



BANCA D'ITALIA
EUROSISTEMA

Environment Report 2018



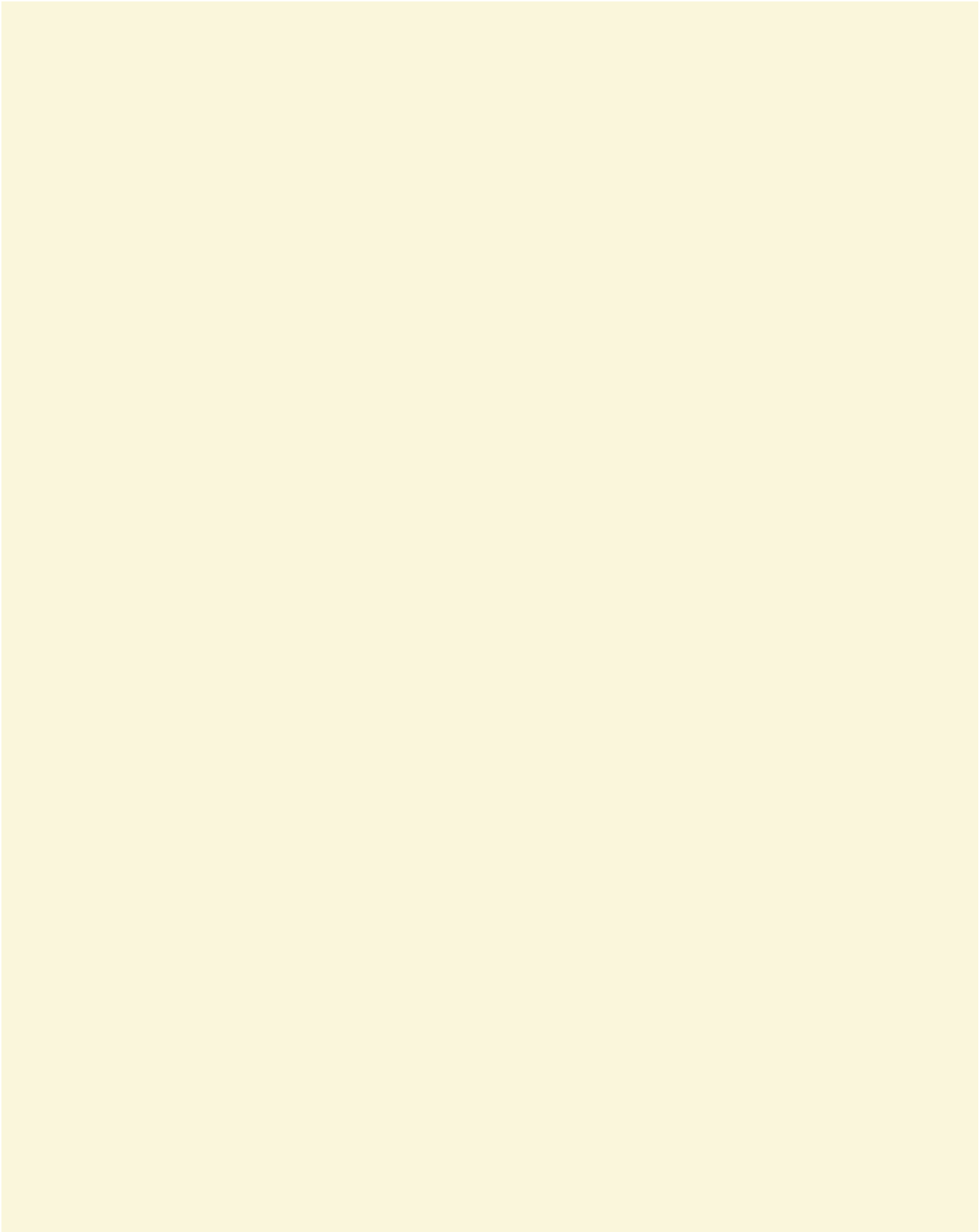




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We have been working for several years now to reduce our ecological footprint, especially in the areas that can have a significant impact on the environment, such as the banknote printing process, which since 2004 has been certified under ISO 14001. In 2018 the ISO 50001 certification was obtained for the management of energy at the Centro Donato Menichella, the site with the highest energy consumption (more than 25 per cent of the total).

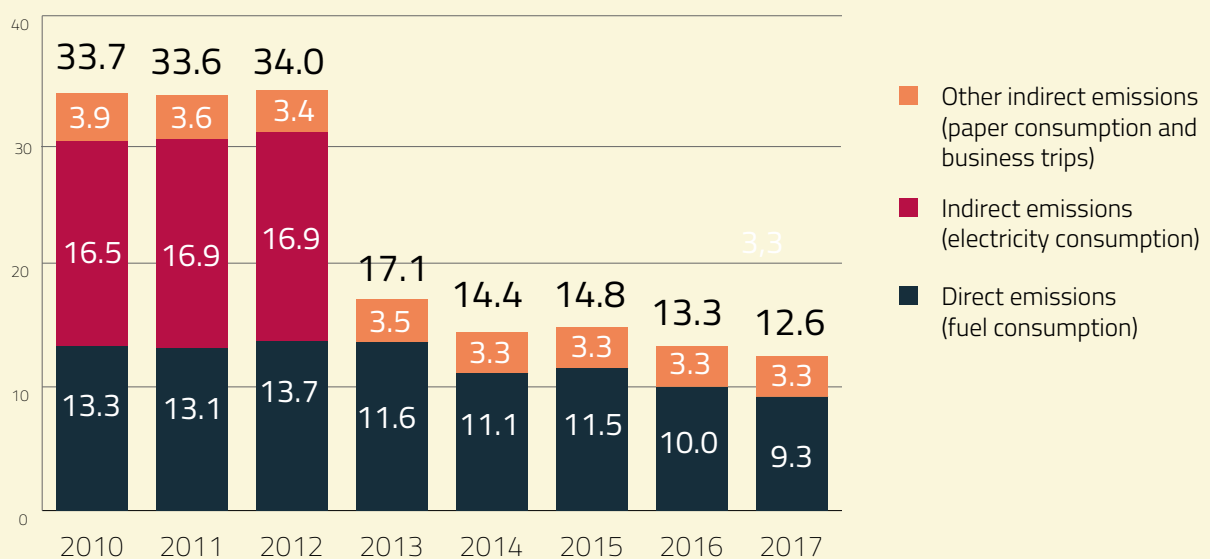
The Bank's environmental policy objectives include the rational use of energy resources, optimal waste management, sustainable mobility, green procurement and the promotion of an environment-friendly culture. Based on these objectives, a twice-yearly action plan is drawn up to progressively improve the Bank's environmental performance.

