

ENVIRONMENT REPORT 2021



BANCA D'ITALIA
EUROSISTEMA



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introduction

An overview

Last year, the Bank of Italy's activities were severely affected by the COVID-19 pandemic. During the health emergency, around 59 per cent of the total number of staff in service worked remotely compared with 4 per cent the previous year.

In terms of environmental impact, remote working has led, on the one

hand, to an increase in household energy and water consumption (for which a standardized methodology is not currently available to make a precise estimate) and, on the other hand, to a reduction in commuting and lower energy and water consumption in the workplace.

The Bank's total carbon dioxide emissions decreased by 28 per cent compared with the previous year (Figure 1): those caused by commuting almost halved, although the use of private cars instead of public transport increased during the pandemic (see the section '*Sustainable mobility*').

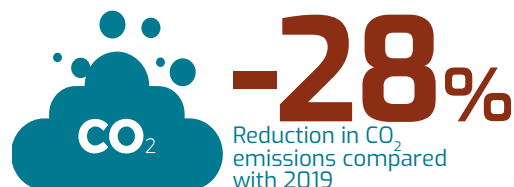
CARBON FOOTPRINT - BANK OF ITALY

Equivalent CO₂ emissions 2019-2020
(thousands of tonnes of CO₂)

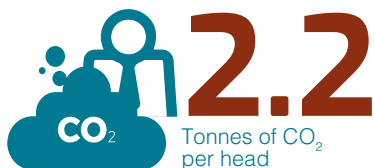
FIGURE 1



Emissions connected with business travel fell considerably (by about 80 per cent).



The reduction in the overall carbon footprint was also due to the decrease in paper consumption for publications (around 30 per cent) and in office paper purchases, which more than halved compared with 2019 (see the section '*Paper*').



Despite the small number of people in the workplace, the buildings' air-conditioning systems (summer and winter) had to work overtime to ensure a better supply of fresh air and consequently to reduce the risk of coronavirus spreading. Compared with the previous year, electricity consumption fell by more than 5 per cent, while natural gas consumption increased by 1.2 per cent (see the section '*Energy*').

The experience gained in 2020 formed the basis for defining a [new model of work organization](#) in which 'on site working' coexists and integrates with remote working arrangements. The adoption of this model implies implementing a wide range of initiatives on four key variables – human capital, organizational systems, IT and logistics – with expected benefits for the community, the Bank's staff, and the environment.

Assessment of the Bank's environmental commitment

On the basis of an international [research](#) study carried out by an independent body, the Bank of Italy was ranked as one of the 'greenest' central banks in the G20 countries in supporting the development of more sustainable finance, integrating sustainability criteria into its investment decisions, and as a result of its efforts to reduce the ecological footprint of institutional activities.

energy

We are committed to reducing energy consumption and to achieving greater energy efficiency through a programme of improvements for our buildings and technological installations and by adopting better management measures. We only purchase electricity produced from renewable sources.

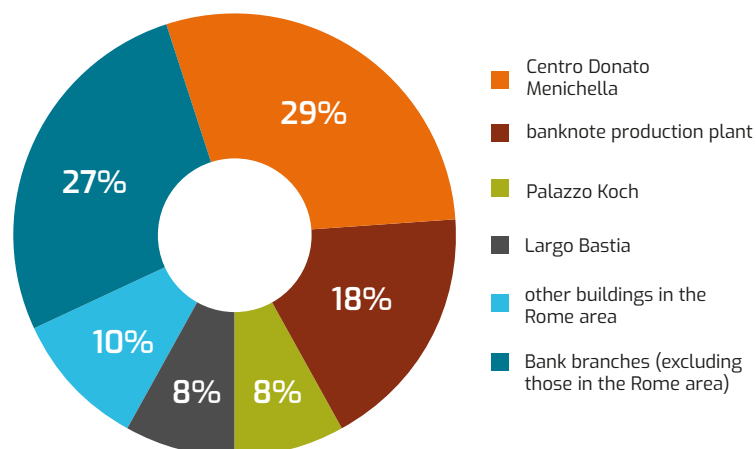
Maintenance work

The Bank is housed in over 50 buildings across the country. Four sites (the Centro Donato Menichella in Frascati, Palazzo Koch, the banknote production plant, and the Largo Bastia site in Rome) account for almost two thirds of total electricity and heating needs (Figure 2).

ENERGY - BANK OF ITALY

Energy consumption (percent)

FIGURE 2



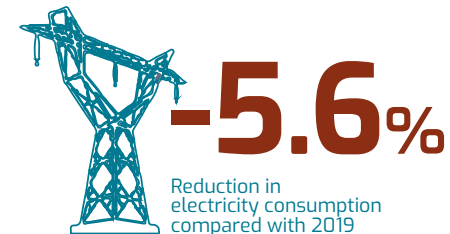
The Centro Donato Menichella site consumes the most energy – mainly because it houses one of the Bank’s two data processing centres – and it has an energy management system certified under the international standard ISO 50001. In 2020 the three-year certification was renewed. The modernization of the thermal power plant with the replacement of the two (out of five) remaining heat generators was completed in the year. Natural gas consumption is expected to fall by around 1 per cent, saving 15,000 cubic metres per year. The replacement of old light bulbs with led lights has continued: this will reduce electricity consumption by approximately 20,000 kWh annually. The auditorium lighting system has been modernized with the replacement of all bulbs with led lights and a new regulation and management system. As well as contributing to a significant improvement in lighting performance, this has led to a reduction of more than 60 per cent in power consumption. Other measures are planned for 2021, including the replacement of the evaporative cooling towers (systems for disposing of the heat produced by air conditioning systems).

At the Largo Bastia site in Rome, which hosts the second data processing centre, three cooling towers and one refrigeration unit used for office air-conditioning were replaced. The expected savings are estimated at 132,000 kWh per year corresponding to around 2 per cent of electricity consumption.

In the banknote production plant, ranked second for energy consumption, the replacement of old light bulbs with led lights continued. In 2021, a multi-annual project will be launched to optimize the energy efficiency of the various stages of the production process and plant infrastructure.



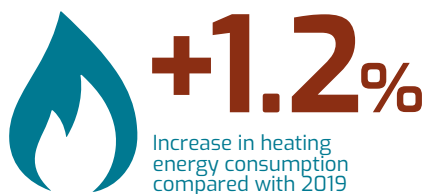
The project includes the installation of meters to measure the energy consumption of printing equipment and machinery, as well as targeted measures to achieve greater energy efficiency.



There is a new IT hub in Palazzo Koch, which monitors the performance of the other two data processing centres, which will consume 90 kW: all the related ancillary services have been planned and implemented according to the most advanced energy efficiency standards (refrigeration with free cooling, inverter motors, high-efficiency electric continuity groups, led lighting, etc.). The thermal power plant is also being renewed: highly-efficient condensing boilers and a management system including weather forecasting will be installed, reducing the building's natural gas consumption by 20 per cent, saving about 47,000 cubic metres per year.

In the other buildings in Rome, a number of energy efficiency improvements are ongoing or will be launched shortly, such as the refurbishment of the façades at the Via Milano 60/g building; the installation of new fixtures and insulation of the roof of the via Parma building; the replacement of all the light bulbs in the offices at the Via Piacenza building, which will provide energy savings of approximately 50,000 kWh per year. In

addition, in the building in Via IV Novembre – despite the architectural constraints on doing any work on a historic building – 240 windows were replaced with high-performance systems and the roofs are being refurbished with the addition of high-performance thermal insulation. In the branch-office buildings, targeted action was taken to achieve greater energy efficiency, including the renovation of summer and winter air-conditioning systems, the replacement of fixtures, the extended use of led lights and the installation of timers to switch off the lighting systems automatically.



MAJOR WORKS ON THE BUILDING IN VIA DELLE QUATTRO FONTANE

The building at Via delle Quattro Fontane 123 in Rome, constructed in the 1950s, was previously the headquarters of the Italian Foreign Exchange Office. It is currently under complete reconstruction, with work under way on the building envelope, the internal environment and the systems in order to significantly improve energy efficiency.

