to 2014

In 2014 the Bank consumed about 311,000 cubic metres of potable water, about 4 per cent less than in the previous year. Compared with 2010, potable water consumption was down by about 23 per cent overall (Figure 4).

FIGURE 5

WATER – BANK OF ITALY
Total potable water consumption of water (per cent)



The largest consumers of water are the banknote production plant and the Donato Menichella Centre: in 2014 together they accounted for just over a quarter of the Bank’s potable water consumption (Figure 5) and about 90 per cent of non-potable water consumption. In 2014 there was also a significant level of potable water consumption at Palazzo Koch due to the presence of a building site.

FIGURE 6

WATER – DONATO MENICHELLA CENTRE
 Water consumption in the period 2010-2014 (thousands of cubic metres)



Figure 6 shows the trend in water consumption over the last five years at the Donato Menichella Centre, where mainly non-potable water is used: in 2014 there was a slight increase in consumption compared with the previous year.

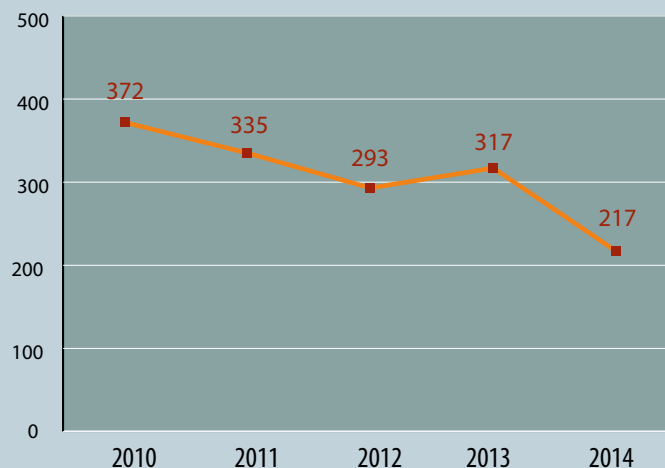
17

The number of A4 sheets of paper used on average each day by a Bank employee

The Bank produces a considerable volume of documents in terms of publications, reports, and external correspondence. For several years, there has been a progressive reduction in the print runs of the Bank's publications, which have systematically been made available online. At the same time there has been a series of projects to trim processes and digitize paper documents. With the digitized document management system, which includes electronic signatures and certified email, all internal correspondence has been digitized and is now also the norm for external correspondence (96 per cent in 2014). Work has also continued on completing the electronic treasury service, thanks to which the receipts for payments to the State Balance Sheet have been digitized (estimated at about three million A4 sheets of paper per year). Further categories of treasury documents will be digitized in the early months of 2016, with an estimated saving of more than 1.7 million A4 sheets per year.

FIGURE 7

PAPER – BANK OF ITALY Supply of A3 and A4 paper for office use (thousands of kilograms)



-42%

The reduction in the supply of paper for office use between 2010 and 2014

Lastly, with the aim of reducing the amount of paper used in weight terms, since May 2014 the Bank has been purchasing packs of paper weighing 75 grams per square metre rather than the standard weight of 80 grams.

