

# Building a greener future

# 2.1. Responsibility to the environment

## Key points

### Commitment

to being a decarbonised, circular company and minimising our environmental impact on the planet.

### 100%

of our operators have implemented externally-certified environmental management systems.

### Digital-green

energy transition driven by fibre and 5G, increased use of renewables and energy efficiency.

## 2.1.1. Vision

Companies play a key role in protecting the environment. By **integrating sustainability** strategically throughout their operations, they not only contribute to reducing their impacts, but also mitigate risks and increase their value as a company.

Customers, investors and employees are significantly more environmentally conscious, which is reflected in their need to carry out their activities in a more sustainable way and to seek partnerships with companies that have incorporated these values into their strategy.

At Telefónica, we strive at all levels of the organisation to minimise our impact and decouple the growth of our business from our environmental footprint.

Furthermore, we believe it is vital to enhance the synergies between the digital, green and energy transition in order to achieve a competitive, resilient and sustainable economy. This is why **digitalisation becomes a crucial tool in facing environmental challenges**: climate change, circular economy, water management and biodiversity.

This commitment forms part of the Company's general strategy for which the Board of Directors is ultimately responsible.

The corresponding performance levels are regularly supervised by the Board's Sustainability and Regulation Committee. In addition, the heads of the sustainability management areas, in coordination with the Global Sustainability (ESG) Office, meet periodically to monitor performance and progress.

We see the environment as a cross-cutting issue that involves operational and management areas as well as business and innovation areas. The **Climate Action Plan** is a good example of this. Not only does this Plan define actions for the operational model, but it also defines actions for the business and financial strategy, the commitment to customers, the supply chain and society as a whole.

In this regard, it is worth highlighting that carbon emissions reduction targets are part of the variable remuneration of all the Company's employees, including the Executive Committee.

**We are committed to digitalisation as a key tool for tackling our environmental challenges.**

## 2.1.2. Targets

The Telefónica Group's main environmental targets are to:

- Achieve **net zero emissions by 2040**, including our value chain. To do this, we will reduce all our emissions by at least 90% and neutralise the remaining emissions through nature-based solutions.
- Consume **100% renewable electricity** in all our markets **by 2030**.
- Be a **Zero-waste company in 2030**, through the design of equipment, reuse and recycling.

## 2.1.3. Policies and management systems

GRI 2-23, 3-3

We have several policies to bring the organisation into line with our environmental targets:

- [Environmental Policy](#).
- [Energy Management Policy](#).
- [Supply Chain Sustainability Policy](#).

As well as our policies, we have internal standards that serve as a common reference framework for all Group companies. These global standards guide the Company in improving its **environmental performance** and incorporate a **life-cycle perspective**.

To control the impact of our activities on the environment, we have chosen to implement an Environmental Management System (EMS) in accordance with the **ISO 14001** standard. **All our operators have an externally certified EMS**. Operating under a certified EMS ensures adequate control and compliance with the applicable environmental legislation in each of our markets. It is therefore directly linked to the **preventive environmental compliance model**, which forms part of the Company's comprehensive compliance process.

Our EMS(s) enable(s) us to manage our most critical environmental aspects, such as energy and waste, as well as others that are less relevant due to the nature of our operations (biodiversity, water, noise). It is worth mentioning that we were not subject to any significant environmental penalties in 2023.

Furthermore, 652 employees with EMS-related responsibilities attended specific 4-hour training in 2023. This course enables them to enhance their competence, training and awareness, which contributes to the improvement of the organisation's environmental performance.

We maintain our Energy Management Systems (EnMS) certifications, based on the **ISO 50001** standard, for our operations in Spain, Germany, Chile and Brazil. Brazil has two certified operational centres, including the Eco Berrini building.

## 2.1.4. Impacts, risks and opportunities

GRI 3-3

The Company's environmental and climate change risks are managed under the Telefónica Group's global risk management framework.

The major risk focus regarding these issues lies in the wide geographical spread of our infrastructure. As a result, we carry out supervision and monitoring based on standardised procedures, under the scope of ISO 14001-certified EMSs.

We take the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) as a starting point for the analysis of climate change **risks**, which are specifically discussed in chapter 2.2. Energy and climate change.



For further information, see 2.2. Energy and climate change

In 2023 the Telefónica Group contracted, locally and globally, several insurance policies to mitigate the possible occurrence of any incident arising from the risks of environmental liability and/or natural disasters, so as to guarantee business continuity.

We have fully comprehensive monetary loss and lost profits cover in place to protect against material losses, damage to assets and loss of income and/or customers, among other things, due to acts of nature. We also have coverage for environmental liabilities as required by applicable laws and regulations. This coverage consists of limits, sublimits and hedges appropriate to the risks and exposures of Telefónica and its group of companies.

By being proactive, establishing preventive measures and including environmental criteria in our decision making, we have been able to:

- Increase the Company's sustainable financing.
- Reduce our dependence on fossil fuels.
- Reduce our CO<sub>2</sub> emissions, in absolute terms, despite the increase in network traffic.
- Seize the opportunities offered by the circular economy.
- Help minimise our customers' environmental footprint thanks to our Eco Smart products and services.

## 2.1.5. Action plan and commitments

GRI 2-23, 3-3

Our environmental strategy seeks **to minimise our impact on the planet** and **maximise the environmental benefits** generated by our digital products and services. It is built around three levels, which will be discussed throughout this report:

- The **first level** is related to the **responsibility** we assume as a company that is committed to our environment, by ensuring compliance with environmental legislation, managing our risks and opportunities, implementing management systems, establishing strict environmental targets, and engaging in proactive advocacy for the environment.
- The **second level** concerns the Company's **decarbonisation and circularity**, the protection of **biodiversity** and integral management of **water**. This is done through the use of renewable energy, energy efficiency projects, circular economy practices and biodiversity management. This second level of the strategy is detailed in chapters **2.2. Energy and climate change**, **2.3. Circular economy** and **2.4. Biodiversity, water and other environmental aspects**.

For further information, see **2.2. Energy and climate change**

For further information, see **2.3. Circular economy**

For further information, see **2.4. Biodiversity, water and other environmental aspects**

- Lastly, the **third level** is linked to our *raison d'être*, the **digitalisation of our customers**, through services that have a positive impact on the environment thanks to connectivity technologies such as the Internet of Things (IoT), the cloud and big data. This last level is detailed in chapter **2.11. Sustainable offering and innovation**.

For further information, see **2.11. Sustainable offering and innovation**

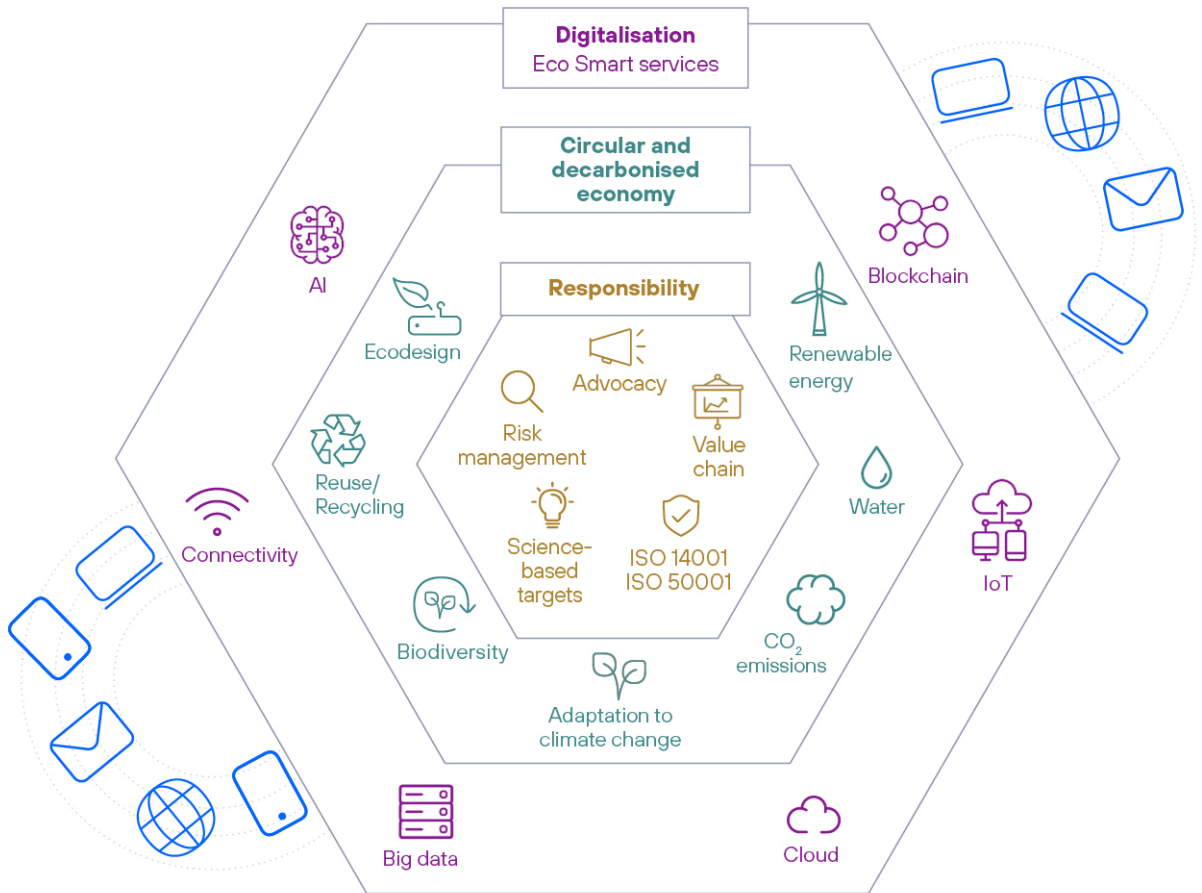
In addition, as part of the integration of the environment into our strategy, **we continue to increase** the day-to-day **sustainable financing** of the Company.

For further information, see chapter **1.7. Finance for the transition to a sustainable economy**

**Environmental strategy**

We reduce our impact and provide solutions to major environmental challenges through digitalisation.

- Risks	=	+ Efficiency	=	+ Resilience
+ Opportunities	=	+ Revenues	=	



## 2.1.6. Progress in 2023

GRI 302-3, 303-5, 305-1, 305-2, 305-3, 306-3

We have an environmental risk and impact monitoring system in place to manage the network throughout its life cycle. Monitoring allows us to offer a top quality service and to promote care for the environment. Therefore, in 2023, we invested around €17 million towards this goal (similar to the investment in 2022).

We foster the circular economy across all our assets to make our network as eco-efficient and environmentally responsible as possible. Thanks to our energy efficiency and renewable energy plans, we have managed to stabilise our electricity consumption, despite the rise in digitalisation. In addition, our circular economy strategy enabled us to reuse 313,805 pieces of network equipment and recycle 97% of our waste in 2023.

In order to both optimise land use and reduce visual impact, energy consumption and waste generation, we apply the best practices available. Among many other actions, we introduce soundproofing measures when necessary and prioritise locating our facilities in co-located sites with other operators, which allows us to reduce the impact caused by network deployment.

### Responsible network life cycle

#### Planning and construction

Environmental licences and permits	1,492
Visual impact reduction measures	64
Base stations with renewable energy	484

#### Operation and maintenance

Energy efficiency and managements projects	170
Renewable electricity in own facilities (%)	84
GHG emissions (Scopes 1+2) (tCO <sub>2</sub> eq)	337,119
Energy consumption per traffic (MWh/PB)	41


#### Dismantling

Network equipment reused (pieces)	313,805
Hazardous waste (t)	3,576
Total waste recycled (%)	97


The trend of our environmental performance is displayed in the following summary of indicators:

### Telefónica's environmental performance, at a glance


#### Management

		2022	2023	Trend
	Certified activity according to ISO 14001 (%)	100	100	● No change


#### Energy

		2022	2023	Trend
	Energy consumption (MWh)	6,106,255	6,011,861	▼ Improvement
	Renewable electricity in own facilities (%)	82	84	▲ Improvement
	Energy consumption per traffic (MWh/PB)	49	41	▼ Improvement

#### Emissions

		2022	2023	Trend
	Scope 1 GHG emissions (tCO <sub>2</sub> e)	131,809	122,460	▼ Improvement
	Scope 2 GHG emissions - market based (tCO <sub>2</sub> e)	221,537	214,659	▼ Improvement
	Scope 3 GHG emissions (tCO <sub>2</sub> e)	1,930,051	1,970,583	▲ Deterioration
	Emissions offsets (tCO <sub>2</sub> e)	35,537	33,711	N/A

#### Avoided emissions

		2022	2023	Trend
	Emissions avoided by customers (MtCO <sub>2</sub> e)	81.7	86.1	▲ Improvement

## Water

		2022	2023	Trend
	Water consumption (ML)	3,194	2,785	▼ Improvement

## Circular economy

		2022	2023	Trend
	Waste generated (t)	52,906	45,756	▼ Improvement
	Non-hazardous waste (t)	50,340	42,180	▼ Improvement
	Hazardous waste (t)	2,566	3,576	▲ Deterioration
	Reused and recycled waste (%)	98%	97%	▼ Deterioration
	Equipment reused (t)	5,557	7,031	▲ Improvement

## Biodiversity

		2022	2023	Trend
	Visual impact reduction measures (no)	104	64	N/A

## Milestones

- ❶ We reduced our total GHG emissions (Scopes 1, 2 and 3) by 51% in just eight years.
- ❷ Thanks to eco-efficiency measures, we reused and recycled 97% of our waste.
- ❸ We avoided 86.1 million tonnes of CO<sub>2</sub>e for our customers thanks to our products and services.