As regards the civil engineering works, the roof, façades and fixtures have all been redeveloped.

The lifts in the building consume less energy, the led lighting system is only activated when there are people, adjusting its brightness to the outdoor light levels, the motorized window blinds auto-tilt to track the sun, and air conditioning deactivates locally if the windows are opened.

The air-conditioning systems have been designed and built according to the most advanced energy saving standards, both as regards the type of equipment installed and the related management system. The new thermal power plant was built using high-efficiency condensing boilers and the domestic hot water system, the cooling plant, evaporative cooling towers, variable flow pumps and primary air treatment units are all new.

In addition, new medium-voltage transformer units and ultra-low leak electrical continuity systems have been installed. For utility uses, well water will be used, thus minimising the use of potable water.

Use of renewable resources

Since 2013, the Bank has purchased electricity exclusively from certified renewable sources.

In 2020, the Bank's photovoltaic installations – one at the banknote production plant and others at the buildings hosting the Catania and the Catanzaro branches – produced more than 67,000 kWh of electrical energy.

The installation of photovoltaic panels on the roof of the parking areas at

the Centro Donato Menichella will start up again after the stop due to the health emergency. These will produce around 380,000 kWh per year.

Raising awareness

On 26 March 2021, the Bank took part in the Italian Energy Saving Day *M'illumino di meno* by, as usual, turning off the external lighting of its buildings. In addition, on 27 March, together with the ECB and other European central banks, the Bank joined in the global *Earth Hour* promoted by the World Wildlife Fund (WWF).

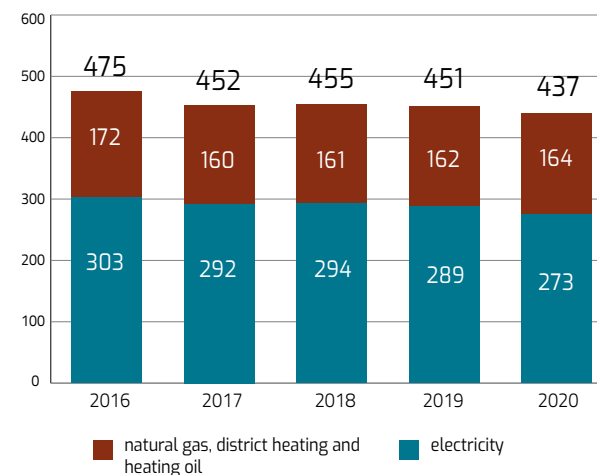
Consumption

Heat consumption (natural gas, district heating and, to a much lesser extent, heating oil) increased by 1.2 per cent in 2020. Energy consumption fell by more than 5 per cent compared with the previous year (Figure 3). Despite the small number of people in the workplace, there was no significant decrease in energy consumption, as the current configuration of systems in the Bank's various premises does not allow for the total decommissioning of heating and cooling in unoccupied spaces. Furthermore, in the year, the air-conditioning systems had to work for much longer to ensure a better supply of fresh air and consequently to reduce the risk of coronavirus spreading: during the first lockdown, many units were switched on for 24 hours a day using outdoor (cold) air only. Ways of optimizing energy consumption will be incorporated into the design of new installations, to take into account the staff actually working on site.

ENERGY - BANK OF ITALY

Total energy consumption (terajoules)

FIGURE 3



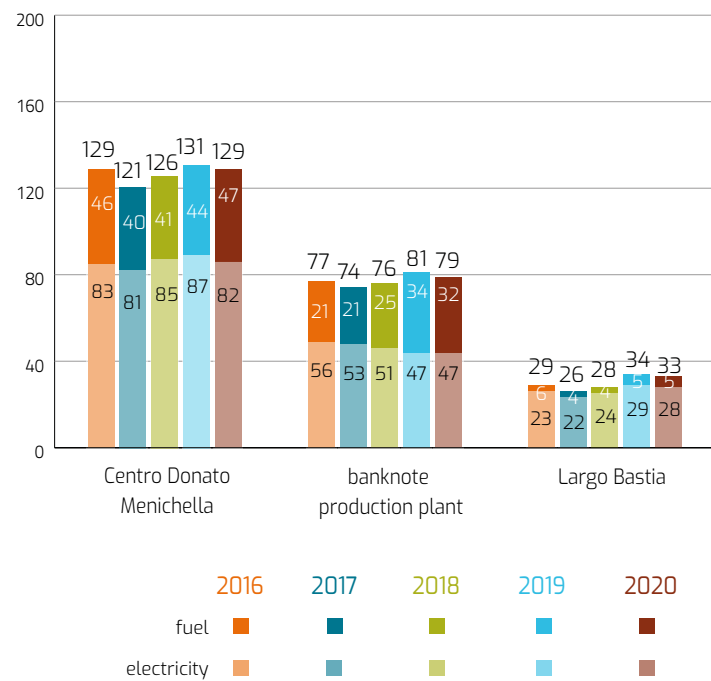
Consumption decreased slightly compared with the previous year at the Donato Menichella Centre, the banknote production plant – which was closed for four weeks over March and April 2020 – and the Largo Bastia building (Figure 4).

A decrease in consumption compared with 2019 was also recorded at Palazzo Koch and in the other buildings in Rome where mainly office work is done; the closure of several sites over March and April 2020 also contributed to this decline. In the same period, four branch offices were also closed temporarily. Overall, the energy consumption of the branch network remained stable since the decrease in the use of electricity was offset by an increase in heat consumption.

ENERGY - BANK OF ITALY

Total energy consumption (terajoules)

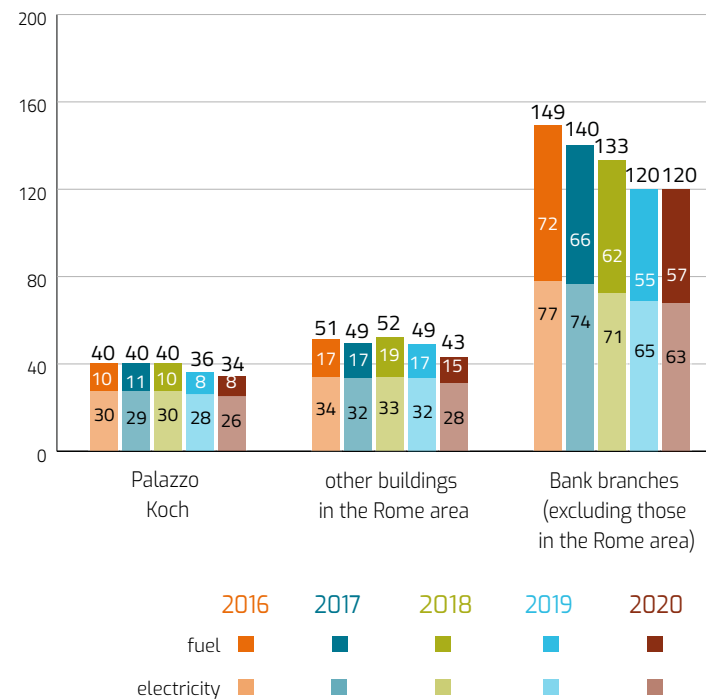
FIGURE 4



ENERGY - BANK OF ITALY

Total energy consumption (terajoules)

FIGURE 5





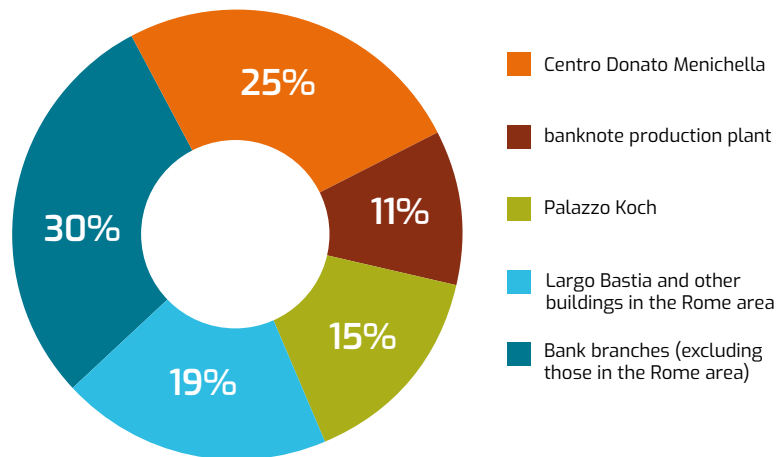
water

We are trying to progressively reduce consumption of potable water. Where possible, non-potable water is used for irrigating the green areas or for industrial purposes (for banknote production and in the evaporative cooling towers for producing cooled water).