FIGURE 8

PAPER – BANK OF ITALY

Recycled paper as a percentage of total paper supplied

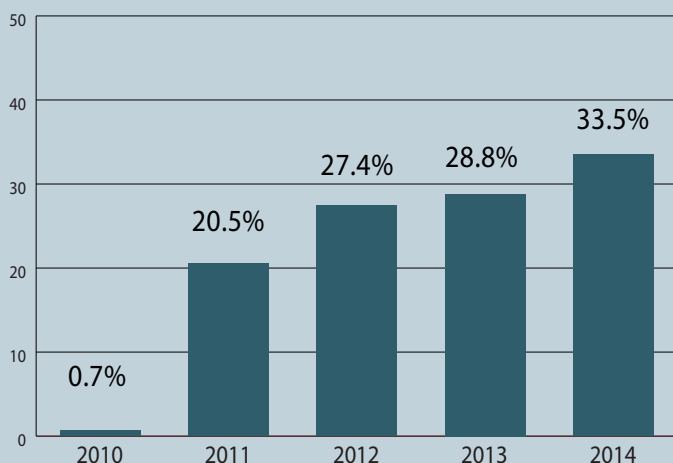


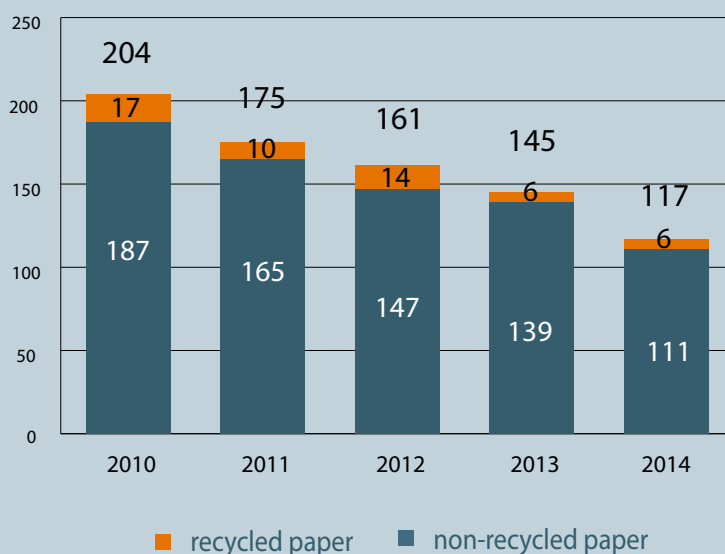
Figure 7 shows the downward trend of paper purchased in packs for office use in the last five years: the slight increase in 2013 is probably linked to the creation of larger stocks.

Besides the reduction in paper consumption, for some years now it has been possible to use packs of recycled paper (100% recycled cellulose fibres) with ecological quality marks – such as the European brand Ecolabel - that guarantee

FIGURE 9

PAPER – THE BANK'S PRINTING AND PUBLISHING DIVISION

Paper used for publications (thousands of kilograms)



-43%

The reduction in the supply of paper used to print the Bank's publications between 2010 and 2014

paper

very high environmental standards for all stages of production. The percentage of recycled paper bought in 2014 was more than 33 per cent of the total (Figure 8); in the Bank's branches this percentage reached around 40 per cent.

In 2014, about 117,000 kilograms of paper were used by the Printing and Publishing Division to print the Bank's publications overall, around 19 per cent less than the previous year (Figure 9).



Photo 2. Detail of some of the Bank's premises in the Rome area. Top: Palazzo Koch, the banknote production unit (Banknotes Directorate), and Largo Bastia, in Rome; the Donato Menichella Centre in Frascati.

waste

Over the last few years, various initiatives have been taken both to reduce at source the quantity of waste produced and to promote recycling or waste-to-energy processing.

Office waste (paper, empty toner cartridges, dead batteries, etc.) and staff canteen waste (leftover food plus glass, plastic and metal containers) are collected separately and sent for recycling.

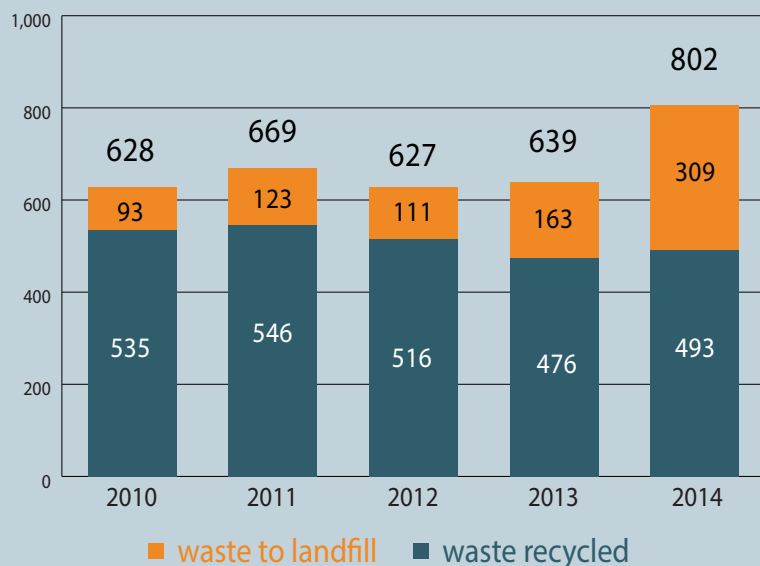
In 2014, as in previous years, meals prepared in the staff canteens but not consumed were donated to charitable organizations (the canteens in Rome and Frascati alone donated more than 19,000 meals and more than 700 kilograms of bread). In addition, since the end of 2014 automatic drink dispensers are being installed for the staff canteens (the drinks provided are produced with ingredients purchased according to fair trade standards): this initiative will eliminate at source the production of waste, estimated as more than a million cans and plastic bottles per year. At the same time, the environmental impact associated with the production, transport, final disposal/recycling of these bottles and cans will be reduced.