## 2.2. Energy and climate change

### Key points

#### A in CDP

For the 10<sup>th</sup> consecutive year, we are part of the CDP A List, which includes the leading climate management companies worldwide.

#### SBTi

has validated our targets to achieve net zero emissions throughout our value chain by 2040, thanks to our Climate Action Plan.

#### 51%

reduction in our total carbon emissions (Scopes 1+2+3) in the last eight years.

### 2.2.1. Vision

The current economic model's intensive use of energy is one of the main causes of climate change, which is one of the most pressing challenges we are facing. In their latest report, the UN expert panel warned that **the world must cut emissions by 45% before 2030** and achieve net zero emissions by 2050 on a global scale. Organisations like the World Economic Forum identify climate change as the major risk factor for the world's economy, and the investment world is increasingly aware of the need to focus on sustainable investments.

In line with scientist-led approaches to limit the global temperature increase to below 1.5°C, the main aspect we are working on in order to decarbonise our company is electricity, which is a vital resource for the development of our business: over 95% of our consumption comes from providing our services through the telecommunications network.

In addition, many of our products and services have the potential to help our customers do business more sustainably. In fact, organisations such as the World Economic Forum and the Exponential Roadmap initiative have indicated that digital technologies can help **reduce global greenhouse gas (GHG) emissions** between now and 2030 **by 15%** when implemented in industrial sectors, **and by up to 35%** if we consider their ability to transform people's habits.

At Telefónica we develop green digital solutions to help our customers transition towards more sustainable and competitive business models.



For further information, see 2.11. Sustainable offering and innovation

Therefore, our vision is aligned with our strategy and our stakeholders' demands; it incorporates energy management, mitigation, adaptation and the opportunities arising from climate change.

We are working to ensure we remain leaders in this area and continue to be included as part of the CDP Climate Change 'A List', as we have been for the past ten years in a row.



## 2.2.2. Targets

GRI 3-3

Telefónica's plan for achieving decarbonisation includes short-, medium- and long-term targets that have been validated by the Science-Based Targets initiative (SBTi) under the new **net zero** standard.

Over **the long term (2040)**, we will achieve **net zero carbon emissions**, including our value chain. To get there, we will reduce all our emissions (Scopes 1 + 2 + 3) by at least **90%** and use nature-based solutions to **neutralise the remaining emissions**.

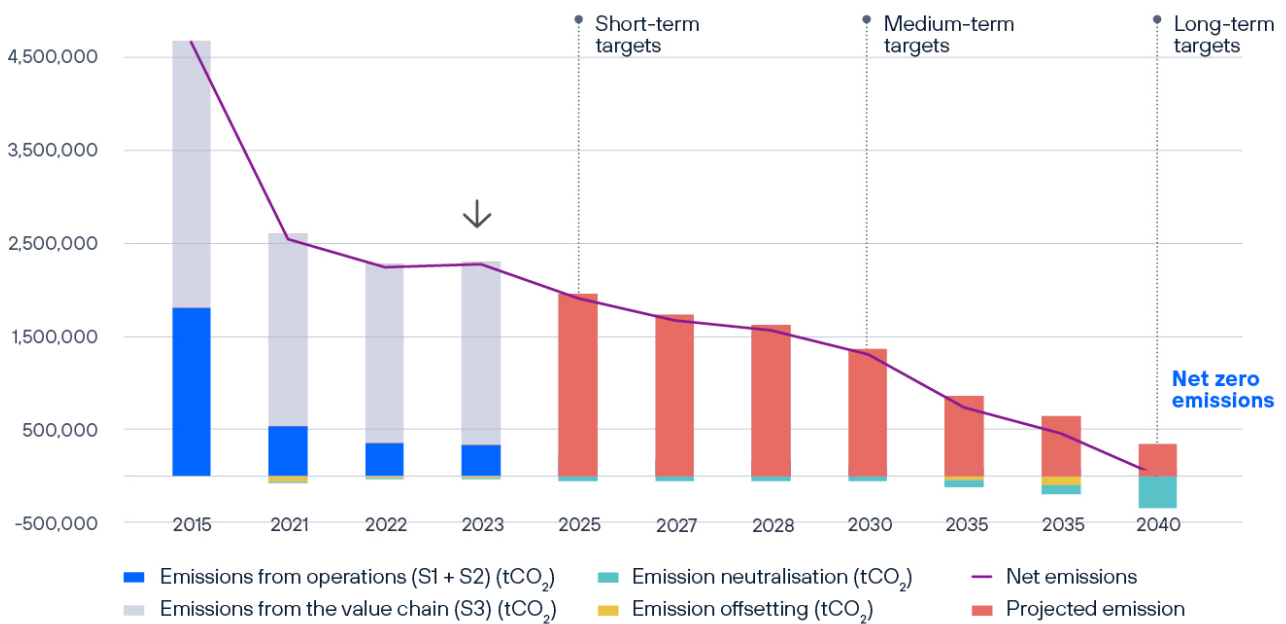
Telefónica's decarbonisation plan includes interim targets for **the short and medium term**:

- Reduce operational emissions (scopes 1+2) by **90%** by **2030** globally compared to 2015 levels, and by 2025 for our main markets.
- Reduce emissions in our **value chain** (scope 3) 39% by 2025 and **56%** by **2030** compared to 2016 levels.

- Continue to use 100% **renewable electricity** in Europe, Brazil, Chile and Peru, and throughout our operations by 2030.
- Neutralise 100% of our operational emissions (scopes 1+2) in our main markets from 2025.
- Improve energy consumption per unit of traffic (MWh/PB) by 90% in 2025 compared to 2015.
- Accelerate our customers' decarbonisation processes by fostering development of new digital solutions.

Telefónica's climate targets are validated by the SBTi and include Scopes 1, 2 and 3.

### The road to net zero

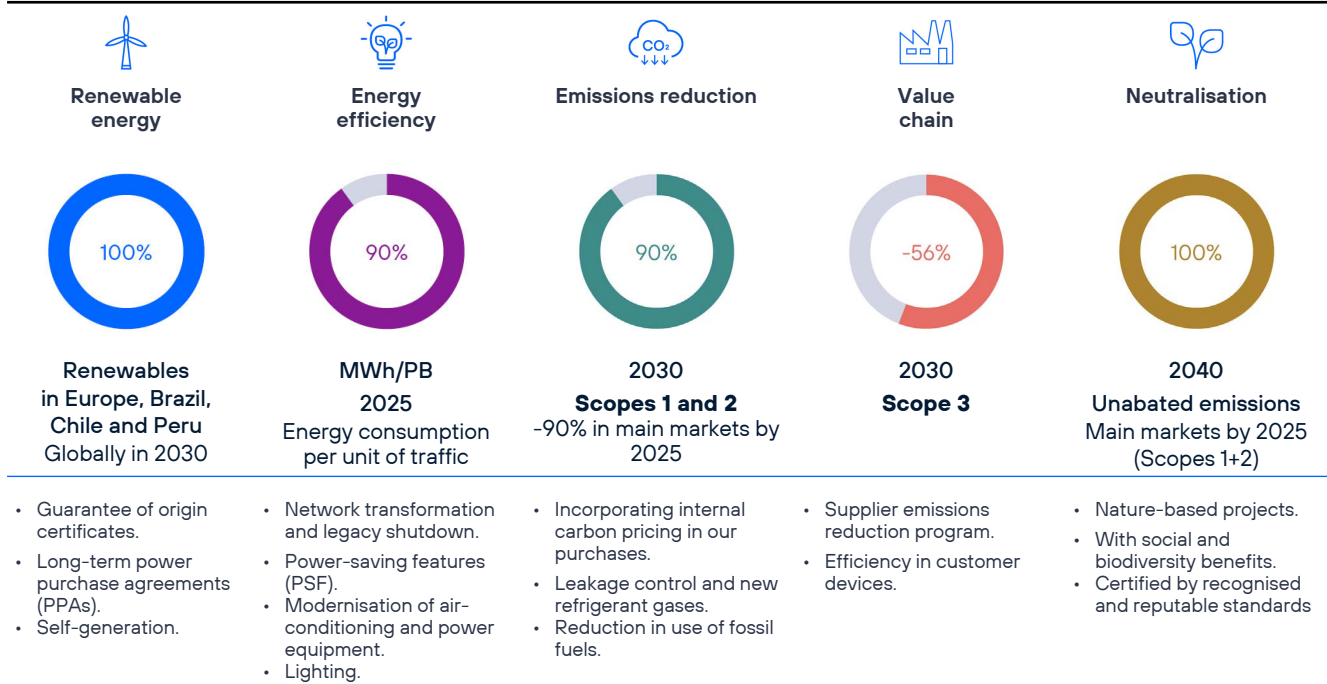


**Energy and climate change targets**  
Beyond the Paris Agreement



**Net zero emissions**

2040: entire value chain (Scopes 1, 2 and 3)



**2.2.3. Governance**  
GRI 2-12

The climate change and energy strategy is part of the Company's Responsible Business Plan, which is approved by the Board of Directors. The Sustainability and Regulation Committee, which meets monthly, oversees the strategy implementation, reviews the risks and monitors its targets.

Our **Global Energy and Climate Change Office** has been operational since 2007. Comprising the global areas of Operations (Global Chief Technology and Information Officer - GCTIO), Environment and other areas for which the issue at hand may be relevant (e.g. Procurement, Risks), the Office is in charge of executing the strategy and coordinating implementation of the Climate Action Plan. Furthermore, the Global Energy Centre, created in 2015, works to ensure we meet our targets as soon as possible and, alongside local officers, promotes energy efficiency and renewable energy projects in each country.

In our **Climate Action Plan** we set out how we align our strategy and business model with the most ambitious scientific climate recommendations so that they are compatible with the transition to a low-carbon economy. This plan is approved by the Board of Directors, following analysis by the Sustainability and Regulation Committee

In addition, a percentage of the variable remuneration of all our employees, including the Executive Committee, is linked to fulfilment of the annual and multi-annual CO<sub>2</sub> emissions reduction and neutralisation targets.

For further information, see 5.1. Annual Report on Remuneration

Reducing CO<sub>2</sub> emissions has been part of the variable remuneration of all employees, including the Executive Committee, since 2019.

We have been holding our Global Workshop on Energy and Climate Change every year since 2010. The Workshop is an annual meeting point for those leading the Company's energy transformation and our main partner companies in the field. During the event, which brings together more than 250 individuals from all the

countries in which Telefónica is present, the latest technological innovation, energy efficiency and renewable energy initiatives and environmental projects are presented and shared.

## 2.2.4. Policies

### GRI 2-23


We have a number of internal regulations that are designed to align the organisation with our energy and climate change targets:

- [Environmental Policy](#).
- [Energy Management Policy](#).
- [Supply Chain Sustainability Policy](#).

## 2.2.5. Impacts, risks and opportunities

### GRI 201-2, 3-3

Climate change is one of the risks included in Telefónica's risk management framework.

 For further information, see 3.1. Risk management framework

We also analyse climate-related **risks** in accordance with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), covering both physical risks and transition risks in the medium and long term. To assess the physical risks, we use projections of climate variables for two different CO<sub>2</sub> concentration scenarios (Representative Concentration Pathways, or RCPs) defined by the Intergovernmental Panel for Climate Change (IPCC) for the time horizons of 2030, 2040 and 2050.

In the **RCP 2.6** scenario (which is aligned with the Paris Agreement), the temperature increase at the end of the century does not exceed 2°C compared to pre-industrial levels. The risks of this scenario relate mainly to transitioning to a decarbonised economy (regulatory, technological, market and reputational risks) – for

example, due to the tightening of the measures to limit greenhouse gas (GHG) emissions. This transition would also entail considerable **opportunities** associated with cost reductions from energy efficiency and renewable energy and with business growth from digital solutions designed to help our customers decarbonise their activities.

 For further information, see chapter 2.11. Sustainable offering and innovation

In the "business as usual" scenario (**RCP 8.5**), where the temperature increase at the end of the century is around 4°C, the major risks are physical risks associated with changes to specific climate variables, whether temporary (increase in extreme weather events) or chronic (increase in temperature, variation in rainfall). The risk associated with the **increase in temperature** would entail a major financial impact, as it could increase our consumption of electricity for cooling our network equipment. In addition, this could be aggravated by the possible increase in the cost of electricity, mainly in countries that are highly reliant on hydropower in the event of drought.