The Centro Donato Menichella, Palazzo Koch and the banknote production plant are the sites with the highest number of people; they consume about half of the total potable water used (Figure 6).

WATER - BANK OF ITALY

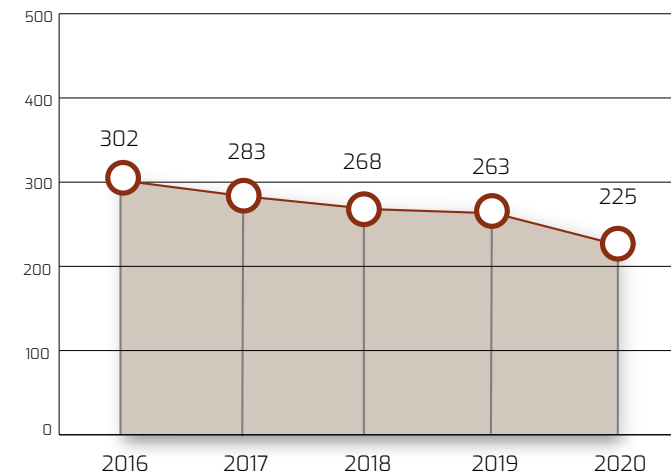
Potable water consumption (per cent)



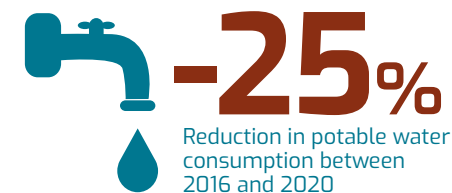
In 2020 total potable water consumption was around 225,000 cubic metres, down from the previous year mainly because of the reduced number of people in the workplace (Figure 7).

WATER - BANK OF ITALY

Potable water consumption (thousands of cubic metres)



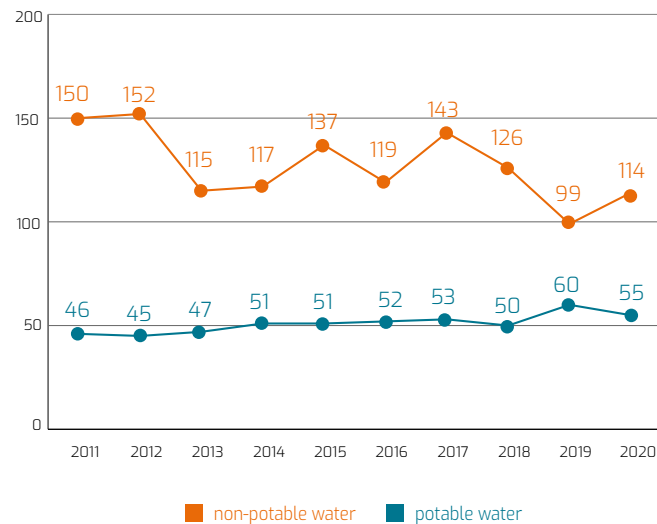
At the Centro Donato Menichella, there was a drop in consumption of potable water and a slight increase in that of non-potable water due to seasonal and management factors (Figure 8).



WATER - CENTRO DONATO MENICHELLA

Water consumption (thousands of cubic metres)

FIGURE 8



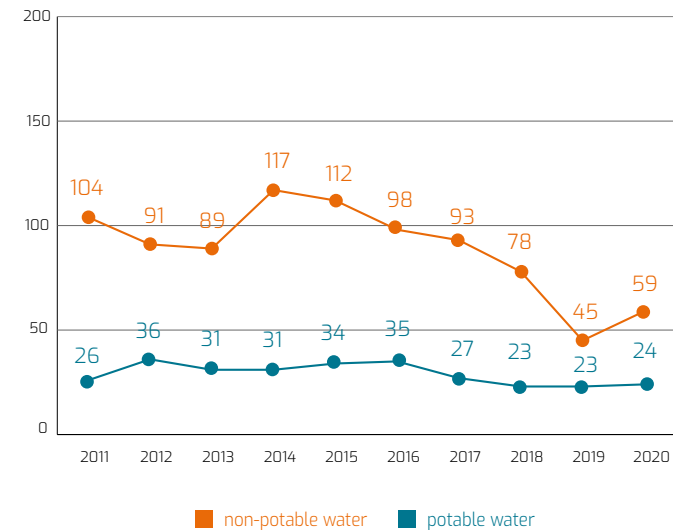
At Palazzo Koch, water consumption fell by more than 10 per cent compared with the previous year.

At the banknote production plant, following the sharp fall in non-potable water consumption observed in 2019 thanks to the installation of the new evaporative cooling towers, there was an increase of 31 per cent due to extraordinary maintenance work on the installations (Figure 9).

WATER - BANKNOTE PRODUCTION PLANT

Water consumption (thousands of cubic metres)

FIGURE 9

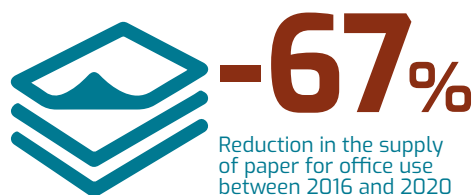


paper

We are committed to reducing paper consumption by streamlining and digitalizing processes and dematerializing documents and publications.

Paper for office use

The Bank's internal communications have been exclusively digital for several years now and most external communications are also online.



Since 2019 the platform 'Online Services for the Public' has been up and running. The platform allows users to send reports and to access to the Bank's information services.

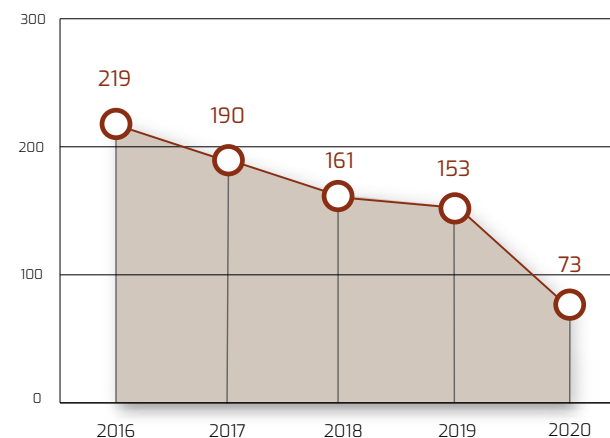
Initiatives are under way to extend digitalization to all the processes relating to state treasury services. In addition, new IT applications for branch business processes will be introduced, so that the use of paper forms will be almost completely eliminated.

As part of the progressive dematerialization of the document management process, the Bank was authorized by the General Archives Directorate of the Ministry of Culture to destroy all original paper documents registered

PAPER - BANK OF ITALY

FIGURE 10

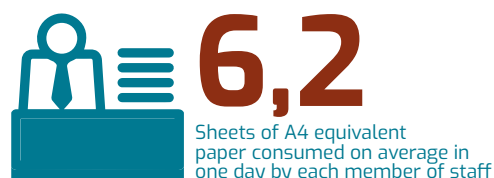
Supply of packs of A3 and A4 office use paper
(thousands of kilograms)



since 2009 as long as certified digital copies are available. The extraordinary removal of unnecessary paper documents in 2019 - which released more than 900 metres of shelf space in the archives - was followed by the elimination of more documents in 2020 which allowed for the release of another 170 metres and the recycling of more than 8 tonnes of paper.