1,025,000

The number of cans and plastic bottles produced as waste in the staff canteens and coffee bars in the Rome area

FIGURE 10

WASTE – BANKNOTES DIRECTORATE Special waste produced (thousands of kilograms)



In addition, in order to make good social use of goods no longer used, rather than disposing of them, in 2014 some 600 pieces of furniture and 400 personal computers that are now unsuitable for use in the Bank were donated to schools, associations and non-profit organizations upon request.

Special waste originating from the banknote production unit and the printing of the Bank's publications are managed so as to recover as much as possible (through recycling and waste-to-energy processes) and, at the same time, to minimize the use of landfill.

Figure 10 shows the quantity of special waste generated by the banknote production unit in the last five years. In 2014 there was an increase both in the quantity of special waste produced and in the percentage of waste sent to landfill sites. This was due to the unforeseen stoppage of the unit's water treatment system, which meant that about 197 tonnes of liquid, that would otherwise have been purified within the unit itself, had to be disposed of as special waste. In parallel, the shutdown of the water treatment system led to a reduction in the volume of industrial effluents going into the public sewers as liquid discharges.

shredded banknotes

The Bank of Italy's Banknotes Directorate prints and issues euro notes. At its General Cashier Directorate in Rome and at 32 of its branches, banknotes in circulation are periodically sorted to ensure that the quality standards for cash are maintained. During the sorting process any worn or damaged banknotes considered unfit for circulation are shredded.

FIGURE 11

WASTE – BANK OF ITALY Production of shredded banknote waste (thousands of kilograms)

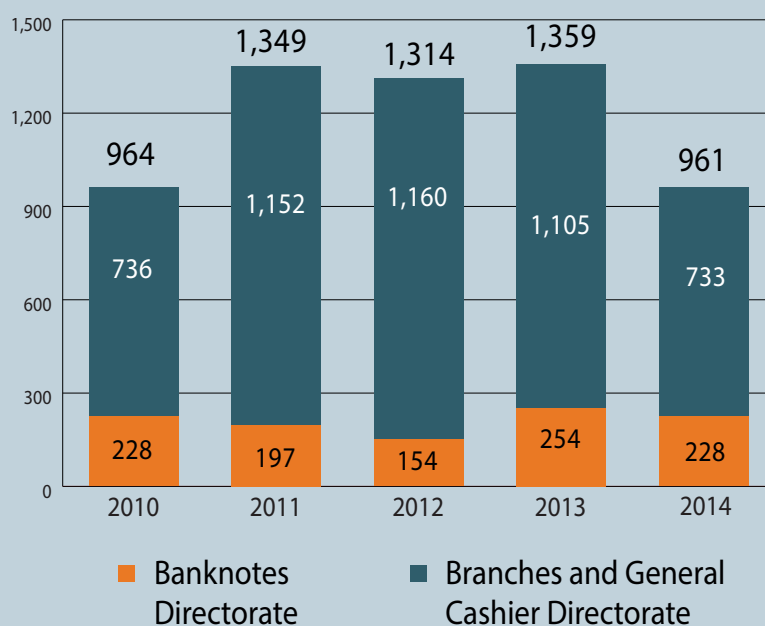


Figure 11 shows the production of paper waste in the last five years as a result of the banknote production process (discards, trimmings and paper used to start up the printers) and waste consisting of shredded banknotes.