The Environment Report describes the impact of the Bank's in-house activities on the environment and provides an overview of both the improvements achieved and the areas requiring further attention.

FIGURE 1

CARBON FOOTPRINT – BANK OF ITALY

carbon dioxide emissions (thousands of tonnes of CO₂)



introduction

The Bank's ecological footprint has been steadily reduced over time; in 2017 emissions of CO₂ were at their lowest in recent years (Figure 1). Last year these emissions, which were already halved in 2013 following the purchase of electricity from renewable sources (conventionally assigned a zero-emission rating), declined further with respect to 2016, thanks to the lower consumption of heating fuels.

Since 2015 the key environmental indicators, together with other management indicators, have been included on a dashboard used by the heads of the various organizational structures: environmental impact is one of the variables taken into consideration when making decisions.

The indicators are calculated with reference to the relevant national and international guidelines and refer to the buildings listed in the methodology section.





THE ENVIRONMENTAL POLICY OF THE BANK OF ITALY

The environment is a common good whose protection requires the commitment of all members of society, starting with the institutions. In accordance with its strategic vision and mindful of its responsibility to the community and to future generations, the Bank of Italy – in addition to ensuring compliance with the legal requirements in this field – is determined to steadily improve its environmental performance by pursuing the following objectives:

- **Sustainable use of resources**
 - progressively improving the energy efficiency of the Bank's premises, technological systems and IT equipment;
 - promoting the production of energy from renewable sources;
 - reducing paper consumption and using water resources more sustainably.
- **Optimal waste management**
 - reducing the production of waste at source;
 - recovery of waste produced and, specifically, of shredded banknote waste;
 - finding new solutions for goods no longer in use, including for social purposes.
- **Sustainable mobility**
 - promoting the use of means of transport with lower environmental impact both for business travel and for staff who commute to and from work;
 - increasing opportunities for remote working and communication online.
- **Green procurement**
 - adopting a procurement policy that creates incentives for suppliers to have the best environmental and social practices, including in the field of workplace health and safety;
 - procurement of work equipment and consumer goods with low environmental impact over their entire life cycle, if they meet all the functional requirements.
- **Environment-friendly culture**
 - training and ongoing awareness-raising;
 - encouraging those with whom the Bank of Italy interacts to pay more attention to environmental issues;
 - analysis and research on environmental themes and cooperation with other institutions.

This commitment will take the form of:

- periodic planning of objectives and concrete improvements;
- innovative and effective logistical, technical and management solutions;
- appropriate tools for monitoring and control;
- systematic measurement of all the main environmental indicators;
- periodic and transparent information on the commitments undertaken and the outcomes.

The management and staff of the Bank of Italy are firmly committed to this path of improvement; the results achieved will be analysed periodically in order to define future courses of action.

Rome, September 2015

THE GOVERNOR





100%

*Share of electricity
from renewable
sources in 2017*

Reducing energy consumption, achieving greater energy efficiency, and promoting the use of renewable resources are key objectives pursued through periodic extraordinary maintenance work on buildings and technological installations as well as through the adoption of operational measures.

Energy audits were carried out in various buildings to identify ways of limiting consumption.

At the Centro Donato Menichella, the site with the highest energy consumption (more than 25 per cent of the total), which also houses one of the Bank's two data processing centres, an energy management system was installed and certified under ISO 50001. Operational procedures for optimizing energy management have been adopted as have sophisticated systems for measuring and monitoring consumption. Numerous interventions are also under way to increase the efficiency of the energy systems.

At the banknote production plant, ranked second for consumption, work is under way to replace the current evaporation towers that disperse the heat produced by the air-conditioning systems with other, more energy efficient, towers. In addition to reducing the use of industrial water, this will save an estimated 100,000 kWh of electricity per year.

At the Largo Bastia site in Rome, which houses the second data processing centre, a refrigerator unit was replaced by a more modern system and a gas oil heating plant replaced by a new plant powered by natural gas. Work is now under way to insulate the building's roof and walls.

In each of the two data processing centres five high-efficiency modular units (islands) were installed, which together provide around 40 per cent of the overall processing power.

In several of the Bank's buildings in Rome and in the branches a project is under way to introduce LED light fittings, which consume less energy and last longer: at the Centro Donato Menichella (in addition to the 1,200 fittings already in place), a further 1,600 bulbs are being installed, reducing energy consumption by an estimated 300,000 kWh per year.

A new heating plant powered by natural gas has been installed in the Florence branch, replacing the old one that ran on gas oil, with benefits both in terms of energy efficiency and lower emissions of pollutants.



With a view to achieving greater energy efficiency, a number of buildings have been targeted for extraordinary maintenance work. The heating systems have been upgraded in the Piacenza, Arezzo and Livorno branches, and air conditioning systems upgraded in the buildings in Via Piacenza and Via Quattro Novembre in Rome. In Palazzo Koch and the Milan, Genoa and Catanzaro branches, some doors and windows have been replaced with more energy-efficient fittings and the degree of insulation of the building covers increased. The first Green roof has been installed on the building that hosts the Bank's Bolzano branch: the vegetation now covering the roof has enabled it to be better insulated and energy consumption has been reduced.