Both regular and recycled paper are used at the Bank. Regular office paper has the ecological standard [EU Ecolabel](#), which certifies compliance with the highest environmental standards at all stages of production. Recycled paper is produced entirely from post-consumer recycled fibres at a plant certified to the European EMAS standard and has [EU Ecolabel](#) and [Der Blaue Engel](#) certification.

In 2020, since most of the staff were working remotely, purchases of office paper more than halved compared with the previous year (Figure 10).



Recycled paper purchases have progressively increased over the years (Figure 11) and, since 2019, the Bank has purchased more recycled than regular paper.

PAPER - BANK OF ITALY

Recycled office use paper (per cent)

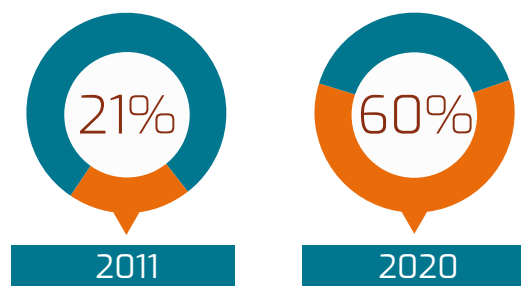


FIGURE 11

Publications

The Bank of Italy's publications are available in digital format on its website. Some, such as the 'Environment Report' and the Statistics

Series, are digital only. Copies of other publications are only printed on demand or for specific needs, such as financial education publications – which are printed and distributed mainly in schools – and those distributed on the occasion of the Governor's 'Concluding Remarks' at the end of May. They are always printed on EU Ecolabel certified paper and in steadily decreasing numbers each year: for example, 9,000 copies of the Annual Report were printed in 2011 compared with 2,700 in 2019, while in 2020 and 2021 only 1,300 paper copies were printed and distributed, mainly because of the restrictions imposed by the pandemic.

In 2020, the use of paper for publications fell by 29 per cent compared with the previous year (Figure 12).

PAPER - BANK OF ITALY

Paper for publications (thousands of kilograms)

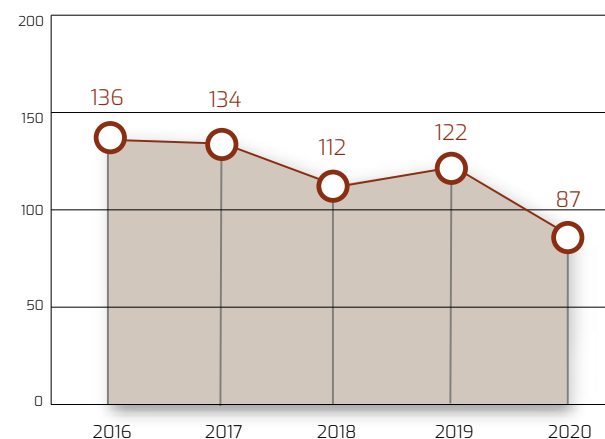


FIGURE 12

waste

The priorities for waste management are to reduce the quantity of waste at source and to promote re-use, recycling and energy recovery rather than disposal in landfills.

All office waste and staff canteen waste are collected separately and sent for recycling. In the Rome and Frascati offices, the quantity of paper waste fell (84,000 kg compared with over 110,000 kg in 2019), while the production of paper and cardboard packaging waste remained constant (50,000 kg).

In 2019, the Bank launched a project to become plastic free, by progressively reducing the use of single-use plastic products. The plastic cups in the hot drink dispensers and those provided alongside the drinking water dispensers have been replaced with cups made of a compostable material. Moreover single-use plastic dishes are no longer used in the staff canteens. Insulated steel water bottles have also been distributed to all employees.

Three drinking water dispensers connected to the water supply network were installed on an experimental basis in the offices of the Perugia branch, replacing traditional dispensers, with significant benefits in terms of environmental impact; another five drinking water dispensers are being installed in the offices of the Florence branch.

As a result of the pandemic emergency, most of the drinking water dispensers installed in canteens were temporarily deactivated in order

to minimise the possibility of contagion. This resulted in the distribution of water in plastic bottles (180,000 in the staff canteens of Rome and Frascati). In addition, during the pandemic emergency, meals were often distributed with disposable tableware made exclusively of compostable material.

In 2020, there was a fall in the number of unconsumed staff canteen meals, which were then donated to charitable organizations (1,430 against more than 8,000 in 2019). The number of employees' used glasses and mobile phones collected in Rome and Frascati and donated to social welfare charities also decreased.

More than 300 items of furniture that were no longer fit for purpose in the Bank were donated to parishes, schools and non-profit associations upon request.

All the special waste generated by the printing of the Bank's publications was sent to waste recovery facilities.



banknotes

Together with the ECB and the other central banks of the Eurosystem, the Bank of Italy contributes to reducing the environmental impact of the production, distribution, recirculation and disposal of euro banknotes.

Eurosystem initiatives

The Bank of Italy is a member of a working group, set up by the ECB at the end of 2019, to determine the different factors that influence the ecological footprint of euro banknotes at all stages of their life cycle: production, circulation and disposal. The study aims to identify the processes in which it is possible to intervene to reduce the environmental impact of cash and to evaluate its sustainability compared with other kinds of payment instruments. Initially, the ECB brought in all the actors in the raw materials sector (paper and ink producers). In 2021, the study was also extended to the areas of distribution, recirculation and disposal, involving service companies and banks, all of which play a key role in cash circulation.

In 2021, a report will be made on the work of the Eurosystem central banks to improve the environmental sustainability profile of banknotes.

Banknote production

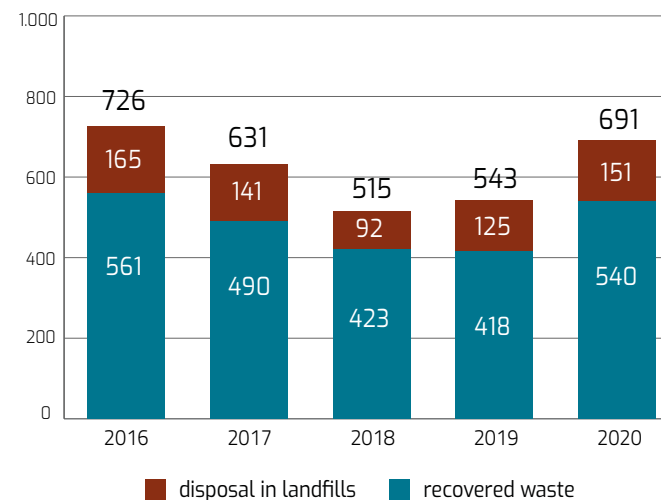
The Bank of Italy prints banknotes at the production plant run by the Banknotes Directorate, which has been certified in accordance with the ISO 14001 environmental standard since 2004.

In 2020, the planned merger of the quality, environmental, and occupational health and safety management systems was implemented, creating a new integrated management system. Numerous initiatives are under way to reduce both energy consumption in the building (see the section 'Energy') and the environmental impact of the production process. An industrial partner is being sought for the development of the project to produce calcographic printing plates by means of a laser engraving system instead of using the current galvanic process. This technological innovation will reduce hazardous waste and emissions into the atmosphere as well as delivering benefits in terms of workers' health and safety.

SPECIAL WASTE - BANKNOTE PRODUCTION PLANT

FIGURE 13

Special waste produced (thousands of kilograms)



The planned modernization of the building's industrial waste treatment system is ongoing. Tenders are also under way for the renewal of the control system and the installation of meters to measure pollutants continuously.

Over the last five years, more than three quarters of the special waste from the banknote production process was sent to recovery facilities (Figure 13). We are also investigating ways of reducing waste generation through the reuse of both wooden packing boxes and the cloths used to clean the printing machines.

Management of worn banknote waste

At the Currency Circulation Management Directorate in Rome and at 34 branches, the banknotes in circulation are periodically sorted to ensure that cash quality standards are maintained. During the sorting process any banknotes that are worn or damaged – and therefore unfit for circulation – are shredded.

The ECB has recently revised the criteria for managing shredded banknotes, asking central banks to stop using landfill disposal by 2022.