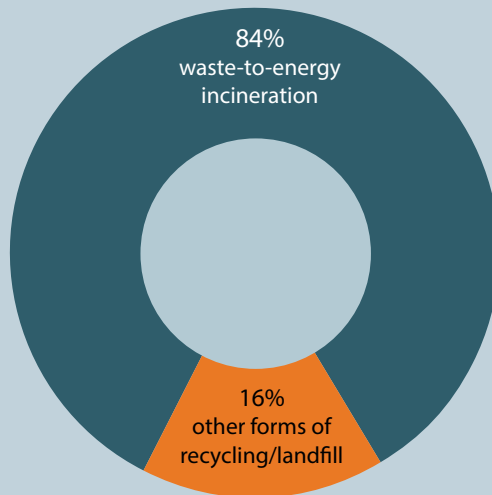
In line with other Eurosystem central banks, a project began several years ago to promote the recovery of energy from this waste, which is the most environmentally effective way of dealing with it.

shredded banknotes

FIGURE 12

WASTE – BANK OF ITALY

Disposal of shredded banknote waste



As shown in Figure 12, in 2014 the share of shredded banknote waste sent to waste-to-energy incineration plants was 84 per cent, compared with 81 per cent in 2013.



Photo 3. *Briquettes of shredded banknotes*

sustainable mobility

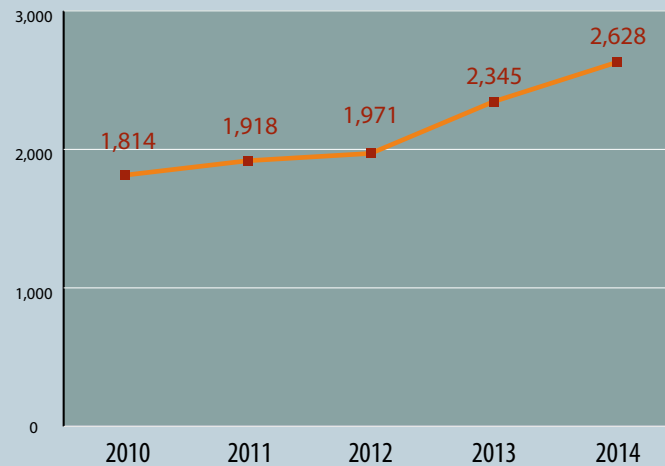
+6%

The increase in kilometres travelled in 2014 compared with 2013

Business travel has an impact on the environment in terms of CO₂ emissions. To reduce harmful emissions connected with staff travel to and from work and encourage the use of electric vehicles (cars, motor cycles and bicycles), the number of charging points at the Bank's main offices in Rome has steadily increased (by the end of 2015 more than 20 such points will have been installed).