Furthermore, transition scenarios, which provide the necessary parameters to test the impact of transitioning to a low-carbon economy, also provide key information to help us understand how the future might unfold if the temperature increase were limited to 1.5°C. For this assessment we use the International Energy Agency's **IEA NZE 2050 scenario**, which is aligned with the Paris Agreement and describes the efforts needed to reduce GHGs and reach net zero emissions globally by 2050.







In order to ensure the resilience of our assets, we have drawn up an **Adaptation Plan**, the main pillars of which are business continuity, energy efficiency and renewable energy plans that help us to reduce exposure to physical risks and adapt to the consequences of climate change.

 For further information on the Task Force on Climate-related Financial Disclosures (TCFD), see 2.20.8. Appendix





**Climate change risks**

**Transition**

**Physical**

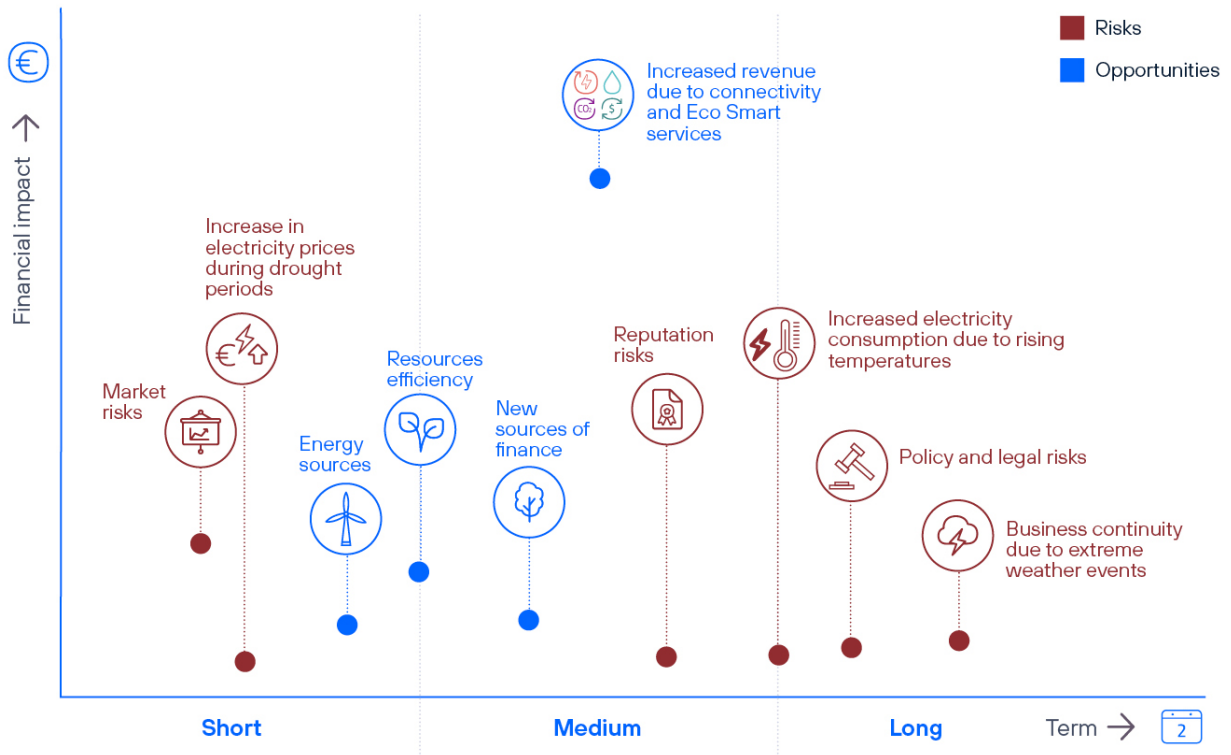
 Regulatory	 Technological	 Market	 Reputational	 Chronic	 Acute
Price increases for certain products and services due to direct or indirect CO <sub>2</sub> taxes or charges (energy, transport, etc.).	Need for early decommissioning of HVAC assets or energy assets due to transition to low-emission energy.	Increased energy OpEx, e.g. in countries with high reliance on hydro generation or due to higher CO <sub>2</sub> prices.	Greater demands in this area from key stakeholders (investors, analysts, customers, etc.). Rising carbon offset costs.	Increased electricity consumption for cooling associated with rising global temperatures. Possible increase in electricity prices during periods of drought.	A higher occurrence of extreme weather events (mainly floods) would increase the business continuity risk and the cost of replacing damaged assets.

**Climate change opportunities**

 Resource efficiency	 Eco Smart products and services	 Energy sources	 Resilience	 New financing sources
We optimise the costs of our networks and operations through our Energy Efficiency Plan.	Our connectivity and digitalisation solutions are key to decarbonising other sectors and will allow us to access new business opportunities.	Our Renewable Energy Plan allows us to reduce carbon emissions and lower the cost of energy for our network, thanks to self-generation and long-term power purchase agreements (PPAs).	Our adaptive strategy allows us to incorporate risks and opportunities into the Company's strategy, influencing our investment, modernisation and network deployment decisions.	Access to new sustainable financing sources, in addition to traditional financing.

Assessing climate scenarios has allowed us to identify the major risks and opportunities for our business in terms of impact, which we outline below.

**Financial impact of climate-related risks and opportunities**



**Management of the main climate change risks**

Category	Nature	Risk	Description	Financial impact	Risk management and mitigation
Physical	Chronic	Temperature increase	Rising average temperatures could increase Telefónica's operating costs, mainly due to increased cooling requirements for network equipment.	Increase in operational costs. <i>Long term</i> <i>Low impact</i>	To manage this risk, we have implemented several lines of action to reduce cooling related electricity consumption. We support a variety of energy efficiency projects, both to reduce air conditioning consumption (e.g. free cooling, liquid cooling, modernisation of equipment, etc.) and regarding the network equipment itself, including technical specifications for the network equipment so that it can operate at higher temperatures.

Category	Nature	Risk	Description	Financial impact	Risk management and mitigation
Physical	Acute	Extreme weather events	Increased severity and frequency of extreme weather events, such as heavy precipitation (rain, hail, snow/ice), forest fires and floods.	<p>Increased operational costs due to the replacement of damaged assets.</p> <p>Decrease in revenues due to service unavailability.</p> <p><i>Long term</i> <i>Low impact</i></p>	<p>To manage this risk, we have the Global Business Continuity System included in our Adaptation Plan to manage risks proactively, ensuring the utmost resilience of our operations in the event of any possible interruption. These include:</p> <p>a) Business Continuity Plans in each country that set out how to restore essential functions that have been interrupted;</p> <p>b) A global Crisis Management System to manage high-impact threats. There is also a Global Crisis Committee, which includes specialists for each type of incident.</p> <p>In addition, the Company's insurance model takes into account the possible impact on assets due to the occurrence of extreme weather events.</p>
Transition	Market	Electricity price increases	The telecommunications sector is not fossil-fuel intensive but is highly dependent on electricity consumption for its networks. For this reason, an increase in electricity prices due to a new regulation in the electricity generation sector or a shortage of hydro generation due to a drought may impact our energy OpEx.	<p>Increase in operational costs.</p> <p><i>Medium term</i> <i>Medium impact</i></p>	<p>To manage this risk and reduce our exposure to rising electricity prices, we have implemented two main plans:</p> <p>a) An Energy Efficiency Plan, which allows us to consume less electricity; and</p> <p>b) A Renewable Energy Plan, which reduces our operating costs and makes us less dependent on fluctuations in electricity prices through long-term power purchase agreements (PPAs).</p>

## Management of the main climate change opportunities

Type	Opportunity description	Financial impact	Opportunity management
Products and Services	Telefónica has identified opportunities in a low-carbon economy to grow the business by selling products that reduce the carbon emissions of our customers and other sectors. In this regard, digitalisation will be essential in tackling the transition to a low-carbon economy.	Increased revenues as a result of higher demand for products and services that contribute to the decarbonisation of the economy.  <i>Medium term</i> <i>High impact</i>	We see the future potential of technology as an opportunity, with digitalisation being essential to tackle environmental challenges, which is why we are a founding member of the European Green Digital Coalition. Telefónica is developing new digital services based on broadband connectivity, the Internet of Things (IoT), the cloud and big data, which have the potential to optimise our customers' resource consumption and reduce their impact on the environment. The Telefónica Tech business unit drives the growth of digital services involving IoT/big data and the cloud to achieve a larger scale and integrate leading digital solutions that help our B2B customers move towards a more digital and sustainable world.
Resource efficiency	Since the electricity consumption of our network is high, Telefónica sees a major opportunity associated with cost reductions arising from energy management. By being more efficient in the use of this resource, the operating costs of our networks will be reduced.	Reduction in operational costs.  <i>Medium term</i> <i>High impact</i>	Through the Energy Efficiency Plan, we aim to decouple the growth of our business from energy consumption, which is why it is integrated into our overall climate change strategy. This plan gives us a significant competitive advantage in our sector, as it increases the efficiency and resilience of our networks.  Since 2010, we have implemented over 1,500 energy efficiency projects that have enabled us to achieve considerable energy savings and therefore cost reductions. We have managed to keep our energy consumption stable since 2015, despite the exponential growth in traffic passing through our networks.
Transition to renewable energy (PPAs)	Telefónica has identified a major opportunity associated with the use of renewable energy sources. This opportunity provides us with a major competitive advantage, as it reduces our exposure to energy price volatility and delivers significant energy OpEx savings.	Reduction in operational costs.  <i>Medium term</i> <i>High impact</i>	One of our strategic targets in terms of climate change is to commit to renewable energies as a sustainable source for our business, ensuring that 100% of our electricity consumption comes from renewable sources by 2030.  The Renewable Energy Plan includes all types of solutions: self-generation, purchase of renewable energy with guarantees of origin, distributed generation and long-term PPAs. The plan allows us not only to reduce our exposure to market variations, but has enabled us to achieve considerable savings in electricity costs as a result of long-term PPAs and distributed generation.
Sources of sustainable finance	Access to new sources of sustainable finance (capital markets and bank financing) and diversification of the instruments used (bonds, hybrids, loans, etc.) with sustainability-linked criteria.	Improved financing conditions.  Broadening the investor base and investor type.  <i>Medium term</i> <i>High impact</i>	Telefónica uses green bonds and green and sustainable hybrid instruments to finance projects with a positive environmental impact as defined in its sustainable financing framework: for example, telecommunication network transformation and modernisation projects (for the fixed and mobile networks), to improve its energy efficiency. In addition, Telefónica uses other sustainable bank financing instruments, such as loans and credit facilities linked to sustainability targets, which allow it to make progress towards achieving corporate targets linked to emissions reductions.

## 2.2.6. Action plan and commitments

### GRI 2-23, 3-3

Our Climate Action Plan sets out our energy and climate change strategy and how it is integrated on a cross-cutting basis throughout the Company. The Plan defines specific actions aligned with most ambitious scientific climate recommendations and focuses on building a greener future.

Our journey to **net zero** requires us to reduce our own emissions (Scopes 1 and 2) and those of our value chain (Scope 3), neutralise unabated emissions and boost the use of our Eco Smart products and services, which help our customers reduce their emissions.

#### 2.2.6.1. Calculating our emissions

We calculate annually the carbon footprint of our operations (scopes 1 and 2) and our value chain (Scope 3), following the methodology established in the **GHG Protocol** Corporate Accounting and Reporting Standard (revised edition). We develop an **emissions inventory** that follows methodological guidelines based on the principles of relevance, completeness, consistency, transparency and accuracy.

The information included in Telefónica's GHG emissions inventory corresponds to the Company's entire reporting scope for non-financial indicators, that is, those operations and facilities over which Telefónica has operational control.

We have our emissions inventory verified by an independent third party so as to confirm the completeness of the calculation process and increase the credibility and transparency of the reported data.

Telefónica calculates its GHG emissions by multiplying the activity data compiled at each facility or business unit by documented GHG emissions factors, which are regularly selected and updated.

To calculate our emissions, we develop an inventory following GHG Protocol, verified by an independent third party.



## GHG emissions accounting methodology

**Scope 1 emissions (direct GHG emissions).** They come from two main sources: fuel consumption (fleet and operations) and fugitive emissions of fluorinated gases. The emissions factors used are stated in the GHG Protocol Cross Sector Tools (2017), the IPCC Fifth Assessment Report (2014) and the carbon footprint reporting tools provided by the ministries of the different countries.

**Scope 2 emissions (indirect GHG emissions).** There are two emission sources: electricity consumption and district heating. There are two methods for calculating these emissions, one that is location based and one that is market based. The emissions factors used are taken from the International Energy Agency's Statistics-Emissions Factors (2023) report and from local official sources (energy or environment ministries) in each country.

**Scope 3 emissions (other indirect GHG emissions).** The SBTi corporate Net-Zero standard establishes that long-term targets must cover at least 90% of an organisation's scope 3 emissions and that all material categories must be included in the inventory.

In order to define the most relevant categories (those for which there is more opportunity to reduce emissions), we screened all 15 categories in accordance with the GHG Protocol. Five categories are material and represent 91% of our scope 3 total. The other 10 categories are excluded from Telefónica's GHG inventory, either because they are not applicable, because they are reported in other scopes, or because they account for less than 5% of the scope.