In line with many other Eurosystem central banks, the Bank of Italy gives precedence to energy recovery from this kind of waste, which is the most appropriate way of dealing with it from an environmental perspective.

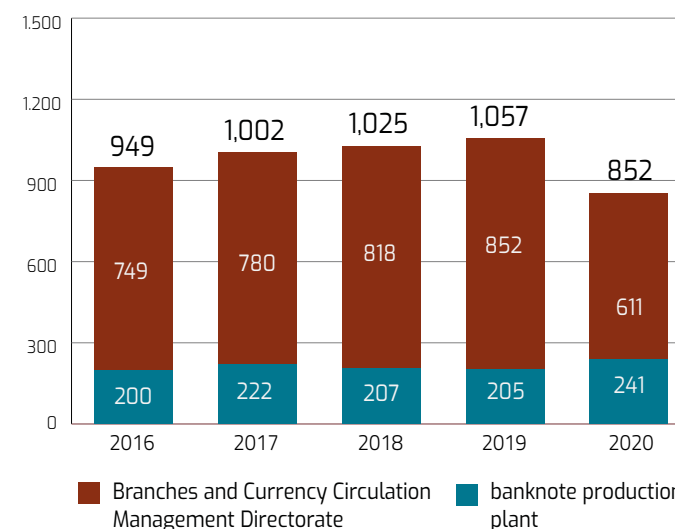
By 2022, in compliance with the ECB's instructions, the Bank will send the remaining share of worn banknotes currently disposed of in landfills to waste-to-energy plants.

Figure 14 shows the amount of paper waste produced in the last five years by the banknote production process (trimmings, paper used to start up the printers, and discards) and by worn banknotes that have been shredded at the end of the sorting process.

WASTE - BANK OF ITALY

FIGURE 14

Production of shredded banknote waste (thousands of kilograms)



In 2020, 90 per cent was sent to waste-to-energy plants or installations for the production of secondary solid fuel (Figure 15). If we consider only the worn banknotes shredded at the end of the sorting process, the percentage is 86 per cent.

WASTE - BANK OF ITALY

Ways of treating waste produced in 2020 by shredding worn banknotes (percentage in terms of weight)

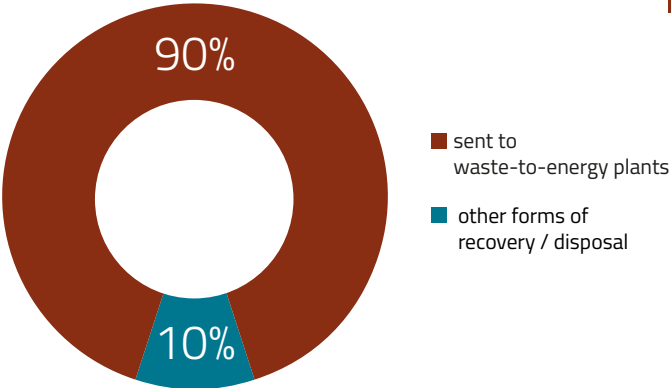


FIGURE 15



sustainable mobility

Using one of the various means of transportation for travelling to and from work and for business trips has an impact on the environment in terms of CO₂ emissions and pollutants. The Bank is committed to reducing work-related travel and encouraging the use of environmentally sustainable means of transport and electric mobility.

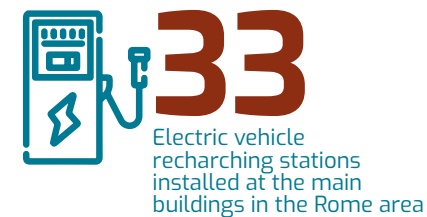
Commuting

During the public health emergency, the large numbers of staff working remotely led to a significant reduction in commuting.

In December 2020, all employees were asked to fill in a questionnaire to assess the hybrid work model (work is performed partly in person at the



office and partly remotely at home) and to estimate the environmental impact of travelling to and from work before and during the pandemic. The section of the questionnaire on environmental impact and the estimation of CO₂ emissions was drafted in collaboration with the Studies, Analysis and Evaluation Unit of the [Italian National Agency for New Technologies, Energy and Sustainable Economic Development](#) (ENEA). Responses showed that, on average, each employee makes a daily round trip of 42 km to and from work, taking approximately one hour and 15 minutes.



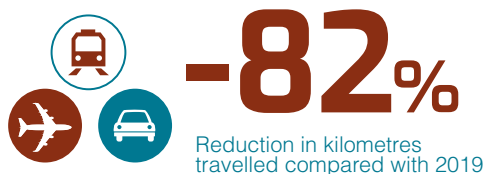
Daily CO₂ emissions per employee travelling to and from work were 4.8 kg before the pandemic and 6.1 kg during the pandemic. This reflects the increased use of private means of transport during the health emergency. Overall, as a result of the massive increase in remote working, CO₂ emissions from travelling to and from work fell by 57 per cent compared with the previous year.

Work-related travel

Due to the pandemic emergency, staff travel between the Rome and Frascati branches and business travel have significantly decreased.

Over 2 million calls and 350,000 online meetings were made via

distance communication tools and some 4,700 meetings were held via videoconferencing systems for a total of 19,600 connections (68 per cent more than in 2019).



Extra mobile work equipment has been made available through the distribution of additional smartphones, laptops, SIM cards for data connection and Wi-Fi routers.



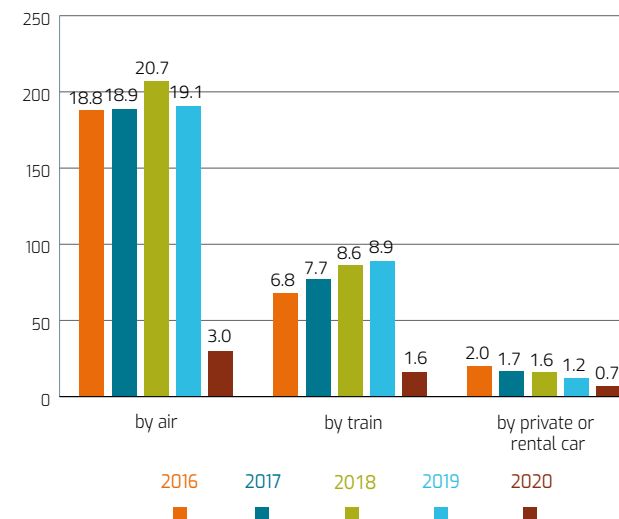
Communication and collaboration solutions have been increased by linking the telephone system with the instant messaging platform. The range of tools for taking part in events with a high number of participants and for communicating with other institutions was also broadened. A further 12 sets of videoconferencing equipment were installed, in addition to the 120 already in place.