FIGURE 13

TRAVEL – BANK OF ITALY Number of videoconferences held



359

kilograms of CO₂ generated per staff member for business travel

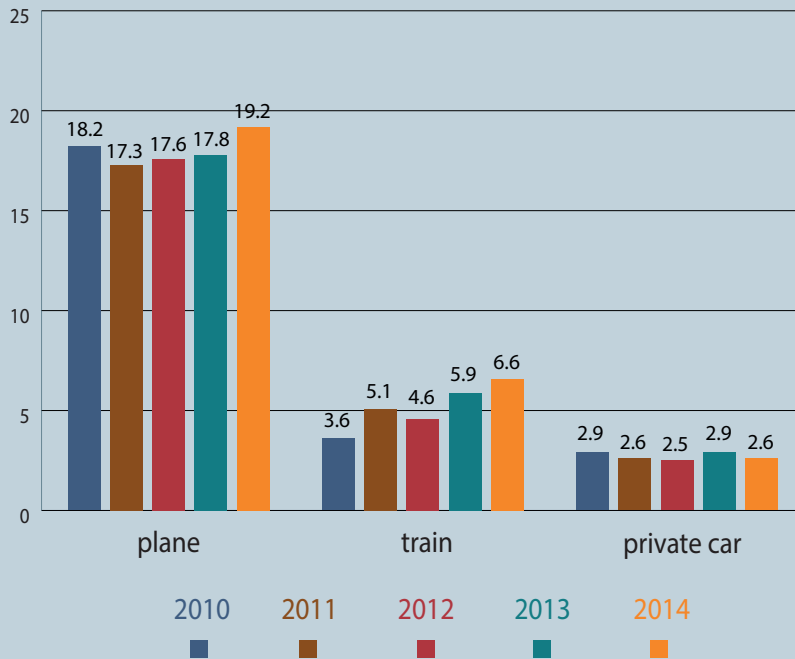
To reduce business travel and associated emissions, 80 sets of videoconference equipment have been installed at the Bank's main offices: 2,628 videoconferences were held in 2014, about 12 per cent more than the previous year (Figure 13). There are also some initiatives under way to increase the use of this equipment by allowing staff to participate in the videoconference sessions from their office or personal computer or from mobile devices such as tablets and smartphones. Furthermore, to reduce harmful emissions from vehicles used for logistical reasons for travel between offices in the Rome area, two traditional petrol/diesel engine vehicles were replaced by two electrically powered ones and by the end of 2015 an additional six vehicles will be similarly replaced: to meet the new demand, 8 electric vehicle charging points have been installed.

sustainable mobility

FIGURE 14

TRAVEL – BANK OF ITALY

Comparison of distances travelled by means of transport in the period 2010-2014 (millions of kilometres)



The total number of kilometres travelled for business purposes in 2014 increased by more than 6 per cent compared with the previous year. Figure 14 shows the kilometres travelled in the last five years using the different means of transport,

FIGURE 15

BUSINESS TRAVEL – BANK OF ITALY

Percentage of Rome-Milan trips travelled by train

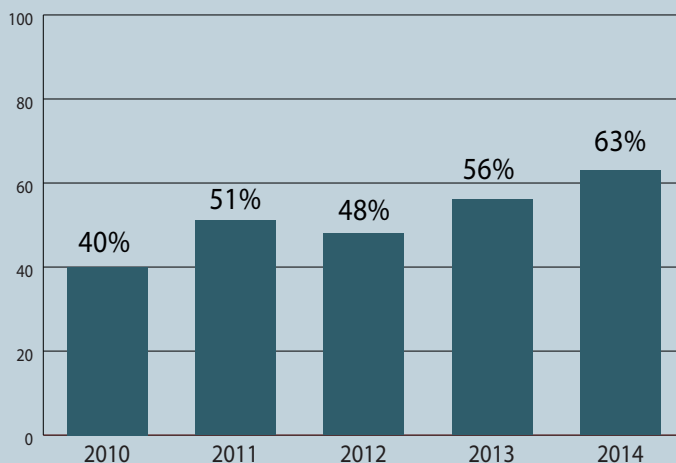
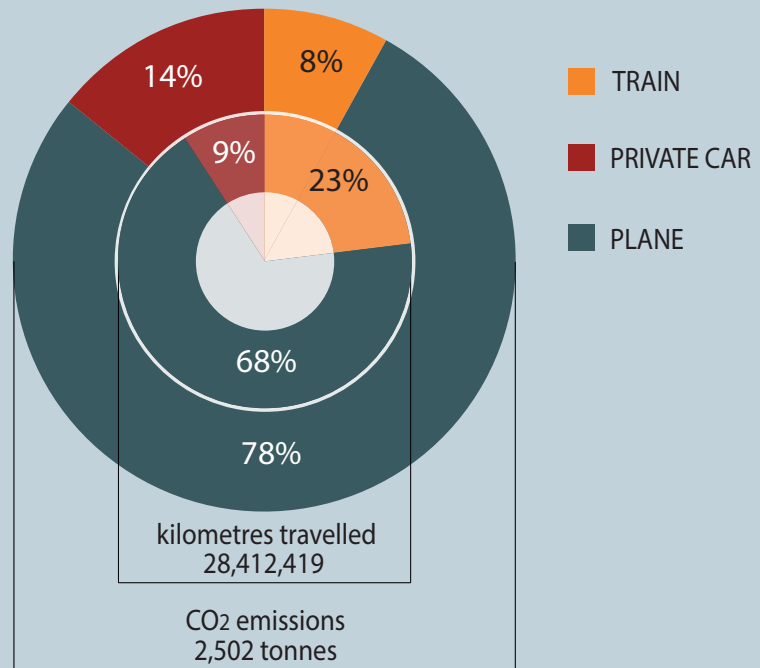