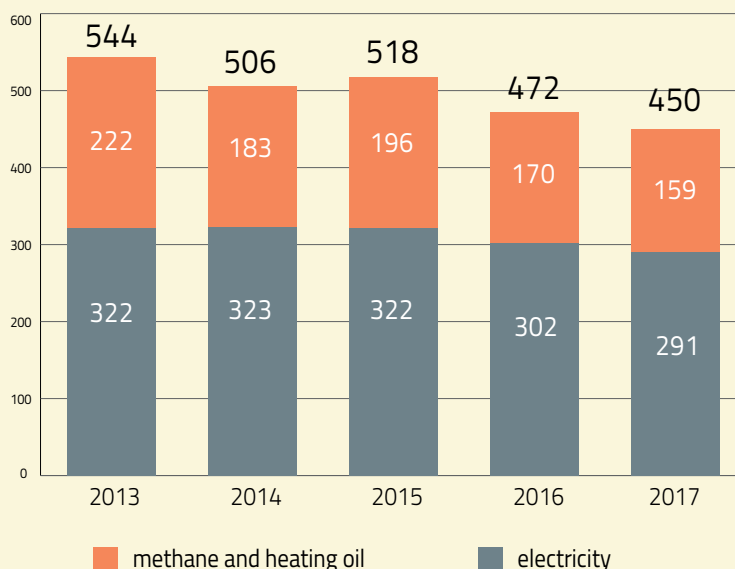
Work is continuing on a complete overhaul of the building and installations of the premises at Via delle Quattro Fontane in Rome, involving the building envelope, the door and window fittings, and the heating and lighting systems. Once complete, the work will ensure a high level of energy efficiency (and the building will be upgraded from class F to B). By the end of the year, extraordinary maintenance work will begin on the facades, covers and windows, and heating and light systems of the building on Via Milano 60 in Rome, enabling a substantial improvement in the energy efficiency of the building, which will be upgraded from class E to A2.

-17%
*Energy consumption
from 2013 to 2017*

FIGURE 2

ENERGY – BANK OF ITALY

Total energy consumption (terajoules)





7

MWh of total energy consumed per day by each employee

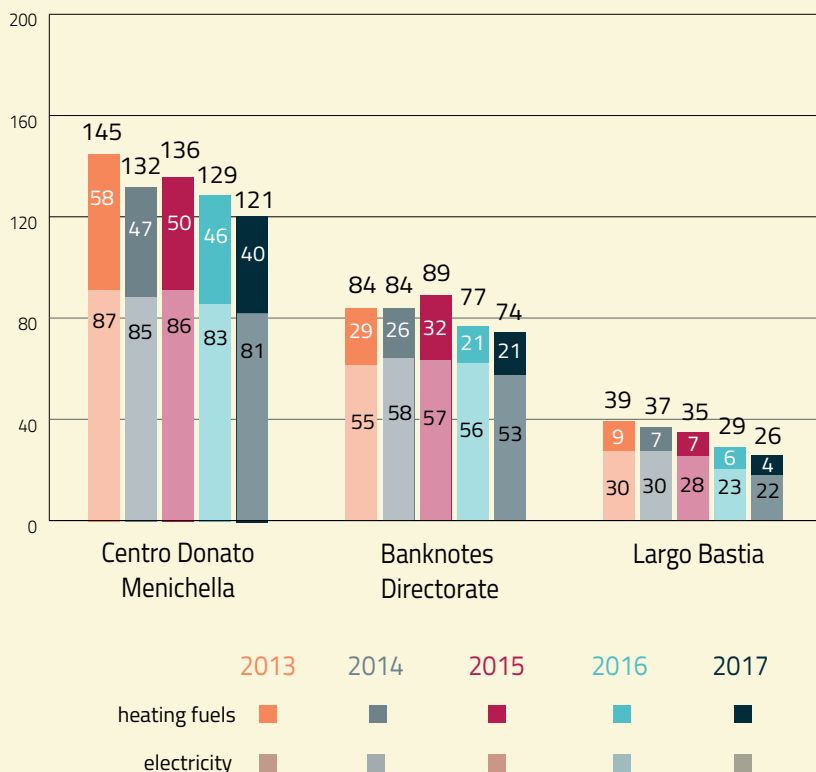
The Bank purchases electricity exclusively from certified renewable sources. The Bank's first electricity-producing photovoltaic plant is in operation at the banknote production plant and in 2017 produced, entirely autonomously, 37,070 kWh of electricity. A second electricity-producing photovoltaic plant has been installed at the Catania branch. By the end of 2018 two more plants will have been installed at the branches of Catanzaro and Genoa; work will also begin on installing a photovoltaic plant capable of producing around 380,000 kWh per year at the Centro Donato Menichella.

In February 2018 the Bank renewed its participation in Energy Saving Day, switching off the external lighting of its buildings and carrying out initiatives to raise staff awareness of how small changes in behavioural patterns can help to safeguard the environment. In 2017 a training course was organized on energy efficiency for employees who are responsible for the technical oversight of the buildings.

FIGURE 3

ENERGY – BANK OF ITALY

Total energy consumption (terajoules)





energy

In 2017 energy consumption hit a ten-year low. Compared with the previous year, total energy consumption fell by 3.6 per cent, while that of heating fuels (almost entirely natural gas) declined by more than 6 per cent (Figure 2).

A breakdown of the energy consumption data (Figure 3) reveals a fall in consumption in the two sites (Centro Donato Menichella and the Largo Bastia) that host the Bank's data processing centres, processing power and the total number of persons employed being equal. Consumption levels also fell at the banknote production plant.

Figure 4 shows the data on the buildings in which office work is the main activity: compared with 2017, the consumption of energy and heating fuels was unchanged at Palazzo Koch while it declined at the Bank's other Rome premises and in its branches.

