

## Press release

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# ECB publishes study on environmental impact of euro banknotes

- Environmental footprint of a person's yearly use of euro banknotes equivalent to driving 8 km by car
- Eurosystem committed to further reducing environmental impact of banknotes, while ensuring cash is widely available and accepted

The European Central Bank (ECB) today published an [environmental footprint study](#) of euro banknotes as a payment instrument. It shows that the average environmental footprint for payments with banknotes was 101 micropoints ( $\mu$ Pt) per euro area citizen in 2019. This is equivalent to driving a car for 8 km, or 0.01% of the total environmental impact of a European citizen's annual consumption activities.

The study measures the potential environmental impact of all activities in a full cycle of euro banknotes – from raw material acquisition, manufacturing, distribution and circulation, to disposal by euro area national central banks (NCBs). It is based on the [European Commission's Product Environmental Footprint methodology](#) and builds on the work begun in the life cycle assessment of the first series of euro banknotes in 2004.

The main factors contributing to the environmental footprint of euro banknotes as a means of payment are the energy consumption of automated teller machines (ATMs) and transportation, followed by processing by NCBs, paper manufacturing and the authentication of banknotes in shops. The long lifespan of banknotes and the fact that they are used for many payments means that the impact of banknote production is lower than that of transportation and distribution.

"The Eurosystem is committed to making euro banknotes as environmentally friendly as possible, while ensuring cash is widely available and accepted," said ECB Executive Board member Piero Cipollone.

Since 2004 the Eurosystem has made efforts to reduce the environmental footprint of euro banknotes, for example by using only 100% sustainable cotton and banning the disposal of banknote waste in landfill.

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In addition, ATM manufacturers and banks have made progress in reducing the environmental impact of their machines. The study published today shows that improvements in the energy efficiency of ATMs contributed to a 35% decrease in their environmental footprint between 2004 and 2019.

Extensive research and development is being conducted to make future euro banknotes even more environmentally friendly at all stages of their life cycle. For instance, the ECB is exploring alternative waste disposal methods for banknotes, such as recycling and the reusing of waste material, and possible improvements to material and components used in the printing process.

These actions are also part of the ECB's broader commitment to tackling climate change within its mandate and to reducing its own environmental footprint in line with the objectives of the Paris Agreement and the European Union's climate neutrality objectives. Detailed information is available in the ECB's yearly [Environmental Statement](#).

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