FIGURE 16

BUSINESS TRAVEL – BANK OF ITALY Percentage of CO₂ emissions and distances travelled in relation to means of transport used in 2014



recalculated with a more precise method than that used for previous editions of the Environment Report: compared with 2010, the figure shows an increase in the number of kilometres travelled both by plane and by train, which has a lower environmental impact.

For the most frequently travelled route, between Rome and Milan, again in 2014, train travel was preferred over air travel (Figure 15).

The inner circle of Figure 16 gives the number of kilometres travelled using the different means of transport as a percentage of the total; the outer circle gives the CO₂ emissions for each one. This shows that while train travel accounts for 23 per cent of the kilometres travelled, it produces only 8 per cent of total emissions for business travel.

green procurement

The Bank intends to reduce its ecological footprint, including by means of a targeted policy on ‘green’ procurement, in the knowledge that green public procurement policies can help to guide the market towards developing more eco-sustainable goods and services with reduced environmental impact over the whole lifecycle.

In tenders for the procurement of goods and services, where possible, environmental protection certificates are among the requirements, there are higher scores for ‘greener’ companies in procedures favouring the most economically advantageous tender, and green clauses for service execution. In addition, over and above the regulatory requirements, suppliers are encouraged to adopt the best practices for workplace health and safety and in the corporate social responsibility field. The procurement procedure for staff canteen services requires the contractor to have obtained environmental certification under ISO 14001. In addition to clauses aimed at reducing waste (see the section on waste on page 14), the contract in force since October 2014 requires food to be produced locally, where possible, and cleaning products to have a European ecological quality mark (Ecolabel). It also calls for food supplies that are grown on land confiscated from the mafia and from fair trade sources – in keeping with its social responsibility commitments.

The procurement procedure for cleaning services for the Bank’s premises in Rome and Frascati, in addition to environmental certification under ISO 14001, requires that all the products used comply with the minimum environmental standards for the sector and more points are awarded for Ecolabel products.

In 2014 the Bank purchased multifunction printers that adhere to the best ecological and energy standards under a “green” agreement available on the public administration procurement website.

Lastly, the procurement procedure for office stationery required the supply of articles with low environmental impact such as notepads made of recycled paper, loose-leaf sheets of paper obtained from recycled paper and ecological glue, felt tip and highlighter pens made of recycled or biodegradable plastic.