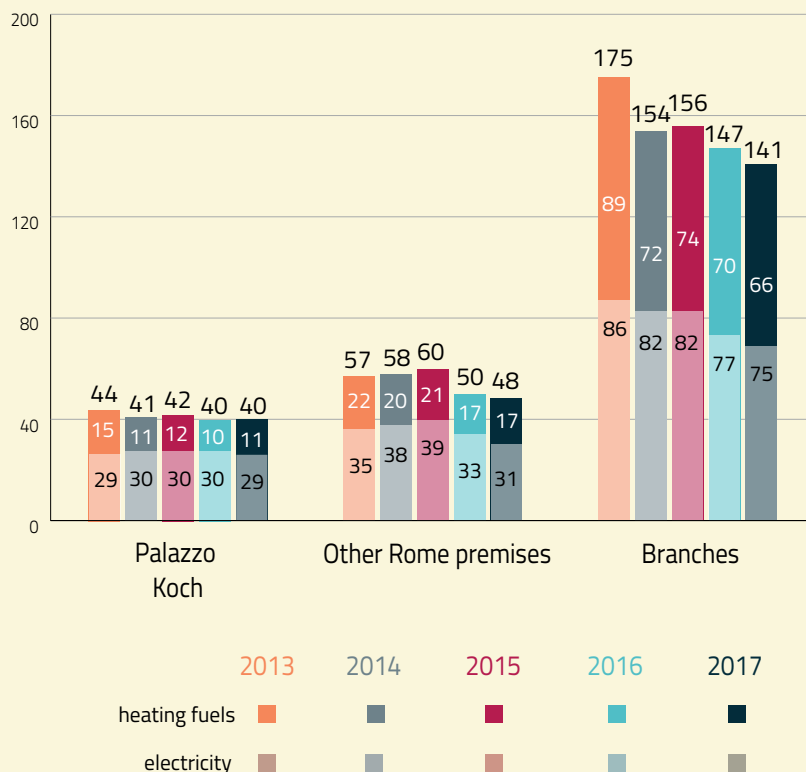
-19%

Energy consumption of the branches from 2013 to 2017

FIGURE 4

ENERGY – BANK OF ITALY

Total energy consumption (terajoules)





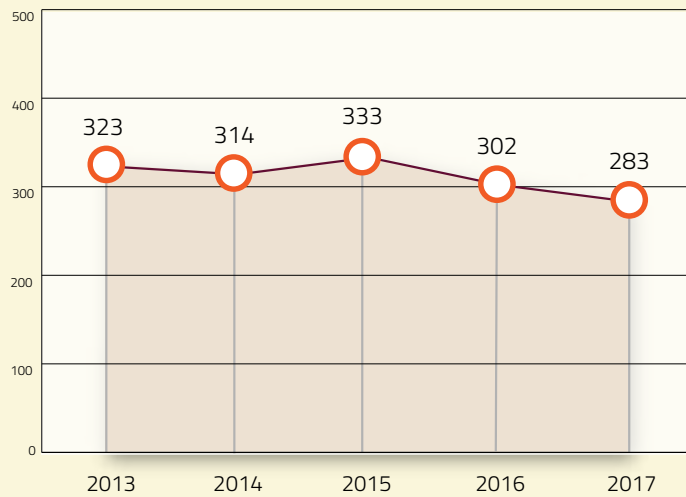
On the Bank's premises water is mainly used for domestic purposes; when possible, non-potable water is used, for example for irrigating green areas or for industrial purposes (production of banknotes and air-conditioning systems).

FIGURE 5

WATER – BANK OF ITALY

Consumption of potable water from 2013 to 2017 (thousands of cubic metres)

-12%
Consumption of
potable water
from 2013 to 2017

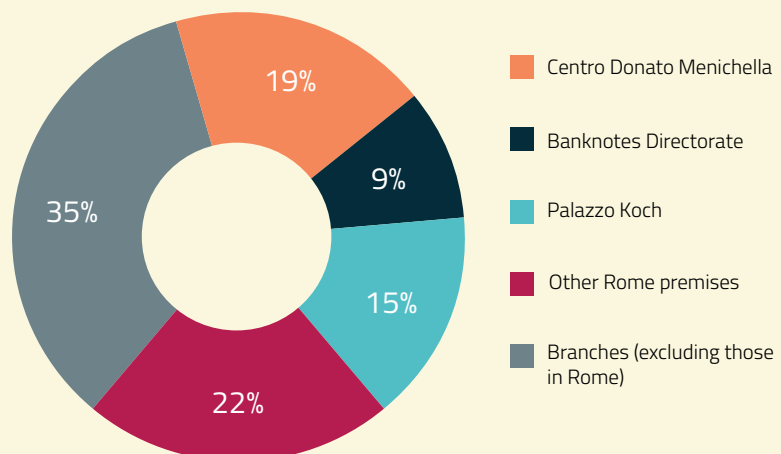


In 2017 total potable water consumption amounted to 283,000 cubic metres, down from the previous year (Figure 5).

FIGURE 6

WATER – BANK OF ITALY

Total potable water consumption (per cent)





water

The Bank's three main buildings consume more than 40 per cent of the total water requirements (Figure 6).

For the Centro Donato Menichella in 2017 additional non-potable water was needed for irrigating green areas and for air-conditioning systems owing to the particularly hot summer season (Figure 7).

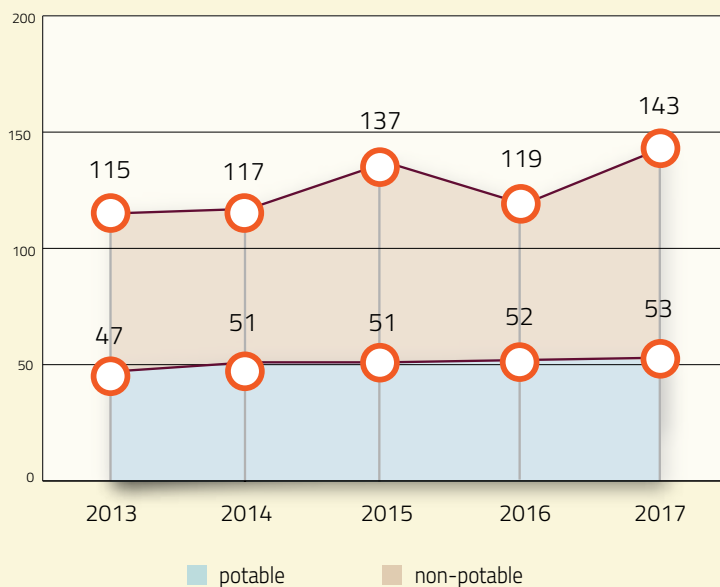
The weather conditions during the summer also led to increased consumption in Palazzo Koch, amounting to 43,000 cubic metres.

At the banknote production plant water consumption amounted to around 27,000 cubic metres of potable water and 93,000 cubic metres of non-potable water, down on the previous year.