The methodology for quantifying scope 3 emissions is consistent with recommendations from the GHG Protocol (Corporate Value Chain (Scope 3) Accounting and Reporting Standard) and from the ITU-T&GeSI&GSMA sectoral guidance (Guidance for assessment of Scope 3 emissions for operators).

To calculate the emissions of purchased goods and services and capital goods (cat. 1 and 2), we use the hybrid method defined by the GHG Protocol, in which the supplier's emissions intensity is multiplied by the amount spent on the supplier.

In the case of purchased mobile devices, we use the supplier-specific method, according to which the units of devices acquired are multiplied by the specific emissions of the production and transportation stages of each model's Life Cycle Assessment (LCA).

The emissions associated with energy-related activities (cat. 3) are those associated with extraction, production and transportation of the energy we consume. The calculation methodology is based on the activity data (amount of fuel, electricity and district heating consumed in the reporting year by the different business units) and the upstream emission factors and transmission & distribution losses, which are specific to each country and obtained from the International Energy Agency's Statistics-Emissions Factors (2023) report and UK's Department for Environment, Food and Rural Affairs (DEFRA)'s 2023 UK Government GHG Conversion Factors for Company Reporting report.

For calculating business travel emissions (cat. 6), we use both the distance-based method (for distances travelled by plane, train, bus, rental car and boat) and the spend-based method (for journeys in certain modes of transport where the mileage is not known). The sources of emission factors used are the 2023 UK Government GHG Conversion Factors for Company Reporting report from the UK's Department for Environment, Food and Rural Affairs (DEFRA) and the Air Emission Accounts by area of activity and economic aggregated data by area of activity (*Cuentas de emisiones a la atmósfera por ramas de actividad y Agregados por ramas de actividad*) from Spain's INE (the National Statistics Institute).

We use two approaches to calculate emissions from the use of sold products (cat. 11):

- Emissions from the use of mobile devices (smartphones or tablets) are calculated by multiplying the number of sold mobile devices by the use life stage specific LCA product emissions of each device. The emissions data are publicly available LCA studies from suppliers or data from the Eco Rating initiative.
- Emissions from the use of customer premise equipment, such as routers and set-top boxes, are calculated by multiplying the number of devices installed by the annual energy consumption and the specific electricity emission factor for each country. The source of the electricity emissions factors is the same as the one used for the location-based method of calculating Scope 2 emissions.

Although they are not included in our inventory, we also calculate and report other emissions that we consider strategic to our business such as "Category 15. Investments". This category includes emissions from the entities of the investees over which we do not have operational control. For example, VMED O2 UK, the joint venture created in the UK in 2021 is included. For this calculation, we use the investment-specific method, multiplying the operational emissions of the investee company by Telefónica's share of equity. If no public emissions data are available, the average-data method is used, multiplying the revenue of the investee company by an EEIO (Environmentally-Extended Input-Output) factor that is representative of the sector of economic activity of the investee company and by Telefónica's share of equity in the investee company.

### 2.2.6.2. The Autonomous Network Journey (ANJ) programme

In 2021 Telefónica launched its ambitious network transformation program, the Autonomous Network Journey, which aims to harness the potential of our technology transition towards softwarisation and unbundled architectures. The program entails changes and improvements in all the technical areas of our Company, from network architecture and systems to the way we work and our processes, thereby boosting autonomy through data management, artificial intelligence (AI) and automatic learning, all while maintaining a customer-, sustainability- and security-by-design-oriented approach.

Guided by the drivers of agility, intelligence, quality, efficiency and sustainability, the program has over 100 initiatives and an organising framework comprising the following:

- Network: our networks and systems.
- Brain: automation platform from which we optimise data management and implement AI algorithms.
- Heart: processes that govern the life cycle of our networks and systems and therefore improve our operational and business KPIs.
- People: new ways of working enabled by technological transformation.

### 2.2.6.3. Reducing our own emissions GRI 305-5

At Telefónica, **keeping our energy consumption stable** is a priority, despite the considerable rise in digitalisation of society and therefore the amount of data traffic circulating through our networks.

That priority informs our **Energy Efficiency Plan** and the **Sustainable Platform Design** project, which is part of the **ANJ** program and includes **technology** initiatives such as modernising our network by replacing copper with fibre optics (85% more efficient); deploying 5G (which is up to 90% more efficient than 4G); virtualisation; cloud migration; implementing Power Saving Features (PSFs) and AI/machine learning (ML) platforms to optimise energy consumption while maintaining quality; **shutting down legacy networks** to minimise network co-existence; **modernising infrastructure** and renovating power plants and HVAC equipment; free cooling; immersion cooling; shutting down HVAC equipment; reducing fuel consumption by using hybrid stations with solar photovoltaic energy; delaying the ignition of generators using deep-cycle lithium batteries;

and using more environmentally friendly fuels such as hydrogen/methanol.

Not only do we need maximum efficiency in energy use if we are to become a decarbonised company, but we also need the energy to come from renewable sources.

Our **Renewable Energy Plan** includes all types of solutions – self-generation, the purchase of renewable energy with a guarantee of origin and long-term Power Purchase Agreements (PPAs) – and prioritises non-conventional renewable energy sources. Our goal is to go beyond 100% renewable energy in our main markets. We want to contribute to increasing the renewable energy mix through self-generation and/or by facilitating the construction of new renewable power plants through our medium- and long-term consumption commitments (under PPA models).

In addition, we have set an **internal carbon price** to help us make better investment and equipment procurement decisions. We implement a shadow price when procuring equipment that uses energy (electricity or fuel) or that contains fluorinated gases, by calculating the Total Cost of Ownership (TCO). This enables us to bear in mind not just the purchase price, but also the price of the energy consumed and the emissions generated during its useful life. As a result, we are able to make better investment decisions, and choose to buy more efficient equipment that will produce fewer operational emissions over its useful life.

The [Climate Action Plan](#), available on our website, is our roadmap to achieve net zero emissions by 2040.

### 2.2.6.4. Reducing value chain emissions GRI 305-5

The emissions generated by value chain (scope 3) are the largest in our carbon footprint.

Of our total scope 3 emissions, nearly two thirds come from our **supply chain** (the “purchased goods and services” and “capital goods” categories, as defined in the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard) and the **use of our products** by our customers.

In order to reduce our value chain emissions, cooperation with our main suppliers and the rest of the sector is key, as we share the same challenges.

With that in mind, we have been running **a number of emissions-related programs with our main suppliers** for several years now. For those who represent around 90% of our supply chain emissions (categories 1 and 2 of the GHG Protocol), we analyse their climate maturity and support them in their decarbonisation process at a company level through training sessions (Supplier Engagement Programme) and by asking them to make specific commitments, such as setting emissions reduction targets in line with the SBTi. There is a smaller group of suppliers for whom, due to the significance of their emissions, we run an individual, more specific collaboration program (Carbon Reduction Programme), which aims to reduce carbon emissions at product level.

In addition, we work closely with other operators in the Joint Alliance for CSR (JAC) and GSMA working groups, collaborating on methodological issues and specific actions to encourage emissions reductions in our common supply chain. We also participate in multi-sectoral initiatives, such as 1.5°C Supply Chain Leaders and the SME Climate Hub, to reach out to small and medium-sized enterprises as well.

For further information, see 2.19. Responsible supply chain management

The other major scope 3 category that is important for our emissions is the one related to the **use of sold products**. To reduce the emissions from electronic devices, we foster design with environmental criteria in household connectivity equipment (CPE) and reuse of customer premise equipment and mobile phones.

For further information, see 2.3. Circular economy

We also help our customers to make informed purchasing decisions. One of our initiatives is Eco Rating, which measures the environmental impact of mobile phones over their entire life cycle, rating their environmental sustainability. On the one hand the Eco Rating label enables customers to incorporate sustainability criteria when choosing mobile handsets and, on the other, it encourages manufacturers to reduce the environmental impact of these devices.

For further information, see 2.11. Sustainable offering and innovation

## We collaborate in sectoral initiatives to reduce our supply chain emissions.

### 2.2.6.5. Neutralising unabated emissions

We will neutralise the emissions that cannot be reduced (a maximum of 10% in 2040) by **permanently removing or sequestering an equivalent amount of CO<sub>2</sub>** from the atmosphere through the purchase of carbon credits or by developing our own projects, which must meet the following criteria:

- **Carbon sequestration** initiatives should preferably be **nature-based**, such as reforestation, afforestation or ecosystem restoration initiatives using native plant species.
- Projects should be able to demonstrate **additionality** and **long-term impact**.
- Projects should provide environmental and social co-benefits, contribute as much as possible to the achievement of the SDGs and respect and consider the rights of local communities and indigenous peoples.
- Projects should be certified to recognised national/ international standards and verified by an accredited third party.
- Projects should preferably be located in countries where Telefónica is present.

Furthermore, **in the short and medium term**, we will invest in projects that yield **high-quality emissions-reduction credits**, thereby contributing to halting deforestation in certain regions where Telefónica has operations and providing incentives to support indigenous peoples and local communities.

### 2.2.6.6. Developing digital solutions for the green transition

Another of the priorities of our Climate Action Plan is to **promote connectivity and digitalisation as key factors which enable the green transition** and also improve our customers' competitiveness.

We develop connectivity, Internet of Things (IoT), cloud, big data and 5G services that provide not only operational and cost-saving benefits, but also environmental benefits.

For further information, see 2.11. Sustainable offering and innovation

### 2.2.6.7. Calculating the avoided emissions of our customers

We annually measure the enablement effect of the products and services implemented by our customers, quantifying their avoided GHG emissions.

In order to carry out these calculations, we need to understand the efficiencies the use of our services brings to our customers' operations.

**Mobile connectivity and broadband services for the B2C segment** give our customers access to digital applications that allow them to adopt more sustainable habits such as teleworking, e-learning, audio/video calls, car sharing, satellite navigation apps, real-time access to public transport applications, shared accommodation, online shopping and online banking services.

To understand how these applications are used and what new, more sustainable habits are being adopted, we conduct surveys of our customers in the residential segment.

To understand how **B2B customers** are using **Eco Smart solutions**, we perform case studies, selecting representative customers for each sector who can give us an idea of the average efficiencies brought by our solutions. We are then able to extrapolate the results to other customers in the same sector who make similar use of the technologies we sell them.

With support from the Carbon Trust, since 2019 we have been using this information to develop and apply a **calculation methodology that converts the efficiencies** (energy, operational or material consumption) produced by our services (when used by a customer) **into avoided CO<sub>2</sub> emissions**.

We are continuously updating this methodology to include new digital services and the technological developments of our solutions and customers in a way that is consistent with industry guidelines and/or methodological recommendations.

In addition to our commitment to promoting green digital solutions and transparently communicating the environmental benefits they deliver, we have been a founding member of the European Green Digital Coalition (EGDC) since 2021.



The EGDC is an initiative promoted by the European Commission and the leading European companies in the ICT sector. In order to make the EU's green transition possible, we, the participating companies, are committed to:

- Investing in the development and deployment of green digital solutions with a strong focus on contributing to energy efficiency.
- Collaborating with key organisations to develop standardised methodologies for assessing the net environmental impact of digital solutions.
- Promoting cross-sectoral dialogue.
- Contributing to the development of guidelines and recommendations for the deployment of these solutions.

Telefónica is included in CDP's Climate A List for the 10<sup>th</sup> consecutive year.



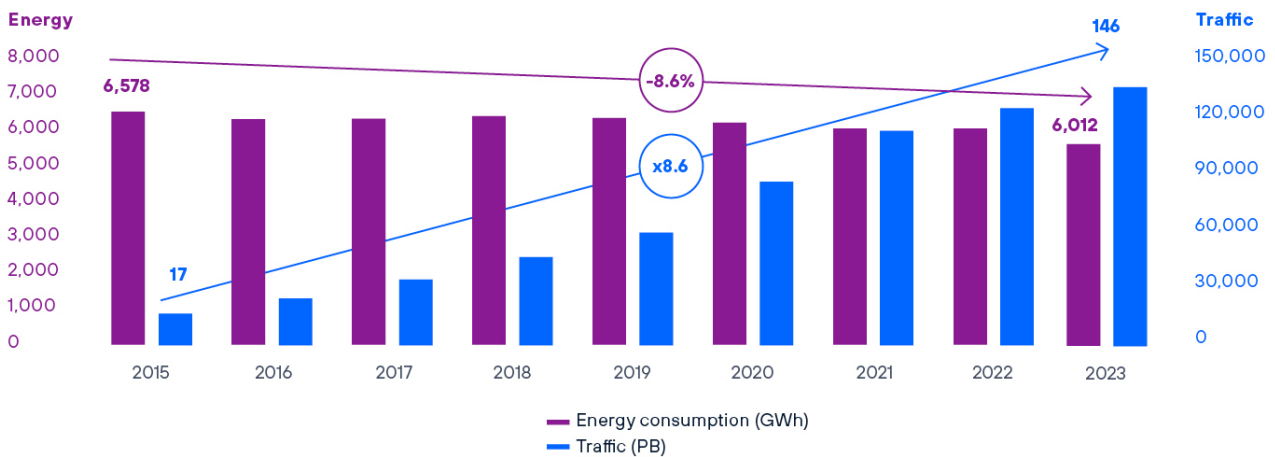
## 2.2.7. Progress in 2023

### 2.2.7.1. Energy consumption performance GRI 302-1, 302-2, 302-3, 302-4

In 2023, we rolled out a series of projects aimed at boosting the efficiency and sustainability of our operations, in line with the Company's ANJ (Autonomous Network Journey) programme to build the network of the future. We prioritised the rollout of new, more efficient, technologies and the shutdown of legacy elements to foster the circular economy.