In the Rome area, 15 electric cars and 10 electric bicycles can be used for

BUSINESS TRAVEL - BANK OF ITALY

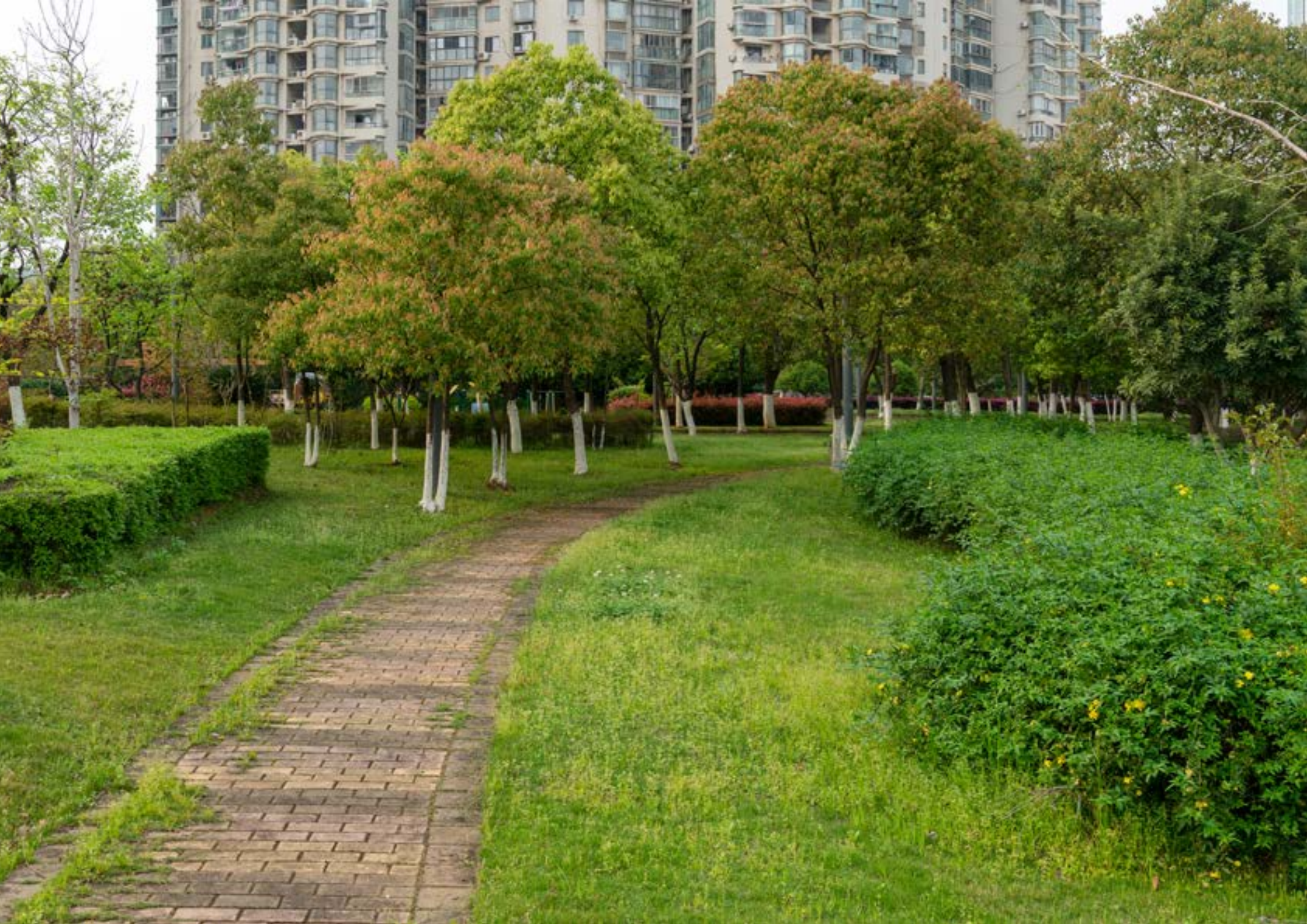
FIGURE 16

Comparison of distances travelled by transport mode (km x 1,000,000)



staff travel between the various work locations.

The total number of kilometres travelled by air and by train for business travel fell by more than 80 per cent compared with the previous year and there was a more than 40 per cent drop in kilometres travelled in private or rented cars (Figure 16).

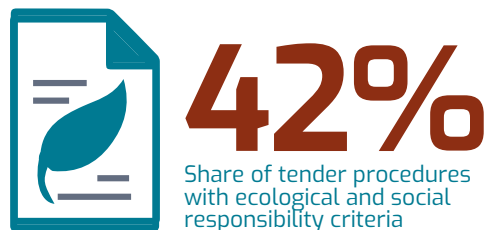


green procurement

The Bank is committed to reducing its ecological footprint, also via its green procurement policy, in order to help to guide the market towards developing more eco-sustainable goods and services.

Tender processes comply with the [minimum environmental standards](#) issued by the Ministry of Ecological Transition. Moreover, where applicable, the Bank of Italy: (a) requires suppliers to possess environmental certifications to access the tender procedure; (b) requires ecological clauses for the provision of services; (c) requires eco-labels for the goods covered by the contract; (d) awards points for companies using products, tools and procedures with the lowest environmental impact (in the tenders in which the award criterion is 'best value for money'). Suppliers are also encouraged to adopt the best practices for workplace health and safety and social responsibility.

In 2020, 82 tender procedures were announced: ecological or social responsibility clauses were included in 34 of them.



In addition to the requirement for ISO 14001 or EMAS environmental certification, contractual clauses have been included in the tenders for office cleaning services, providing for the use of products with an [EU Ecolabel](#) environmental label and machinery, equipment and technical solutions to reduce both the consumption of water, electricity and chemical substances, and waste production. In addition, more points are awarded to offers from companies proposing to provide portage and removal services with environmentally friendly vehicles and machinery, and using wooden pallets with ecological certifications.

In the tender for the supply of office chairs, in addition to the ISO 14001 or EMAS environmental certification, requirements included: the use of recycled wood fibres, the sourcing of raw materials from environmentally managed sources, the use of packaging from recycled materials, goods that can be disassembled at end-of-life to recover materials, recyclable plastic components, and it must be possible to substitute any textiles used.

Points were also awarded if the ISO 14001 or EMAS certification was supplied for private security services. It was also a requirement for taking part in the tender for the maintenance of green areas, for which operational techniques must allow a reduction in the use of plant protection products and the recycling in composting plants of any leftover materials.

ISO 14001 or EMAS environmental certification is required for participation in tender procedures for the maintenance of thermal, water, fire prevention, electrical and voice/data systems in the buildings; extra points are also awarded for the possession of certificates for energy

efficiency (ISO 50001 and UNI CEI 11352), workplace health and safety (ISO 45001) and social responsibility (SA8000). Further points can be awarded in the procedures for: extraordinary maintenance (e.g. for the use of more efficient systems and equipment); running the systems and maintaining the buildings and systems at the banknote production plant in Rome and other nearby premises (e.g. by improving energy efficiency profiles); and the renovation of security systems (e.g. for the supply of equipment with the 'Energy Star' label).

In the tender procedure for the refurbishment of the premises at Via Milano 60/g in Rome, extra points were awarded for: possession of environmental certifications (EMAS or ISO 14001) or workplace health and safety (ISO 45001) on the part of the companies doing the work and their main suppliers; the recovery of at least 70 per cent of the non-hazardous waste produced on the site and the subsequent disposal of unrecoverable waste in landfills no farther than 15 km from the place of production; the use of electric-powered means of transport or other means complying with an emission standard of no less than Euro 6; the fitting of electronic taps in bathrooms; and the mounting of vertical gardens on the façades of the upper floors of the building and common internal areas.

In tenders for the acquisition of IT equipment, extra points are awarded to companies that provide less energy-intensive solutions.

In all tender procedures for the procurement of raw materials and security elements involved in printing euro banknotes, contractors are obliged to: maintain accreditation in accordance with [Decision](#)

[ECB/2020/24](#), which provides for specific environmental requirements including ISO 14001 environmental certification; comply with existing ECB environmental decisions; and agree to environmental checks by the ECB and report the occurrence of any serious environmental incidents.

sustainable investment

The attention paid by the Bank to protecting the environment and sustainability also extends to how it manages its investment portfolio.

The Bank of Italy adopts sustainability criteria in its investment decisions, with the twofold objective of improving financial risk management and contributing to the sustainable development of the economy and society.

Numerous studies show that good business practices in the environmental, social and governance (ESG) fields are associated with better economic and financial performance, as these practices are accompanied by a greater propensity to innovate in processes and products, they reduce legal and reputational risks, and give rise to more favourable investor assessments.

The ESG criteria adopted by the Bank aim to exclude companies that do not comply with the core labour conventions, international treaties on controversial weapons (biological and chemical weapons, anti-personnel mines, cluster, nuclear, invisible fragmentation and incendiary munitions and blinding laser weapons) and tobacco producers. The criteria also give preference to companies with the best ESG profiles, obtained on the basis of the scores provided by a specialized company.