FIGURE 7

WATER – CENTRO DONATO MENICHELLA

Water consumption from 2013 to 2017
(thousands of cubic metres)



18.2
Average number of
A4 sheets consumed
daily per employee

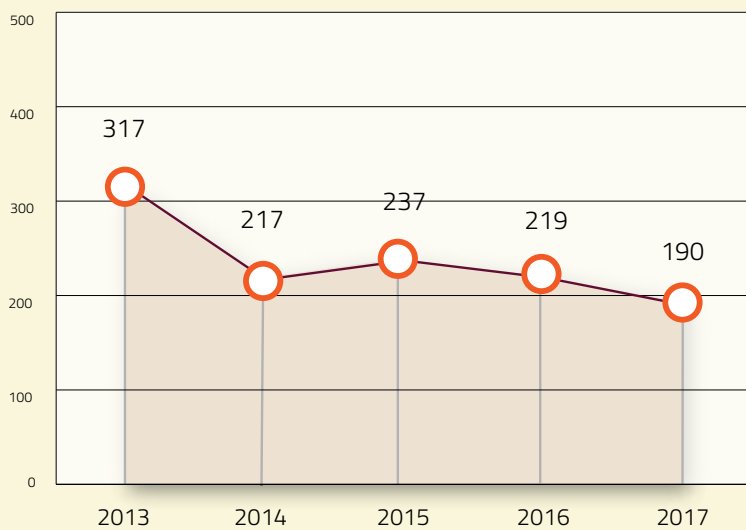
The Bank produces a wide range of documents, external correspondence, reports, and financial education manuals.

Over time numerous projects have been undertaken to dematerialize paper documents and to streamline processes. With the digitized document management system, which incorporates electronic signatures and certified email, all internal correspondence has been digitized; external correspondence mostly occurs via mail with the exception of a small, though progressively decreasing, share of letters signed electronically and sent on paper.

FIGURE 8

PAPER – BANK OF ITALY

Supplies of A3 of A4 reams of paper for office use
(thousands of kilogrammes)



-40%
Paper purchased for office use
from 2013 to 2017

With the gradual installation of new IT processes to support accounting activities in the branches, in the coming years it will be possible to achieve an annual saving of around 5,000,000 sheets of paper: the objective is to work towards the complete dematerialization of the documentation used in the various branch activities.

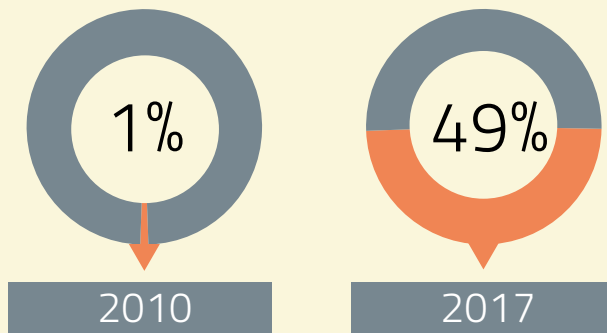


paper

FIGURE 9

PAPER – BANK OF ITALY

Recycled paper as a share of the total



With the objective of reducing paper usage, since 2014 the Bank has been purchasing reams of paper weighing 75 grams per square metre rather than the standard 80 grams. Since 2018 the Bank's purchases of white paper have all borne the ecological quality certificate [Ecolabel](#), which certifies compliance with the highest environmental standards at all stages of production.

To raise awareness among staff members of the need to reduce printing volumes, a Paperless Day was held, during which guidelines were released on how to limit printouts and to promote greater use of IT tools.

In 2017 purchases of paper reams for office use were at their lowest recorded levels in the last five years (Figure 8).

For several years now, it has been possible to use eco-certified (including the Ecolabel brand) A4 paper made entirely from post-consumer recycled fibres. In 2018 recycled A3 paper was also purchased. Just under 50 per cent of total purchases in 2017 were of recycled paper (Figure 9), the highest percentage recorded in the last five years; in 9 branches and at Italy's Financial Intelligence Unit the share of purchases of recycled paper was over 90 per cent.

-7.4%

Paper used to print the Bank's publications from 2013 to 2017

All of the Bank's publications are available on its website. Print runs of paper copies have been gradually reduced over time: for example, for the Annual Report the number of copies printed has gone down from 14,000 in 2007 to 3,700 in 2017.

Following the increase recorded in 2015 due to the printing of a large number of workbooks for secondary school students, last year the consumption of paper used to print publications was largely unchanged from that of the previous year (Figure 10).

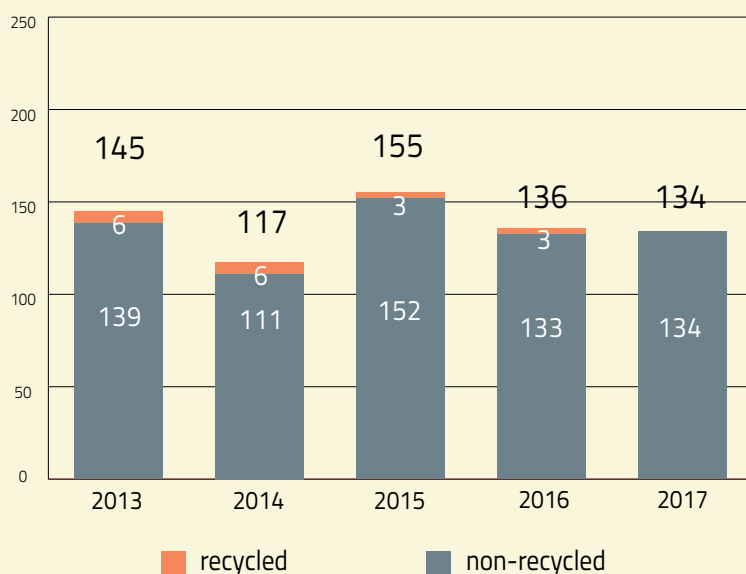
Thanks to the introduction of new digital printers, which are more flexible and have a lower environmental impact compared with the previous offset systems, in 2018 a print on demand policy was introduced for all the Bank's publications: this will lead to a further reduction in paper consumption and deliver greater efficiency in publication production and management processes.

To reduce its paper footprint further, Ecolabel-certified paper was used for the five paper-based publications printed on the occasion of the Governor's Concluding Remarks of 28 May 2018, which together account for around 10 per cent of the total volume printed.

FIGURE 10

PAPER – THE BANK OF ITALY'S PRINTING CENTRE

Paper used for publications (thousands of kilogrammes)







The priorities are to reduce the quantity of waste produced at source, promote reuse and recycling, as well as to favour energy recovery rather than disposal in landfills.