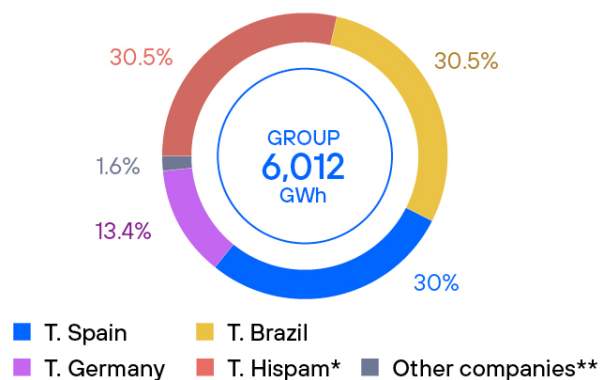
During this period, we implemented 170 initiatives focussing on energy management and efficiency in our networks and offices, with savings of 281 GWh and €82 million. Our total energy consumption was 6,012 GWh (21,642,699 GJ), of which 95% was electricity and 5% was fuel. We must highlight that we have managed to improve our rate of **energy consumption per unit of traffic** by 89.3% compared to 2015.

#### Progress in energy consumption and traffic 2015-2023



Thanks to the implementation of energy efficiency projects, we have reduced power consumption by 8.6% since 2015, even though data traffic through our networks has increased 8.6 times over.

#### Total energy consumption 2023



\* T. Mexico, T. Colombia, T. Venezuela, T. Ecuador, T. Peru, T. Argentina, T. Chile, T. Uruguay  
 \*\* Telxius Cable, TGIES, T. Tech

As part of our energy efficiency projects, we actively promoted network transformation initiatives, which are responsible for 66% of our total energy savings. We also continued our commitment to **shut down legacy networks**, including both mobile and network infrastructure. In Spain, in line with the 2024 copper shutdown plan, 1,914 plants were closed in 2023 (4,150 since 2014); this means we have shut down 49% of the total number of plants scheduled to close, generating savings of 41 GWh. In addition, in Hispanoamerica we made progress in shutting down the 2G network, totalling 50% in Uruguay. When we have completed the shutdown process entirely (100%), this will achieve estimated savings of 4.7 GWh per year, which represents 17% of total consumption of this operation.

**As regards infrastructure**, we defined a new multi-annual plan based on a series of levers we have included in our [Climate Action Plan](#), such as compaction of technical rooms, renewing of obsolete equipment, cold aisle containment and increasing the temperature of rooms and associated water circuits. In 2023, we improved the PUE (Power Usage Effectiveness) of our main data centres by a tenth, to 1.69.

We broadened the **Data Centre Consolidation** project to include all critical sites. In Germany, we defined a consolidation plan to have less infrastructure (but better in terms of reliability and efficiency) and obtain a 15% reduction in energy consumption.

In addition to the projects carried out at our data centres, we undertook activities involving the rest of the critical infrastructure (core sites). In Spain, we continued to implement the **Apagado Milles** project, which consisted of matching the climate control equipment to the real status and shutting down almost 1,000 units, with savings of 20 GWh in 2023.

In 2023, our **Smart Site Design** project also pressed onward, aiming to improve the **design** of mobile sites thanks to the Smart Site model, which includes equipment modernisation, use of free cooling, more efficient rectifiers, bluetooth locking and renewable energy, among other best practices. Germany is a good example of this, where we continued to work on the NSD (New Site Design) project.

In Brazil, we signed the **Energy Savings as a Service (ESaaS)** framework agreement, while in Hispanoamerica we selected the **Hycooloop** model to move forward in modernising the infrastructure and improving the energy efficiency of the sites, all with third-party investment. In 2023, in Spain we implemented four ESaaS-based projects which represent savings of 5.2 MWh per year. The next step involves expanding it to 40 plants, with estimated average savings in consumption of 20% for each plant.

With the aim of managing network capacity efficiently, we intensified the use of power-saving features (PSF), especially during off-peak periods. We incorporated advanced AI, machine learning and automatic traffic prediction tools. In 2023, we implemented six new **power-saving features (PSF)** in our 4G and 5G networks in our main markets, enabling us to reduce energy consumption in off-peak hours by up to 30%, without compromising on quality of service. In Germany, AI/machine learning platforms were rolled out to obtain additional savings to those from the 4G/5G power-saving features already active at network level, with additional savings of up to 5%.

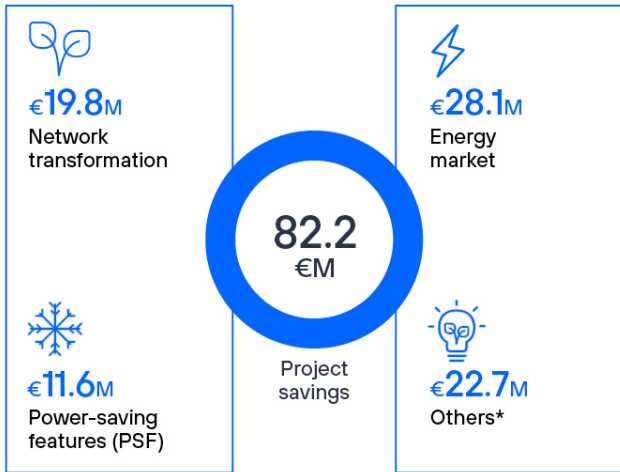
Lastly, we continued to **improve the methodologies for obtaining fuel consumption data** from operations and recharging of refrigerant gases. In Colombia and Venezuela, we implemented automatic fuel measurement systems at the main plants. We persevered with the digitalisation of the management process, achieving an increase in data reliability, which enabled us to reduce refrigerant gas recharges by 15% in Brazil. This also makes it possible to implement new projects to reduce scope 1 emissions.

**With the aim of reducing emissions derived from the use of fossil fuels**, we conducted an assessment for the use of hydrogen/methanol solutions at off-grid mobile sites. In 2023, the study demonstrated theoretically that fuel cells powered by methanol, as a complement to the solar panels and batteries already in use, would allow us (at a reasonable cost) to eliminate the use of generators and, therefore, reduce our emissions. In the coming year, we will roll out a number of pilots prior to large-scale implementation.

In line with this, for our power plants where use of generators is inevitable as they guarantee continuity of service, we performed an analysis based on use of biofuels (HVO) to replace traditional diesel. Thus, we ratified the viability of a change that reduces emissions. During 2024, we will launch a number of pilots in different operations.

In Colombia, 10 sites were implemented under the ESaaS model and eight sites with the Li-ion battery cycling project, representing a reduction of 125,582 litres of fuel per year. In this way, we eliminated 100% of the sites which ran 365 days with a generator.

**Savings in energy efficiency and managements projects**



\*Other: includes projects such as lighting, correcting the output factor, renewable self-generation, reduction in fuel use, cooling, power, and tax exemptions and benefits.

**2.2.7.2. Renewable energy**

In 2023, 84% of our total electricity consumption in our own facilities came from renewable sources. In Europe, Brazil, Chile and Peru, 100% of the electricity we used came from renewable sources.

We continued the **distributed generation (DG)** project in Brazil. To date, we have installed 67 renewable energy plants out of a total of 85 planned. These plants will generate over 700 GWh per year for our operations, thereby reducing dependence on renewable energy certificates (iRECs).

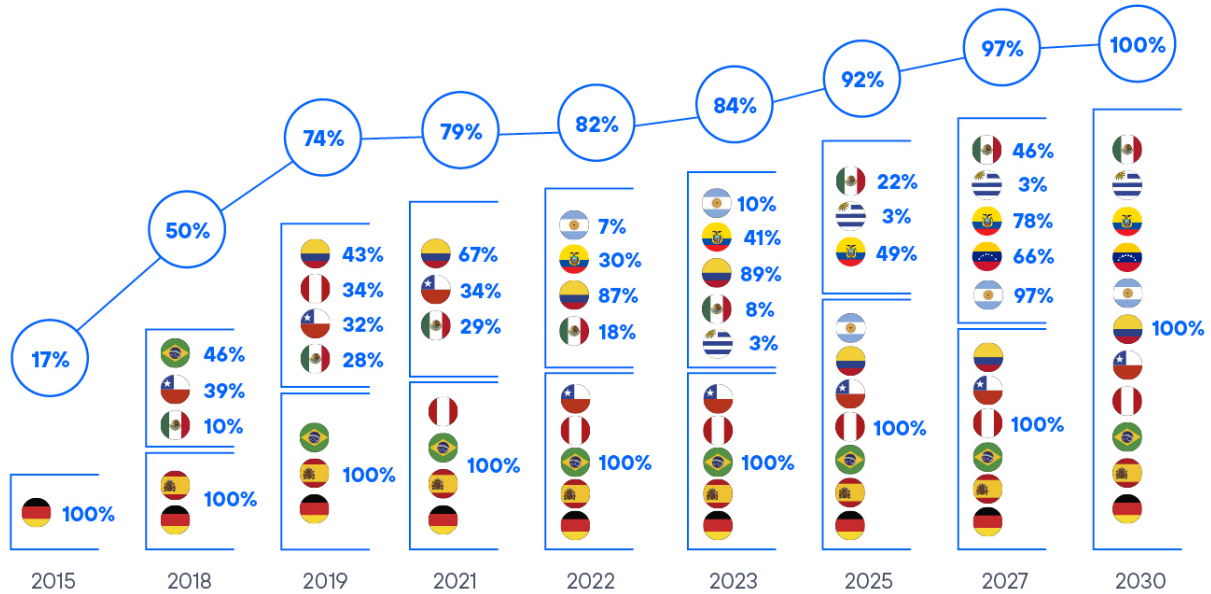
In addition, thanks to extending **guarantee of origin programmes**, for the first time Telxius Cable certified 100% of the electricity it consumed as renewable at its own facilities in its main markets, through the purchase of iRECs. In Hispanoamerica, we awarded the first multi-country and multi-annual purchase (2024-2026) for iRECs for a volume of between 451 GWh (2024) and 981 GWh (2026). This is an increase in the percentage of renewable consumption of between 53% and 76% for 2024 and 2026, respectively. In 2023, Argentina, Ecuador and Colombia continued increasing their consumption of renewable electricity, achieving 10%, 41% and 89% respectively.

Regarding the electricity we use at non-Company facilities, our operations in Germany, Spain, Brazil, Peru and Chile also certified 100% of electricity consumption at third-party sites as being renewable, enabling us to reach a figure of 87% globally.

In Europe, Brazil, Peru and Chile, 100% of the electricity we consume at our own facilities comes from renewable sources (84% at global level). Our goal, as part of the RE100 initiative, is for the electricity we consume in all our operations to come entirely from renewable sources by 2030.

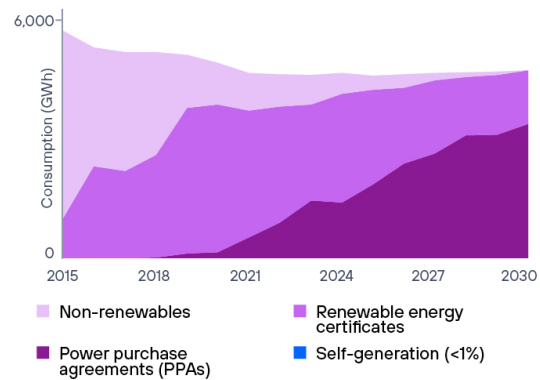
With regard to **self-generation of electricity**, we have 484 systems installed (both in fixed network buildings and in mobile network base stations). These systems not only contribute to improving our electricity use through renewable sources but also allow us to avoid using fossil fuel-based generators in isolated (off-grid) base stations, achieving considerable reductions in consumption, which range between 70% and 100%. A noteworthy example of this initiative was the implementation of 11 self-generation projects in Ecuador, with estimated annual production of 34,000 kWh.

**Progress in renewable energy consumption in own facilities**



Our commitment in this area is reflected in the **Renewable Energy Plan**. This aims to reach 100% by 2030, in the long-term power purchase agreements (PPAs) we have entered into and in the gradual ramping up of our self-generation. It will enable us to gradually reduce the acquisition of renewable energy certificates, generating in turn significant savings in electricity operating costs (OpEx).