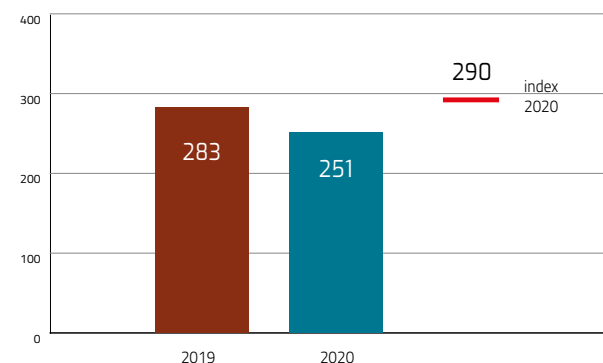


The Bank's equity portfolio in euros has been managed since 2019 by adding ESG criteria to the pre-existing focus on financial considerations alone: the aim of this kind of management is to improve the ESG profile

SUSTAINABLE INVESTMENT - BANK OF ITALY

FIGURE 17

Weighted average carbon intensity of the equity portfolio in euros 2019-2020 (tonnes of CO₂ equivalent on turnover in millions of euros) (1)



(1) Weighted average carbon intensity is calculated as the weighted average of the carbon intensity of each company, where the carbon intensity is the ratio of the company's direct and indirect emissions, expressed in tonnes of CO₂ equivalent to its turnover in millions of euros. The weighting is based on the percentage share of the equity in the portfolio. Direct emissions are those directly linked to companies' business processes (defined as Scope 1 emissions under the Greenhouse Gas Protocol measurement standard), while indirect emissions are those generated by the sources of energy purchased by the company (Scope 2 emissions).

of the benchmark portfolio and, at the same time, to reduce its carbon intensity, measured as the ratio of greenhouse gas emissions to turnover. In 2020, the latter declined by 12 per cent compared with the previous year and by 13 per cent in relation to the benchmark (Figure 17). The portfolio also reflected a fall in electricity consumption intensity (as the ratio of energy consumption to turnover) of 24 per cent compared with the portfolio at the end of 2019, and of 5 per cent in relation to the benchmark.

In 2020, the Bank of Italy extended the use of sustainability criteria to collective equity investments in the United States and Japan.



In addition to equity instruments, the scope of sustainable investments was further extended to portfolios of bonds that include those issued by privately-owned companies as well as those issued by supranational bodies and agencies for the financing of projects with environmental sustainability features (green bonds).

In July 2021, the Bank published its [Responsible Investment Charter](#), setting out its vision of sustainable finance, communicating the principles underlying the management of financial investments and setting out its lines of action in this area.



biodiversity

Protecting biodiversity is a challenging aim and one which we are committed to in the coming years.

The Bank pays particular attention to its highly biodiverse green heritage, which is predominantly located in the areas surrounding the banknote production plant and the Centro Donato Menichella. Maintenance work aims, on the one hand, to keep the green areas in excellent condition and, on the other, to a comprehensive optimization of this heritage through initiatives such as: scheduled monitoring, new planting of tree species in harmony with the surrounding landscape, harvesting of fruit for social purposes, creation of educational and thematic areas, training initiatives and guided tours to develop greater environmental awareness.

A small green roof – using succulent plants of the genus *Sedum* (belonging to the *Crassulaceae* family) placed on a bed of a mixture of peat and lapilli – was constructed to cover the reception booth at the banknote production plant. This green roof, which is in addition to the one installed in 2017 over the entire roof of the Bolzano branch building, has much better insulation characteristics than the previous one (with an 80 per cent reduction in thermal transmittance), limiting the overheating of the indoor space during the summer thanks to passive cooling technology. Where town planning and technical conditions allow, more green roofs will be installed on top of other buildings. In general, the extensive use of green roofs in urban settings contributes to reducing the phenomenon

of heat islands in cities and plays an important role in regulating rainwater run-off, which is obstructed by the progressive use of concrete.

Green walls will be introduced in some work areas. This has already been tried out at the Florence branch, in order to create greater harmony between the artificial office space and the natural features of the landscape.

In addition to the initiatives already planned for the areas owned by the Bank, further work is under way to adopt outdoor green areas, with a view to recovering unused or poorly maintained spaces and create new green islands in the urban environment.

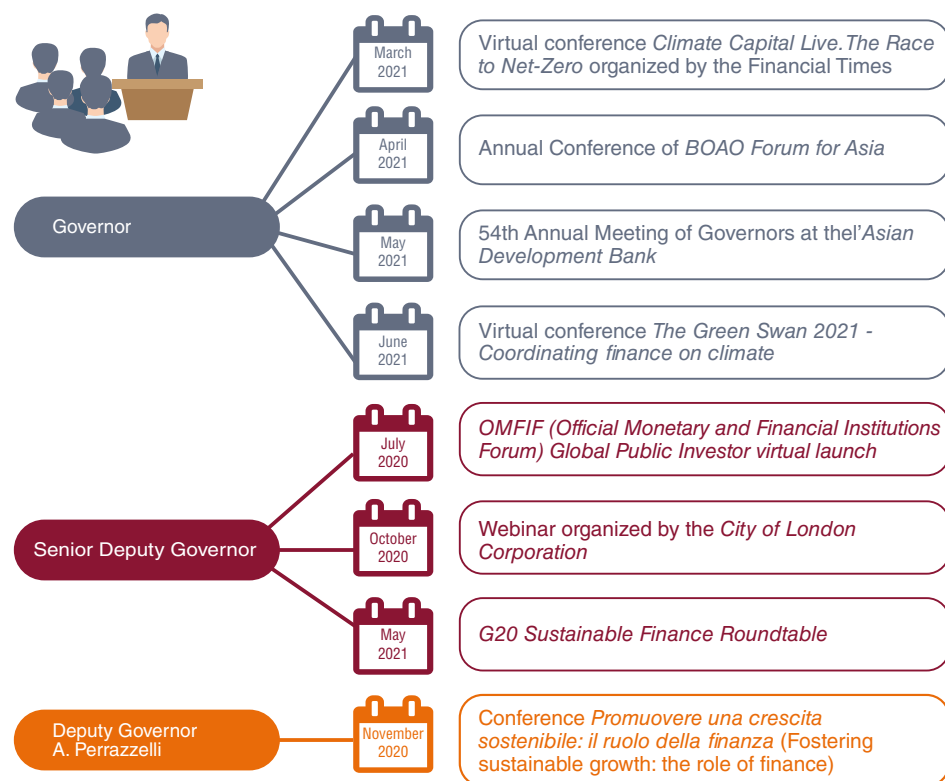
environment-friendly culture

The Bank contributes to the debate on the relationships between the economy, finance, energy and the environment through its research and analysis activities; it organizes and participates in conferences and workshops on these issues; and makes its own contribution to setting the national and international positions

on the environment by sending its own representatives to participate in committees and working groups. The Bank also contributes to creating an environment-friendly culture with initiatives aimed at secondary school students and members of staff.

Main speeches by members of the Governing Board at external conferences on environmental sustainability in the period between July 2020 and June 2021

FIGURE 18



Climate finance: How far will central bankers go?

Financing carbon neutrality

Raising the Bar on Climate Ambition: Road to COP 26

The conference messages in light of the G20 Presidency programme

The role of central banks and sustainability in the post-COVID recovery

Build Back Better - Mobilising Private Finance for a Green Recovery

Opening speech

Introductory report



Participation in conferences and publications

The Governor and the other members of the Governing Board have spoken at various conferences on the issue of sustainability (Figure 18). In June 2021, a national newspaper published an article by the Senior Deputy Governor of the Bank of Italy and the Vice-President of the Deutsche Bundesbank on the role of central banks and supervisory authorities both in improving knowledge about climate change risks and mitigating their impact on financial stability, and in facilitating private investment in funding the transition to a low-carbon economy. In the last half of 2020 and the first half of 2021, as part of its regular publication series, the Bank has published 14 research papers on sustainable finance and the impact of climate change on the economic and financial system. One of these papers, *Central banks, climate risks and sustainable finance*, published in March 2021, gives an overview of the main economic implications of climate change, describes the main risks for the Italian economy and financial system, and highlights the market prospects for sustainable finance and the risks and opportunities it entails. This study also describes the Bank's initiatives in the field of climate risk measurement and those in the area of sustainable investment.