Office waste and staff canteen waste are collected separately and sent for recycling. As in previous years, uneaten meals prepared in the staff canteens were donated to charitable organizations (more than 16,000 meals were donated by the canteen at the Centro Donato Menichella).

At the Bank's Rome offices there are collection points for employees' old glasses and mobile phones; in 2017 some 480 pairs of glasses were donated to a non-profit association, which sorts them and sends them on to the populations of developing countries; 320 mobile phones were donated to a non-profit association that helps disabled persons find work. In addition, again in order to make beneficial social use of old goods, in 2017 more than 740 items of furniture, which were no longer fit for purpose in the Bank, were donated to schools and non-profit associations upon request.

Special waste originating from the printing of the Bank's publications and the banknote production plant is managed with the objective of recovering as much of it as possible (through recycling and waste-to-energy processes) and, at the same time, of minimizing landfill waste.

The replacement with digital systems of the offset printing machines used for the Bank's publications led to a drastic reduction in the production of special hazardous waste as well as of atmospheric emissions.

Figure 11 shows the quantity of special waste generated by the design and printing of banknotes: in 2017 more than three quarters of the waste produced was allocated for recycling.

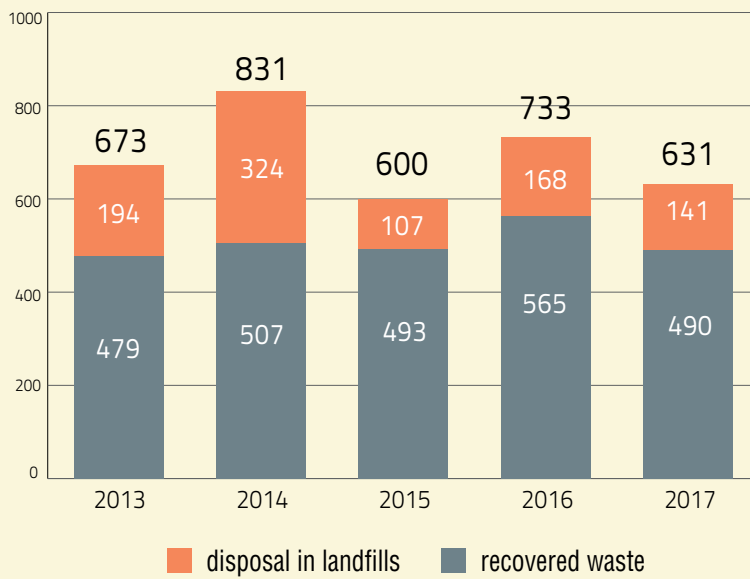


waste

FIGURE 11

WASTE – BANKNOTES DIRECTORATE

Special waste produced (thousands of kilogrammes)



shredded banknotes



The Bank of Italy prints banknotes at the production plant run by the Banknotes Directorate. At the Currency Circulation Management Directorate in Rome and at 35 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 12

WASTE – BANK OF ITALY

Production of waste from shredded banknotes
(thousands of kilogrammes)

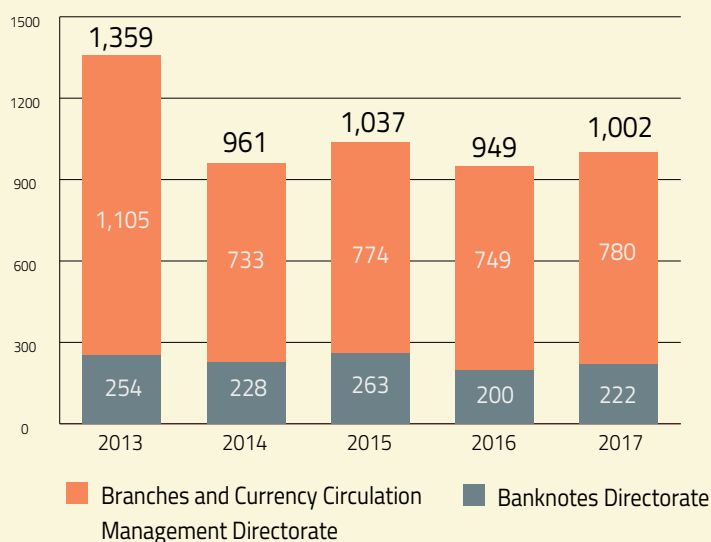


Figure 12 shows the production of paper waste in the last five years as a result of the banknote production process (scrap paper, trimmings and paper used to start up the printers) and waste consisting of worn banknotes that have been shredded at the end of the sorting process.

In line with the 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. In 2017, 86 per cent of shredded banknote waste was sent to waste-to-energy incineration plants, slightly more than in previous years (Figure 13).

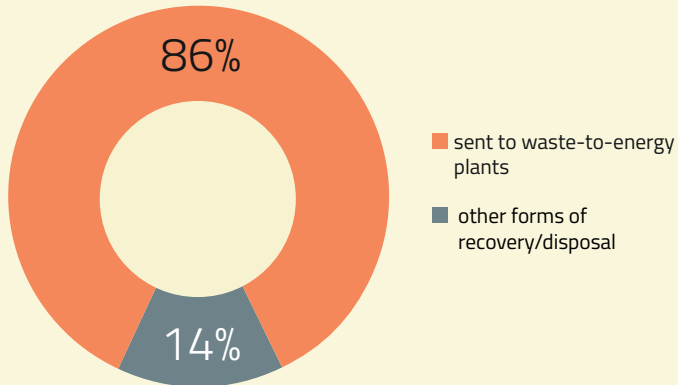


shredded banknotes

FIGURE 13

WASTE – BANK OF ITALY

Percentage by weight of shredded banknote waste





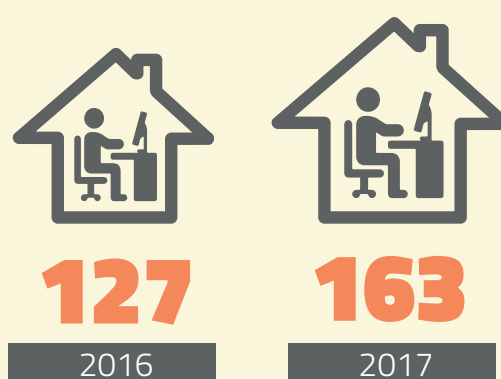
Travel to and from work and for business trips has an impact on the environment in terms of emissions of carbon dioxide and pollutants.