**Renewable energy consumption by type**



**Energy consumption performance**

Energy	Unit	2015	2021	2022	2023	2015/2023 Performance
Total energy consumption	MWh	6,577,766	6,106,625	6,106,255	6,011,861	-8.6%
Electricity consumption + self-generation <sup>1</sup>	MWh	6,186,885	5,815,665	5,824,828	5,739,167	-7.2%
Renewable electricity consumption	MWh	967,076	4,227,978	4,529,993	4,849,439	401.5%
Self-generation	MWh	13,477	6,375	4,317	5,929	-56.0%
Non-renewable electricity consumption	MWh	5,206,331	1,581,311	1,290,518	883,800	-83.0%
Fuel and district heating	MWh	390,882	290,961	281,427	272,694	-30.2%
Biofuels consumption	MWh	57,383	28,386	48,848	66,410	15.7%
Non-renewable fuel consumption	MWh	328,435	254,986	226,266	201,173	-38.7%
District heating (non-renewable)	MWh	5,063	7,589	6,312	5,110	0.9%
Electricity from renewable sources in own facilities	Percentage	17%	79%	82%	84%	
Total annual traffic managed	Petabyte	17,054	113,547	125,790	146,074	756.5%

<sup>1</sup> Of which 3,851,889 MWh were consumed in our own facilities.



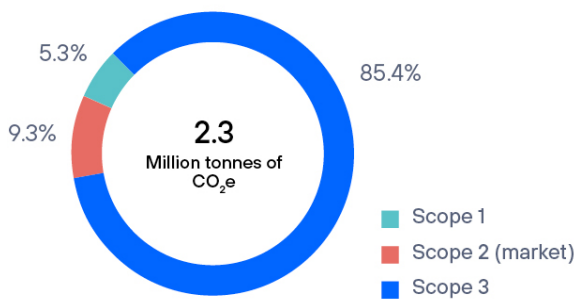
### 2.2.7.3. GHG emissions

GRI 305-1, 305-2, 305-3, 305-4, 305-5

In 2023, the Telefónica Group emitted 2.3 million tCO<sub>2</sub>e, the largest proportion of which came from the indirect emissions produced in our value chain (Scope 3) which account for 85.4% of our carbon footprint.

Indirect emissions from electricity use (Scope 2) represented 9.3% of our total emissions, while direct emissions from the activities controlled by Telefónica (Scope 1) amounted to 5.3%.

#### GHG emissions by scope



#### Performance of operational emissions

**Scope 1** emissions are derived from two main sources: consumption of fuel in our business areas and fugitive emissions of fluorinated gases (refrigerant gases from the cooling equipment and fire suppression agents). In 2023, these emissions were 7% lower than the previous year, due to a 11% decrease in fugitive emissions of fluorinated gases and a 3% decrease in total fuel consumption.

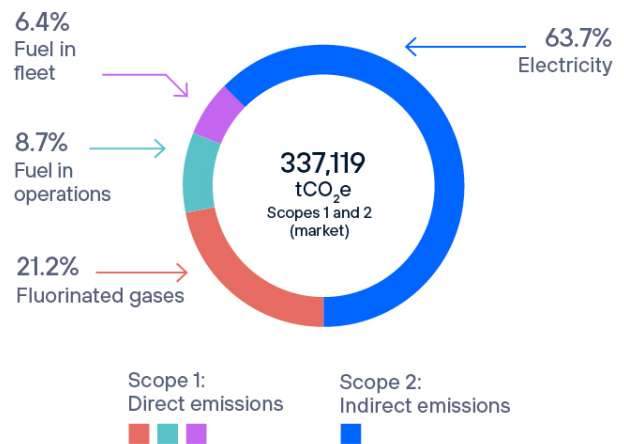
**Scope 2** emissions dropped by 3% compared to the previous year. We achieved this thanks to our **Renewable Energy and Energy Efficiency Plans**, with which we have increase our renewables-based consumption to 84% across the group while also reducing

our electricity use by 1.5% in comparison with the previous year. This means that, in 2023 alone, we avoided the emission of 837,520 and 45,289 tCO<sub>2</sub>e, respectively.

Compared to the base year (2015), our **Scope 1** emissions decreased by 57% (163,741 tCO<sub>2</sub>e) and our **Scope 2** emissions by 86% (1,310,295 tCO<sub>2</sub>e). Combined, our Scope 1 and 2 emissions fell by 81.4%, resulting in 1,474,036 fewer tCO<sub>2</sub>e emitted to the atmosphere.

In this way we continued to progress towards meeting our target, updated in 2023, of reducing our operational emissions (Scope 1 and 2) by 90% by 2030.

#### Scope 1 and 2 emissions. Breakdown by source.



In 2023, without our Renewable Energy Plan, Telefónica's emissions would have been 3.5 times greater.

## GHG emissions

	Unit	2015	2016	2021	2022	2023	Performance, base year/2023
Scope 1 <sup>2</sup>	tCO <sub>2</sub> e	286,201	281,517	183,231	131,809	122,460	-57%
Scope 2 (market-based method)	tCO <sub>2</sub> e	1,524,954	1,047,751	353,506	221,537	214,659	-86%
Scope 2 (location-based method)	tCO <sub>2</sub> e	1,869,500	1,712,202	1,212,173	1,002,189	1,036,537	-45%
Scope 1+2 (market-based)	tCO <sub>2</sub> e	1,811,155	1,329,268	536,737	353,346	337,119	-81%
Scope 1+2 (location-based)	tCO <sub>2</sub> e	2,155,701	1,993,719	1,395,404	1,133,998	1,158,997	-46%
Emissions offset <sup>3</sup>	tCO <sub>2</sub> e			63,018	35,537	33,711	NA
Scope 3 <sup>4</sup>	tCO <sub>2</sub> e	2,855,544 <sup>5</sup>	2,855,544	2,072,159	1,930,051	1,970,583	-31%
Total GHG emissions (Scope 1+2+3; market-based method)	tCO <sub>2</sub> e	4,666,699	4,184,812	2,608,896	2,283,397	2,307,702	-51%
Total GHG emissions (Scope 1+2+3; location-based method)	tCO <sub>2</sub> e	5,011,245	4,849,263	3,467,563	3,064,049	3,129,580	-38%
Biogenic emissions	tCO <sub>2</sub> e			9,020	13,873	16,267	NA
Emissions avoided due to renewable energy consumption	tCO <sub>2</sub> e	392,489	752,264	902,019	845,456	837,520	113%
Emission intensity (Scope 1+2 [market]/revenues €M)	tCO <sub>2</sub> e / €M	33.0	29.4	14.6	8.8	8.3	-75%
Emission intensity (Scope 1+2+3 [market]/revenues €M)	tCO <sub>2</sub> e / €M	79.8	92.6	71.2	57.1	56.8	-39%
Emission intensity (Scope 1+2+3 [location]/revenues €M)	tCO <sub>2</sub> e / €M	86.0	101.0	89.6	73.3	74.0	-27%

## Breakdown of total emissions by company

Emissions (tCO <sub>2</sub> e)	T. Germany	T. Brazil	T. Spain	T. Argentina	T. Chile	T. Colombia	T. Ecuador	T. Mexico	T. Peru	T. Uruguay	T. Venezuela	Telxius	Other companies <sup>6</sup>
Scope 1 + 2 (market)	6,190	25,524	18,947	144,398	9,405	15,699	6,387	39,545	3,564	1,941	49,717	9,137	6,664
Scope 1	5,955	25,524	18,947	23,076	9,405	10,141	1,036	4,304	3,564	483	9,240	9,075	1,708
Scope 2 (market)	234	0	0	121,322	0	5,558	5,352	35,240	0	1,458	40,477	63	4,956
Scope 3	391,940	302,358	529,979	171,831	149,679	83,302	16,290	98,044	111,235	10,308	35,548	8,996	61,074
<b>Total GHG emissions</b>	<b>398,129</b>	<b>327,882</b>	<b>548,926</b>	<b>316,228</b>	<b>159,084</b>	<b>99,001</b>	<b>22,677</b>	<b>137,589</b>	<b>114,800</b>	<b>12,249</b>	<b>85,265</b>	<b>18,133</b>	<b>67,738</b>

## Performance of value chain emissions

85% of the Telefónica Group's total emissions are **Scope 3 emissions**, that is, those produced by our value chain. Specifically, they derive from the following categories:

<sup>2</sup> Scope 1 emissions by type of gas: CO<sub>2</sub>: 50,695 tCO<sub>2</sub>e; CH<sub>4</sub>: 239 tCO<sub>2</sub>e; N<sub>2</sub>O: 212 tCO<sub>2</sub>e; HFCs: 71,314 tCO<sub>2</sub>e.

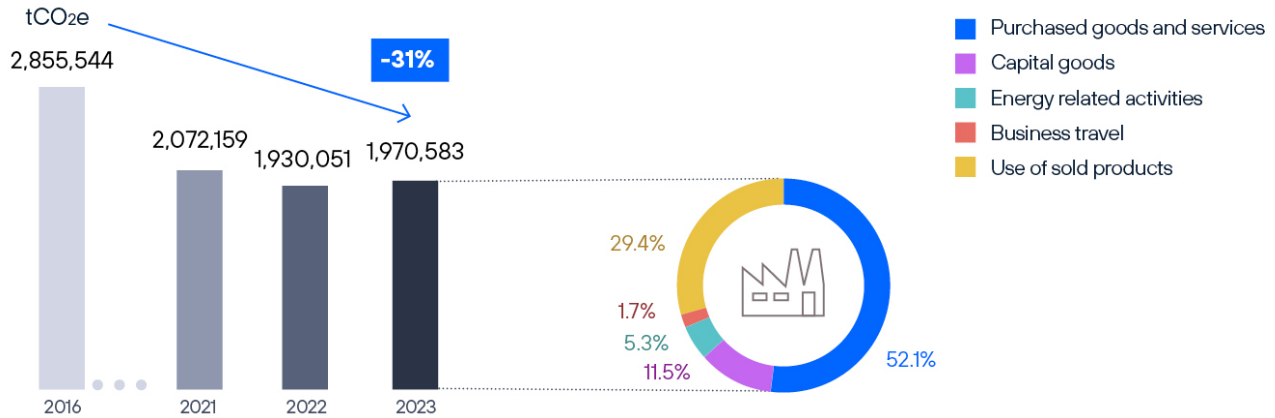
<sup>3</sup> Emissions offset by purchase of carbon credits in certified projects.

<sup>4</sup> Scope 3 emissions include the emissions from material categories: Cat.1 (1,026,696 tCO<sub>2</sub>e), Cat.2 (225,403 tCO<sub>2</sub>e), Cat.3 (105,225 tCO<sub>2</sub>e), Cat.6 (34,284 tCO<sub>2</sub>e) and Cat.11 (578,975 tCO<sub>2</sub>e).

<sup>5</sup> Telefónica calculates its scope 3 emissions from the 2016 fiscal year, so the same value has been assumed for 2015, so that the total footprint of the organization (scopes 1, 2 and 3) can be calculated for the purposes of its time variation.

<sup>6</sup> "Other companies" consolidates emissions for the following companies: Telefónica S.A., Telefónica Tech and Telefónica Global Solutions.

Scope 3 emissions



Of these emissions, 64% come from the purchases we make from our supply chain (“Category 1. Purchased goods and services” and “Category 2. Capital goods”) and 29% from the use of products we sell to our customers (“Category 11. Use of sold products”).

Other relevant categories include “Category 3. Energy-related activities” and “Category 6. Business travel”, which together account for the remaining 7% of the value chain’s emissions.

We also calculate and report other emissions that we consider strategic to our business such as “Category 15. Investments”, which in 2023 amounted to 35,060 tCO<sub>2</sub>e. This category includes emissions from VMO2, the joint venture created in the UK in 2021.

In 2023, our Scope 3 emissions decreased by -31% compared to 2016 (base year), which represents 884,961 tCO<sub>2</sub> fewer in seven years.

Despite the reduction compared to the base year and the lower emissions ratios in the main categories, our Scope 3 emissions increased by 2% in absolute terms compared to the previous year.

Specifically, the emissions associated with procurement rose by 1%; however, this was linked to an increase of 7% in purchase volume. This means that the emission

intensity ratios per unit of purchase have decreased, thanks to a heightened climate-related commitment from our suppliers, which has been fostered by our engagement initiatives.

Business travel emissions increased due to the return to in-person meetings, although they remained 48% lower than the pre-pandemic level.