methodology

51

The increase in the number of employees compared with the previous year

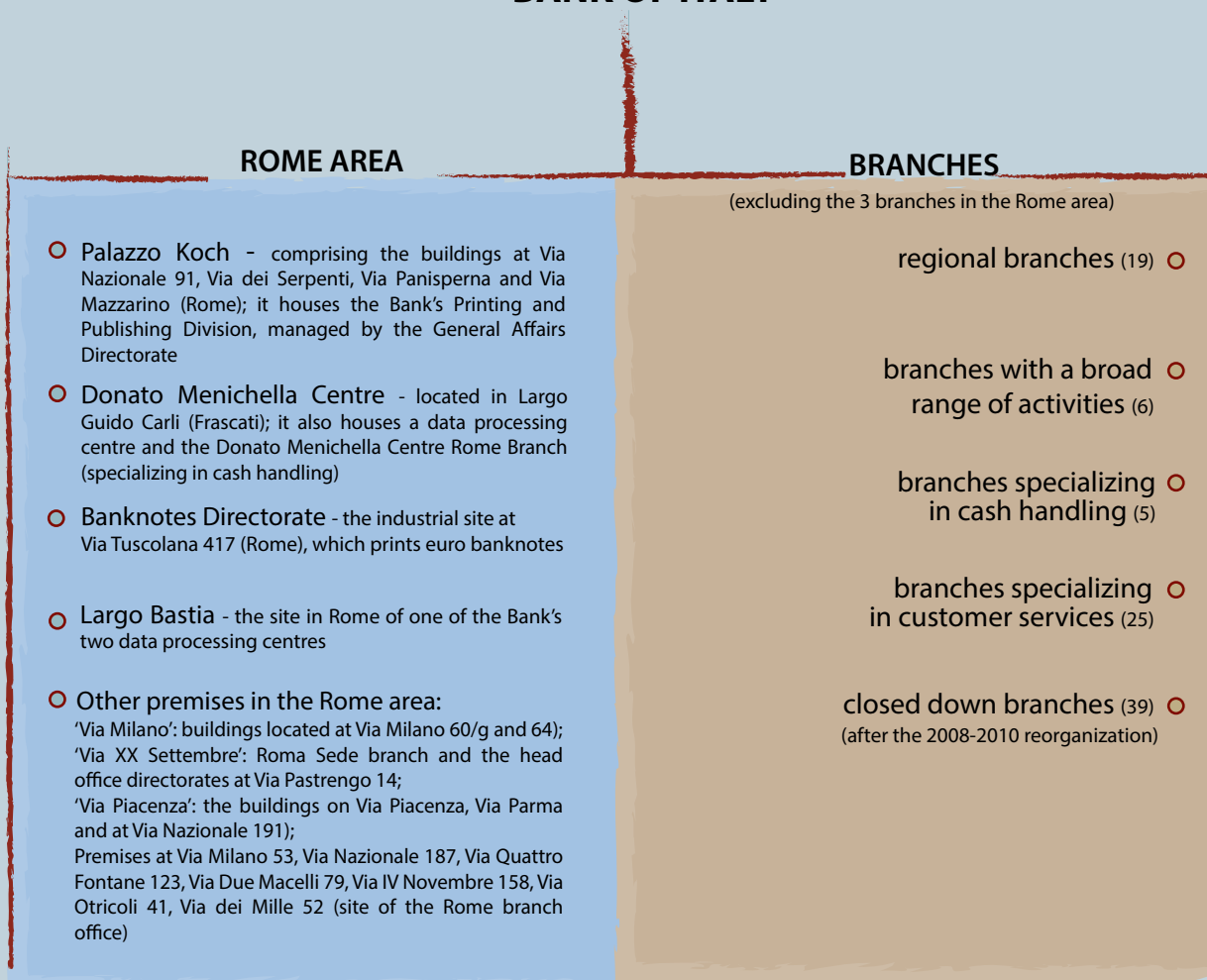
The data contained in this report have been updated to 31 December 2014 by the Bank of Italy's Organization Directorate, on the basis of the information provided by the various units of the Bank.

All the figures contained in the report specify the buildings or facilities to which they refer (see the legend in Figure 17 below). In particular the figures labelled 'Bank of Italy' refer to the buildings where the head office directorates and branch offices carry out their work.

The number of staff employed by the Bank of Italy at 31 December 2014 was 7,078, of whom 163 were on secondment to other organizations in Italy and abroad; there were 4,580 employees in the Rome area.

FIGURE 17

BANK OF ITALY



To calculate the environmental indicators 'per employee' (e.g. paper consumption per capita), no account was taken of the presence on Bank premises, even on a continuous basis, of staff from external companies, Carabinieri police officers, or visitors.

The environmental indicators were calculated according to the relevant national and international guidelines. In particular, for CO₂ emissions resulting from energy consumption and business travel, we followed the guidelines on the application to banks of the 'GRI Global Reporting Initiative – edition G4', published by ABI Lab (2014), in turn based on the 'Greenhouse Gas (GHG) Protocol'. To calculate energy consumption in terms of tonnes of oil equivalent (TOE), reference was made, for electricity, to the conversion factor contained in the 'MISE Circolare del 18 dicembre 2014' and, for fossil fuels, to the 'National Inventory Report', published by ISPRA (2013).