The increasing number of persons teleworking is helping to reduce the environmental impact of work-office travel (Figure 14). The Bank encourages the use of electric vehicles (cars, motor cycles and e-bikes) and has installed 25 charging points at the Bank's main offices in Rome and Frascati.

FIGURE 14

MOBILITY – BANK OF ITALY

Number of teleworkers



To reduce business travel and the associated emissions, the Bank's main offices have been equipped with 98 video conferencing systems. An additional 25 systems will be purchased by the end of 2018. In 2017 there were more than 5,900 video conference link-ups (Figure 15), equal to a total of around 2,450 meetings: 64 per cent of the meetings were held between the various Bank premises, 22 per cent with national institutions and 14 per cent with international interlocutors.

To reduce harmful emissions from vehicles used for travel between offices in the Rome area, the number of electrically powered cars for hire, which currently stands at 9, will be bolstered by an additional 6 vehicles (2 of these will replace cars powered by traditional fuels).

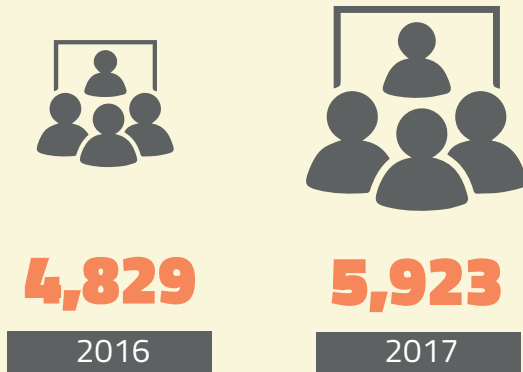


sustainable mobility

FIGURE 15

MOBILITY – BANK OF ITALY

Number of video conferences



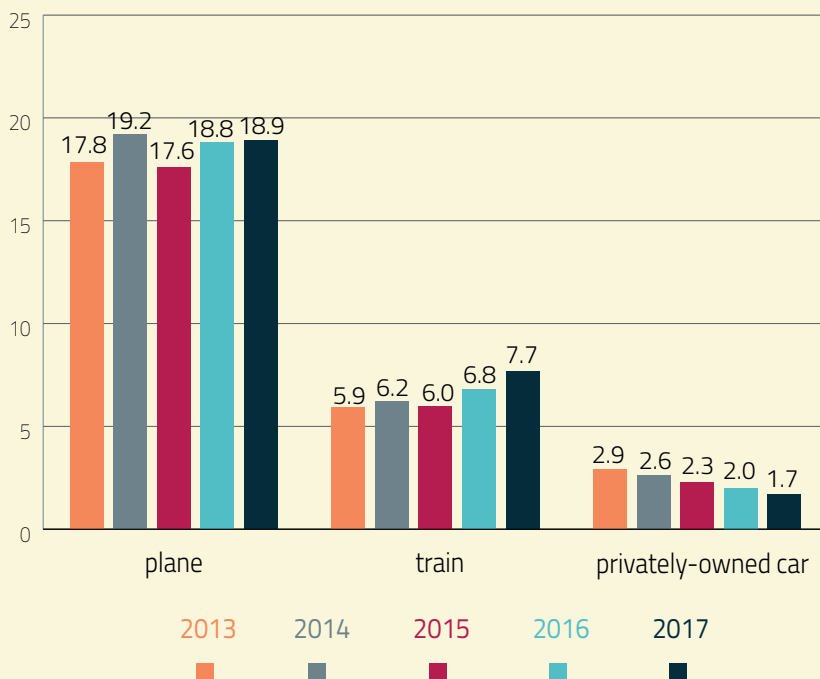
+23%
 Number of video conferences
 compared with 2016

Based on the results of a survey distributed among employees based at the Bank' Rome premises, the fleet of corporate shuttle buses linking the Centro Donato Menichella in Frascati to the local public transport network and to the other Bank premises in Rome was optimized.

FIGURE 16

BUSINESS TRAVEL – BANK OF ITALY

Comparison of distances travelled by transport mode from 2013 to 2017 (km x 1,000,000)



+2.4%
 Kms travelled compared
 with 2016



370
*Kgs of CO₂ emitted
by each employee
for business trips*

A series of initiatives were also undertaken to promote more sustainable mobility: agreements were entered into with companies that provide car sharing services with vehicles that run on both electricity and traditional fuels, while in 2018 the use of e-bicycles for travelling between the various Rome premises will be trialled.

With the aim of increasing staff awareness of the environmental impact of business travel, the hotels offering promotions for Bank staff were given an environmental sustainability rating, which is updated annually and compiled on the basis of the results of a questionnaire.

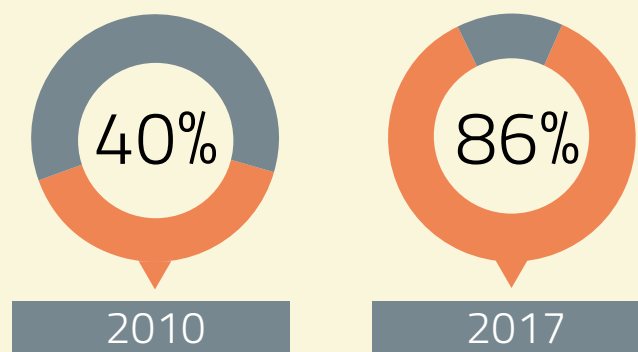
The use of trains instead of air travel for routes served by high-speed rail links for journeys of under four hours – since September 2017 – will help to reduce carbon dioxide emissions further.

The total number of kilometres travelled for business purposes increased by about 2.4 per cent compared with 2016 (Figure 16): the number of kilometres travelled in air planes remained virtually unchanged while that for trains, the form of transport with the lowest environmental impact, was up by more than 13 per cent. Private car use has gradually declined in the last five years. For the most frequently travelled route, between Rome and Milan, there has been a steady increase in the use of trains as opposed to air travel (Figure 17).