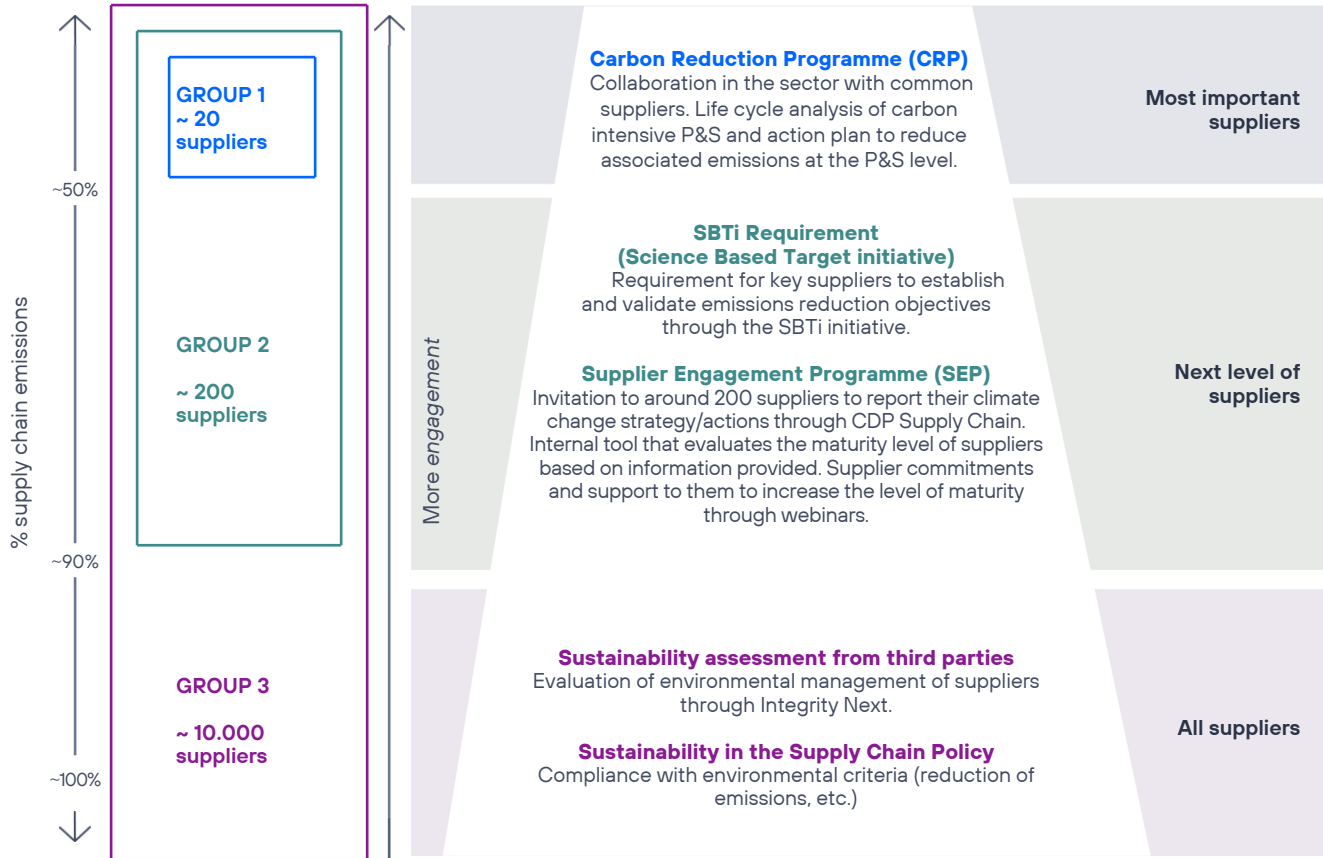
Lastly, emissions associated with use of sold products rose by 5% due to the sale of new products, such as televisions and games consoles. Excluding this new line of products, emissions of this category would have dropped by 9% compared to 2022.

**Key actions to reduce emissions in the value chain**

We are aware that Scope 3 emissions represent a major challenge since, as they are outside our direct control, the process of collecting activity data is more complex and the allocation of responsibilities is more vague.

Given the importance of **supply chain emissions**, working with our suppliers and with other companies in the sector is a necessity, so that together we can successfully reduce those emissions.

## Engagement initiatives with suppliers



In 2023, we made progress in the implementation of various supplier-oriented engagement initiatives. Our approach was to **categorise and group our suppliers based on their contribution to our carbon footprint**. This has enabled us to carry out specific initiatives according to each group.

The **suppliers in group 3** (i.e. all our suppliers) accepted the **Supply Chain Sustainability Policy**, which includes, among other aspects, emissions calculation and reduction requirements.

For **suppliers in group 2**, two different initiatives were carried out:

First of all, we invited 178 suppliers (which represented 90% of our supply chain emissions) to participate in the **CDP Supply Chain** programme, where they provide information about climate strategy, targets and actions. Based on this information, we classified them according to their level of climate maturity and thanks to our **Supplier Engagement Programme** we undertook a number of different activities, such as identifying areas for improvement and providing training webinars.


Secondly, the top 73 suppliers in terms of emissions were asked to commit to setting science-based emissions reduction targets validated by the **Science Based Target initiative**, a commitment which is regularly monitored.

Finally, for **suppliers in group 1** (our most strategic suppliers) we ran the **Carbon Reduction Programme**. This is a joint action in collaboration with other companies in the sector and consists of securing their engagement on an individual basis to promote emission reduction at **product** level. In other words, the suppliers identified the most carbon-intensive common products and then, through a life-cycle assessment (LCA), the stages with the greatest potential for achieving emissions reductions were identified.

We also took part in other sector-based initiatives, such as the climate change working group (led by Telefónica) within the Joint Alliance for CSR (JAC) to align criteria and join forces, with the commitment of decarbonising the sector. We were also part of the working group on climate change at GSMA, which together with GeSI (the Global Enabling Sustainability Initiative) and the ITU (International Telecommunication Union) published in

2023 the *Scope 3 Guidance for Telecommunications Operators*.

Our participation in initiatives such as SME Climate HUB and 1.5°C Supply Chain Leaders continued, with the aim of helping SMEs to measure their emissions and take specific action to reduce them and achieve their climate targets. The year 2023 also included the holding in Spain of the SME-oriented event entitled “Decarbonisation of SMEs. Boosting the SME Climate Hub in Spain”, which Telefónica invited some of its suppliers to attend.

 For further information, see 2.19. Responsible supply chain management

With regard to emissions associated with the **use of our products**, we have been working to reduce the electricity consumption of **our customer premise equipment**, consisting mainly of routers and set-top boxes, thanks to an enhanced design.

 For further information, see 2.3.Circular economy

### 2.2.7.4. Neutralising unabated emissions

We have been mitigating the impact of our emissions for several years through nature-based projects that generate high quality carbon credits. All of the projects (100%) used in 2023 are biogenic sinks.

One of our targets for 2025 is to neutralise 100% of the residual Scope 1 and 2 emissions of our key markets (Spain, Germany and Brazil) each year. In 2023, this value rose to 65% (10%at global level).

#### Details of climate mitigation projects financed through carbon credits

KPI	T. Germany	T. Brazil	T. Spain	T.S.A.	Total 2023
Cancelled carbon credits (tCO <sub>2</sub> e)	3,714	25,525	3,472	1,000	33,711
% Removal projects (ARR)	100%	20%	13.6%	100%	30.5%
% Reduction projects (REDD+)	—%	80%	86.4%	—%	69.5%
% Verra Standard	100%	100%	86.4%	90%	98.3%
% Spanish Climate Change Office (OECC)	—%	—%	13.6%	10%	1.7%

In **Spain** we have used credits from **Telefónica Forest** as well as from a project that protects forests located in one of the regions with the highest level of deforestation in the Amazon biome and from another project that restores an area affected by a forest fire in Caldas de Reis, Galicia, with native species. Thanks to these three projects, the operator offset 18% of its operational emissions (Scope 1 + 2) in 2023.

Meanwhile, in Brazil **we continued to offset 100%** of Scope 1+2 emissions through the purchase of carbon credits. The projects support local initiatives both for conserving ecosystems that contribute to halting deforestation and for reforesting the Amazon rainforest with native species. They also promote the socioeconomic development of local communities, by generating revenues and developing educational activities.

In **Germany, we neutralised 60%** of our operational emissions through a reforestation project in Colombia that promotes the sustainable management of forest resources to encourage natural regeneration.

Lastly, **Telefónica, S.A., mitigated 68% of the impact of the Scope 1 and 2 emissions** from its corporate premises, by removing an equivalent amount of CO<sub>2</sub> from the atmosphere. This was achieved through a reforestation project based in Colombia and a restoration project involving hillside woodland containing chestnut, oak and pine trees in San Esteban de Budiño, in Spain.

## 2023 Performance - Global

KPI	Unit	Target	Base year value	2023 value	Performance
Energy consumption per unit of traffic	MWh per Pb	-90% (by 2030)	386	41	-89%
Scope 1+2 GHG emissions (market-based)	tCO <sub>2</sub> e	-90% (by 2030)	1,811,155	337,119	-81%
Scope 3 GHG emissions	tCO <sub>2</sub> e	-56% (by 2030)	2,855,544	1,970,583	-31%
Total GHG emissions (Scope 1+2+3)	tCO <sub>2</sub> e	-90% (by 2040)	4,666,699	2,307,702	-51%
Offsetting of residual Scope 1 and 2 emissions	Percentage	100% (by 2040)		10%	
Renewable electricity consumption in own facilities	Percentage	100% (by 2030)	17%	84%	

## 2023 Performance - Main markets (Germany, Brazil, Spain)

KPI	Unit	2025 Target	Base year value	2023 value	Performance
Energy consumption per unit of traffic	MWh per Pb	-90%	336	40	-88%
Scope 1+2 GHG emissions (market-based)	tCO <sub>2</sub> e	-90%	1,022,365	50,661	-95%
Scope 3 GHG emissions	tCO <sub>2</sub> e	-39%	1,453,453	1,224,277	-16%
Total GHG emissions (Scope 1+2+3)	tCO <sub>2</sub> e		2,475,818	1,274,938	-49%
Offsetting of residual Scope 1 and 2 emissions	Percentage	100%		65%	
Renewable electricity consumption in own facilities	Percentage		25%	100%	

## VMO2

The main indicator data for VMO2 regarding energy and emissions for 2023 were:

	Unit	VMO2 (fixed and mobile operations)
Total energy consumption	MWh	1,187,097
Scope 1 + 2 emissions (market)	tCO <sub>2</sub> e	55,207

### 2.2.7.5. Emissions avoided by customers

At Telefónica, we have been estimating our contribution to our customers' green transitions for some time.

**Qualitatively:** through the Eco Smart label, we identify the potential of our B2B services to generate environmental benefits after being rolled out and used in other companies.



For further information, see 2.11. Sustainable offering and innovation

**Quantitatively:** we have been estimating the emissions that we help our customers avoid since 2018. Although it is true that we began with approximate methodologies, each year we have worked to improve the accuracy of our calculations and at the current time we are aligning them with the methodological requirements being defined at the EGDC (European Green Digital Coalition).

Therefore, and with the goal of ascertaining how our **customers from the residential segment** use connectivity services to access services or apps that allow them to change to more sustainable habits, in 2022 and 2023 we **polled over 4,400 customers in Spain, Brazil and Germany.**

The main findings of these surveys were that the digital services with the highest use were audio/video calling, online shopping and online banking. They all make it possible to reduce or eliminate daily commutes or longer

distance journeys by facilitating teleworking, remote training and access to online services. This leads to a reduction in the fuel consumption of vehicles, which are no longer in use, and therefore in the related GHG emissions.

Our customers also use car-sharing and accommodation-sharing apps (which are less polluting than traditional ones), public transport apps that provide real-time information to boost their use and satellite navigation apps that provide information on the most efficient routes.

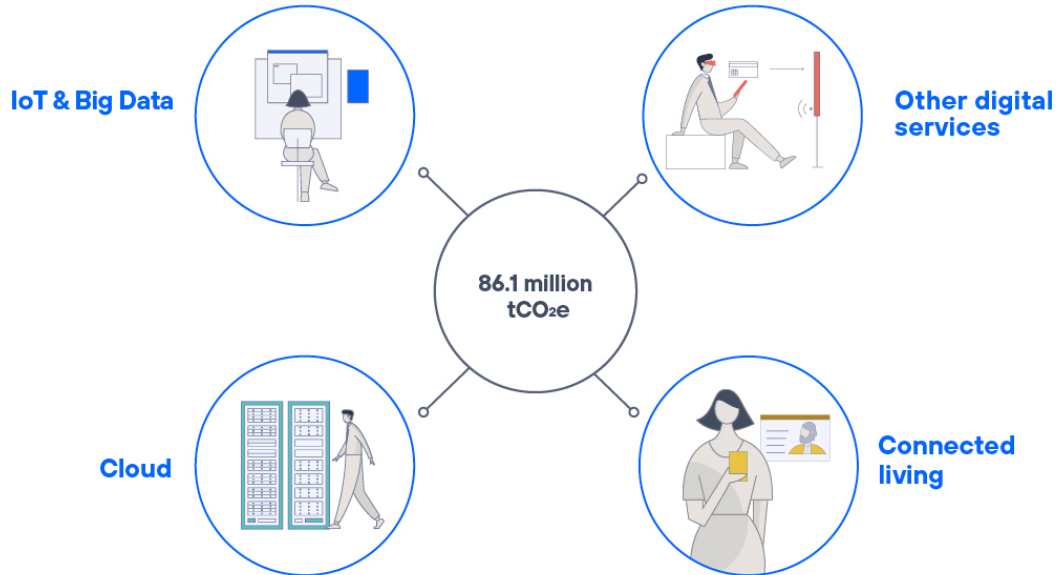
## Digitalisation is vital to limit the average global temperature increase to below 1.5°C.

In the case of the Eco Smart services we offer **B2B customers**, we conduct case studies that enable us to find out the energy savings or other efficiencies can be generated, to later transform them into savings in terms of CO<sub>2</sub>.