In the *Annual Report* on 2020 there was a special focus chapter entitled, 'Central banks, climate risks and sustainable finance'. The second *Financial Stability Report*, 2020 included a study on the exposure of the banking system to climate change risks.

A large research project has recently been launched to publish more

than 20 papers on the effects of climate change on the Italian production system.

Organization of conferences and workshops

A cycle of 19 workshops, also open to external participants, was held between September 2020 and March 2021 on issues such as environmental sustainability, energy transition and climate change.

In June 2021, a webinar was held on [Central Banking and Green Finance](#) for central banks in EU candidate and potential candidate countries, countries covered by the European Neighbourhood Policy and other emerging economies. The webinar underlined the fundamental role of central banks in mitigating the risks associated with decarbonizing the economy and in helping to redirect capital towards green initiatives.

Participation in national working groups

The Bank's experts are helping to draft the report on the national energy situation ('[La situazione energetica nazionale](#)'), prepared by the Ministry of Ecological Transition; it participates in the work of the [Committee for the Natural Capital](#), coordinated by the Ministry, and in the [Italian Observatory on Energy Poverty](#) (OIPE).

The Bank gives technical support to the Ministry of Economy and Finance for the negotiations on legislative proposals arising from the EU Commission's Action Plan on Sustainable Finance.

It also participates in the inter-institutional board of experts sponsored by the [Italian Banking Association](#) (ABI) to identify possible interventions

for the modernization of energy use in buildings in Italy.

The Bank works with the [National School of Administration](#) (SNA) to organize courses on sustainable management for officials and managers in the public administration.

Participation in European working groups

At European level, in the context of the review of the Eurosystem's monetary policy strategy, the Bank participates in the ECB working group examining climate change risks and possible effects on monetary policy. In 2021, the Bank hosted three meetings to receive input from civil society in relation to this review, one of which was dedicated to listening to environmental, consumer protection and sustainable development associations.

The Bank also participates in the Joint Climate Group of the [European Systemic Risk Board](#) (ESRB) and the Financial Stability Committee (FSC). In the field of banking and financial supervision, the Bank participates in the work of the [European Banking Authority](#) (EBA) to incorporate environmental, social and governance risks into prudential and public disclosure rules. Furthermore, the Bank collaborated in drafting the ECB's guide on supervisory expectations on climate-related and environmental risks for significant banks, contributing to the analysis of the practices of the European banking system.

The Bank also contributed to the preparation of two Basel Committee reports to look into the transmission channels of climate-related risks to the financial system and the methods for measuring these risks and

to the analyses carried out by the [Financial Stability Board](#) (FSB) on regulatory and supervisory approaches to financial risks arising from climate change.

In the field of statistics, the Institute participates in the work of the Expert Group on Climate Change and Statistics of the Statistics Committee of the European System of Central Banks (ESCB) to identify suitable indicators and data for the analysis of risks and opportunities related to climate change and for the development of sustainable finance. Within the framework of the [Committee for Monetary Financial and Balance of Payments Statistics](#) (CMFB), which is composed of representatives of the ESCB national central banks and European national statistics institutes, the Bank participates in a task force mandated to identify common projects to improve statistics on sustainable finance and climate change.

Lastly, the Bank is part of the Environmental Network of Central Banks (ENCB), a working group made up of 15 central bank representatives, which promotes the exchange of best practices in the management of internal environmental aspects.

International cooperation

The Bank is a member of the [Network for Greening the Financial System](#) (NGFS), which is composed of more than 90 bodies including central banks and supervisory authorities. The network coordinates studies and exchanges of experience on environmental and climate risk management in the financial sector and initiatives to identify and close gaps in the data

needed for analysis. In 2020, the Bank also participated in the preparation of: a guide for supervisors on integrating climate and environmental risks; a climate scenario manual for central banks and supervisors; and the second version of the manual for sustainable investments for central banks, in which there is a description of what the Bank of Italy has achieved in integrating the sustainability criteria into its financial investments (see the section '[Sustainable investments](#)').

As regards the work of the OECD's Committee on Financial Markets, the Bank helped to prepare a number of reports on sustainable finance, sharing its analyses and experience as an institutional investor with a focus on environmental, social and governance aspects.

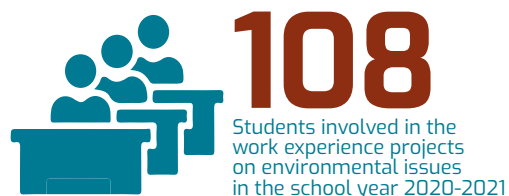
Under the [Italian G20 Presidency](#), which focuses on a three-pillar programme (people, the planet and prosperity), the Bank sends representatives to the working groups of the Finance Track, including the Sustainable Finance Working Group, revived thanks to a proposal from the Bank of Italy with the aim of studying financial policies in support of the global transition towards socially and environmentally sustainable economic activities. The Italian Presidency, in partnership with the major international institutions, organized two conferences related to climate change and policies to promote the energy transition: the [International Conference on Climate Change](#), in which global policies for the transition were discussed, and the G20 [High Level Tax Symposium on Tax Policy and Climate Change](#), focused on environmental taxation. Together with the Innovation Hub of the [Bank for International Settlements](#) (BIS), the Bank of Italy organized an international contest ('G20 TechSprint 2021') to search

for possible technological solutions for some of the important challenges in the field of sustainable finance.

Other initiatives

In 2020, due to the pandemic emergency, staff volunteer projects to protect the environment had to be suspended.

In the school year 2020-2021, the Bank hosted numerous 'Work Experience Programmes' (PCTOs) for secondary school students, nine of which were focused on environmental issues, run by the branches of Ancona, Brescia, Catania, Catanzaro, Naples, Palermo, Perugia, Salerno and also by the head office in Rome. All these programmes were carried out online because of the COVID-19 emergency.



An agreement is being concluded with the Italian national agency for new technologies, energy and sustainable economic development (ENEA) to fund a scholarship on the environmental impacts of more people working remotely. The research project involves the development of a methodology for assessing these impacts, which will then also be made available to other public and private organizations.

In-house training

Every year a workshop is run for the staff members who are responsible for environmental issues at each of the Bank's branches, to facilitate the exchange of ideas and to share the good environmental practices developed in different places. Moreover, with the aim of raising awareness of environmental issues among staff, an online training course on sustainable development and climate change was organized in 2020 and more than 160 employees took part.

methodology

The data in this edition of the Environment Report are updated to 31 December 2020. The figures that refer specifically to the 'Bank of Italy' give the data for all the buildings where the head office directorates and branch offices carry out their work (Figure 19). The remaining figures specify the building or activity to which they refer.

At 31 December 2020, the Bank of Italy employed 6,671 staff (see the *Report on Activities and Operations*, available on the Bank's website), of whom 197 on secondment to other organizations in Italy and abroad. Around 4,600 people work in the Rome and Frascati offices.



The presence on Bank premises, even on a continuous basis, of staff from external companies or of Carabinieri police officers was not taken into account when calculating the environmental indicators per employee (per capita paper consumption, etc.). All the percentages given in this report and the infographics have been calculated using non rounded data.

The environmental indicators were calculated using national and international methodologies. We used the [Guidelines](#) on the application of the Global Reporting Initiative (GRI) environmental standards (ABI Lab, December), based on the *Greenhouse Gas* (GHG) Protocol. The table below illustrates the correlations between the indicators required by the GRI accounting standard and the page numbers of this report where they appear.

GRI Standards	page reference
103-2 Management approach	4-5
301-1 Materials used by weight or volume	14-16
301-2 Recycled materials used	14-15
302-1 Energy consumption within the organization	6-10
302-3 Energy intensity	6
302-4 Reduction of energy consumption	6-10
303-1 Total water used 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 Greenhouse gas emissions	4
305-5 Reduction in the emission of greenhouse gases	4-5
306-2 Waste by category and type of disposal	16-20

A large-scale photograph of a building facade covered in a dense, vertical garden of green plants, illustrating a green wall or living wall system. The plants are arranged in a grid-like pattern, creating a textured, green surface. The building is set against a clear blue sky.





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