FIGURE 17

BUSINESS TRAVEL – BANK OF ITALY

Percentage of Rome-Milan trips made by train





green procurement

The Bank is committed to reducing its ecological footprint, including by means of its green procurement policy, in the knowledge that this can help encourage the market to develop more eco-sustainable goods.

Tender processes comply with the [minimum environmental standards](#) issued by the Ministry for the Environment. Moreover, where possible: (a) possession of environmental certificates are a requirement for taking part in tenders; (b) green contract performance clauses are included in contracts; (c) ecological quality brands are used for the items in the tender. In the tenders favouring the most economically advantageous winner points are awarded to the greenest companies.

Suppliers are also encouraged to adopt best practices for workplace health and safety and social responsibility.

In addition to requiring the contractor to have obtained ISO 14001 certification, procurement procedures for office cleaning services include clauses on the use of cleaning products bearing the Ecolabel environmental quality logo and of machines, equipment, and technical solutions that permit reductions in water and electricity consumption.

In the tender procedures for building and plant maintenance services for the Bank's premises higher scores were awarded for: possession of environmental (ISO 14001), energy efficiency (ISO 50001) and workplace health and safety certification (OHSAS 18001); the presence of qualified technicians for energy management (EGE); a commitment to increasing the efficiency of the technological systems and the building envelope; the use of electrically powered vehicles only. Green contract performance clauses were also included in the tender procedure for the extraordinary maintenance and restoration of some buildings in Rome.

Purchases of IT systems systematically require certificates such as Energy Star or equivalent energy efficiency requirements.

In 2017 a training course was organized on green procurement for employees who, in various capacities, are involved in tender procedures.

environment-friendly culture



The Bank contributes with its own analysis and research activities to the debate on environmental issues and, in particular, to the study of relationships between the economy, finance, energy and the environment. At national level the Bank helps draft the [report on the national energy situation](#), prepared by the Ministry for Economic Development. It is a member of the Committee for Natural Capital and the Observatory on Sustainable Finance, coordinated by the Ministry for the Environment. It also helped to define the section of the recent [National Energy Strategy](#) that deals with the issue of energy poverty.

At the international level, the Bank's frequent participation in G20 working groups on sustainable energy and finance helps to identify problem areas linked to the risks that climate change poses to the economic and financial system, and the examination of the best ways to mitigate them.

The Bank organizes and hosts various conferences and seminars on the issues of energy and the environment: in February 2017 it organized



detail of the living roof of the Bolzano branch



environment-friendly culture

a conference to present the [Report on Italy's National Dialogue for Sustainable Finance](#) and also helped to draw up the report itself.

The Bank also takes part in working groups that explore issues related to the management of internal environmental aspects in companies, such as the [Green Banking Observatory](#) of the ABI Lab Consortium, comprising environmental experts from Italian banks and the Environmental Network of Central Banks, whose members are drawn from a number of European central banks.

With the objective of bringing environmental issues to the attention of young people, in 2018 a pilot School-Work project was undertaken to study the environmental impact of buildings.

86

*Number of employees
fewer compared to the
previous year*

The data in this edition of the Environment Report are updated to 31 December 2017. The figures headed Bank of Italy show the data for all the buildings where the head office directorates and branch offices carry out their work (Figure 18). The remainder specify the building or activity to which they refer.

The number of staff employed by the Bank of Italy at 31 December 2017 was 6,885 (see the Report on Operations and Activities available on the Bank's website), of whom 184 on secondment to other organizations in Italy and abroad and around 4,550 employees in the Rome and Frascati areas.

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

The environmental indicators were calculated according to the applicable national and international guidelines. In particular, reference was made to the guidelines on the implementation in banks of the 'GRI Global Reporting Initiative', published by ABI Lab (2017), based on the 'Greenhouse Gas (GHG) Protocol'. The table below illustrates the correlations between the indicators requested by the accounting standard of the GRI and the pages of the document where these same indicators are listed.

GRI Standards	Page reference
103-2 Management approach	6
301-1 Materials used by weight or volume	14-16
301-2 Recycled materials used	14-16
302-1 Energy consumption within the organization	8-11
302-3 Energy intensity	10
302-4 Reduction of energy consumption	8-11
303-1 Total water drawn by source of supply	12-13
305-1 Direct emissions of greenhouse gas	4
305-2 Emissions of greenhouse gas generate by energy consumption	4
305-3 Other indirect emissions of greenhouse gas	4
305-4 Reduction in the emission of greenhouse gas	4
306-2 Waste by category and type of disposal	18-21

methodology

FIGURE 18

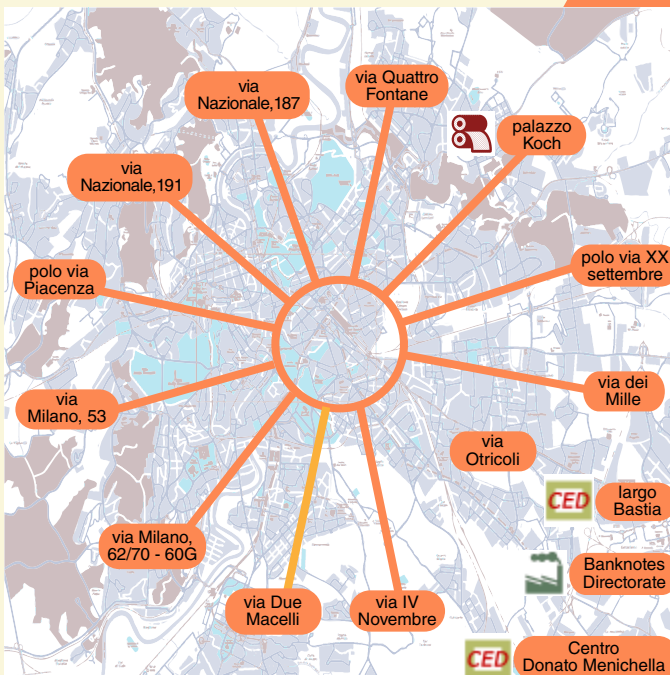
BRANCHES

(excluding the three branches in the greater Rome area)

- regional (19)
- specialized in cash handling (5)
- other branches (12)
- territorial service units (10)
- detached supervision divisions (3)
- closed in 2016 (12)



ROME AREA



-  printing works
-  industrial activities
-  data processing centre