Combining both, we estimate that our **Eco Smart and connectivity services** enabled our customers **avoid 86.1<sup>7</sup> million tonnes of CO<sub>2</sub>** during 2023.

<sup>7</sup> Of the total, 84.9 million tonnes correspond to services where Telefónica merely provides broadband and mobile connectivity for the B2C segment and 1.2 million tonnes to IoT, cloud, big data and health services where Telefónica provides the connectivity, IoT devices, platforms, services and/or software. These data include emissions generated by connectivity and the network infrastructure that forms part of these services.

**Customers' emissions avoided through digitalisation**



# Milestones

- ❶ We reduced our total GHG emissions (Scopes 1, 2 and 3) by 51% in just eight years.
- ❷ Thanks to our products and services, we helped our customers avoid emissions amounting to 86.1 million tonnes of CO<sub>2</sub>.
- ❸ We were included in the CDP Climate A List for the tenth year in a row.
- ❹ In global terms, the electricity we consume in our own facilities is 84% renewable energy (87% renewable energy at third-party facilities).
- ❺ We reduced energy consumption per unit of traffic by 89% compared to 2015.



## 2.3. Circular economy

### Key points

97%

reused and recycled waste. Our aim is to be a zero waste company by 2030 through reuse and recycling.

20%

of mobile phones collected from customers: this is our new 2030 target, in line with the GSMA.

313,805

reused items of network equipment and cables, thanks to initiatives such as the MAIA project.

### 2.3.1. Vision

Over exploitation of the planet is one of the main causes of environmental degradation and climate change. According to the World Resources Institute, we consume over 100 billion tonnes of mineral, biological, metal and fuel resources each year. That exceeds what the planet can regenerate in a year. Currently, 7.2% of those resources are recycled or given a second life, down from 9.1% in 2018.

The **circular economy** is part of the solution to this problem, as it could reduce resource use by 28% and global greenhouse gas emissions by 39%. In the EU alone, it could create around **700,000 jobs** and increase GDP by 0.5% by 2030. All this is based on principles such as building impact-reduction into the design, extending the lifespan of products, recovering raw materials and fostering the dematerialisation of the economy through digitalisation.

At Telefónica we integrate this philosophy into our processes, aiming to optimise resource consumption and promote design with environmental criteria, reuse and recycling in order to minimise our impact and encourage materials to be kept in circulation.

### 2.3.2. Targets

Our main target is to become a **Zero Waste company by 2030**.

To achieve this, we set targets for the input and output of materials in order to facilitate the returning of resources that is the hallmark of the circular economy, and thereby ensuring that our waste does not end up incinerated or sent to landfill but is instead transformed into raw materials that are reintroduced into the value chain.

**Material inflows:** these initiatives aim to reduce material extraction by increasing the circularity of products, incorporating durability, reparability and/or recyclability into the design and increasing equipment use cycles through reuse.

- **Customer premise equipment:** refurbish and reuse 90% of routers and decoders collected from customers in 2024.
- Introduce circularity criteria for purchases of customer electronic equipment in 2025.

- Introduce environmental criteria in Telefónica-designed home connectivity equipment starting in 2025.
- **Mobile phones:** reuse 500,000 devices a year by 2030 thanks to various initiatives.

**Material outflows:** there is no waste, only misplaced resources. Therefore, these initiatives aim to facilitate the return of end-of-life materials by transforming waste into resources through refurbishment and recycling.

- **Mobile phones (in line with GSMA sectoral targets):**
  - Take back at least 20% of the mobile phones distributed to end customers.
  - Reuse, resell and recycle 100% by 2030.

- **Network equipment:** reuse, resell and recycle 100% by 2025 (in line with the GSMA sectoral target).

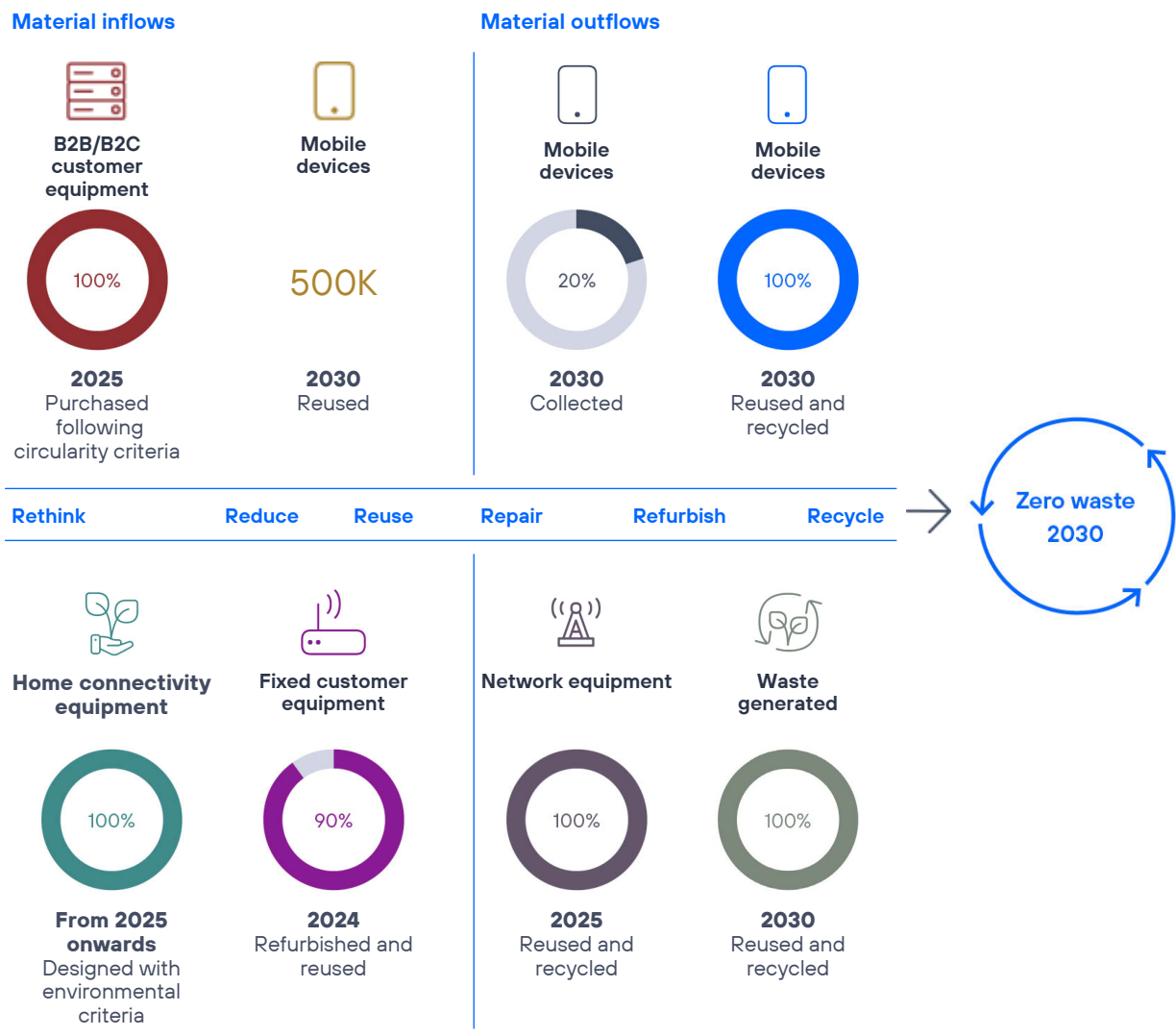
- **Zero waste:** reuse and recycle 100% of the total waste generated (hazardous and non-hazardous).

All our commitments are voluntary and applicable to all the countries in which we operate.

They are also aligned with the GSMA's circular economy strategy for network equipment and mobile devices, and the waste hierarchy.

This hierarchy is set out in the EU Waste Framework Directive (2008/98/EC) and the European Commission's circular economy categorisation system and establishes the priorities and actions for environmental protection and for promotion of the circular economy.

### Moving towards becoming a zero-waste company



### 2.3.3. Policies

#### GRI 2-23

We have several policies that lay down the basis for implementation of the circular economy throughout the Company:

- [Environmental Policy.](#)
- [Energy Management Policy.](#)
- [Supply Chain Sustainability Policy.](#)

Deriving from these policies are the following Principles for promoting the circular economy:

- Advocating the development of an enabling regulatory framework for the circular economy.
- Promoting together with manufacturers the integration of environmental criteria in the design and procurement of equipment.
- Reducing waste generation and encouraging reuse and recycling.
- Guaranteeing proper waste treatment through controls on our supply chain.
- Offering our customers products and services that involve lower consumption of raw materials, environmental information that they can refer to during purchase and alternatives to waste disposal for their used devices.

### 2.3.4. Impacts, risks and opportunities

#### GRI 3-3, 306-1

Inadequate management of waste, especially electronic waste, could lead to pollution and therefore have a negative impact on the environment. The resulting environmental restoration could be expensive. Not only this, but the practice of not reusing equipment leads to the depletion of natural resources because non-reuse fails to take full advantage of a product's full lifespan.

By contrast, a circular economy model brings **positive environmental impacts** as reuse gives parts a second life, increases equipment use cycles and therefore avoids emissions associated with equipment manufacturing. Furthermore, recycling avoids the impacts associated with the extraction of virgin raw materials by enabling such materials to be recovered, transformed and reincorporated into the production model. These initiatives, together with circular procurement, make it possible to decouple economic growth from the extraction of non-renewable resources.

According to the World Economic Forum, the crisis affecting natural resources and their overexploitation poses supply **risks** that can affect the availability of products and services and can be reversed only through a more circular economy. One example is the pressure that supply chains face during geopolitical conflicts or pandemics. In addition, the demand for critical raw materials such as lithium, cobalt and nickel is expected to increase further due to the continuing development of the technology industry.

Design with environmental criteria, reuse and recycling contribute to reducing the risk of resource depletion and ensuring the continuity of our supply chain. They also reduce the associated environmental impact, as 45% of global emissions derive from the manufacture and use of products, while 90% of the biodiversity loss and water stress is caused by the extraction and processing of natural resources.

The reuse and refurbishment of customer premises and network equipment is a clear opportunity for Telefónica as such activities generate savings by avoiding the purchase of new equipment. In addition, the sale of refurbished network equipment or waste, such as cable from the copper-to-fibre transformation, provides us with additional revenues. Another revenue **opportunity** for the Company comes from the reuse of mobile handsets through buyback programs, the sale of refurbished handsets, repair services and handset leasing.

**Digitalisation and connectivity** also offer an opportunity linked to the circular economy. This is why we make use of technologies such as blockchain and big data to improve the efficiency of our reverse logistics processes, increase equipment traceability and avoid CO<sub>2</sub> emissions. VICKY, APOLLO, MARA and MAIA are some examples of how we harness digitalisation in our reverse logistics processes.

Furthermore, the digitalisation of waste management through our GRETEL platform helps to provide greater traceability and information on the final disposal of equipment, reducing risks and impacts arising from inadequate treatment.

In addition, digital solutions represent a business opportunity for Telefónica as they can promote the circularity of other economic sectors through our Eco Smart solutions.



For further information, see 2.11. Sustainable offering and innovation

### 2.3.5. Action plan and commitments GRI 2-23, 3-3, 308-2

At Telefónica we are committed to the comprehensive integration of circular economy criteria at three levels: **internal eco-efficiency, suppliers and customers.**

The circular economy allows us to grow with fewer resources and avoid indirect carbon emissions associated with the manufacture of new equipment.

#### Circular economy strategy Enhanced circularity through digitalisation



### 2.3.5.1. Internal eco-efficiency

We reduce our environmental impact through efficiency measures such as preventive maintenance of infrastructure, replacement of equipment with energy-efficient equipment and internal reuse. This enables us to optimise our consumption of water, paper and energy (for the latter, through an Energy Efficiency Programme).



For further information, see 2.2. Energy and climate change

To prevent waste generation in our operations and our value chain, we are committed to **circular design, procurement based on circular criteria and reuse**, mainly of electronic equipment, as the best waste is that which is not generated at all. This enables us to be more competitive, reduce our expenses and increase our revenue, all while reducing our environmental footprint and complying with applicable legal regulations.

#### Electronic equipment

We extend the lifespan of our equipment by reusing it whenever possible. If the equipment cannot be reused, the best option is to recycle it, as each piece of equipment contains **precious metals** such as gold, copper and nickel that can be used in a new product.

We have been reusing many pieces of equipment during our current network transformation, thereby promoting the circular economy in decommissioning processes. To encourage reuse, Telefónica has rolled out the **MAIA** marketplace, which facilitates and promotes internal reuse with the aid of a digital platform. Each operator can access the platform to view available equipment and contact other operators in the Group to coordinate reuse. When **internal reuse** is not possible, the platform enables operators to connect with technological partners to facilitate the sale of the equipment and therefore extend its lifespan.

In terms of mobile devices reuse, Telefónica has a global **MARA** initiative, an omnichannel model with an end-to-end approach that allows our customers to assess their devices automatically and access trade-in programmes anywhere (home, retail and voice channels). This process optimizes device management times, reduces logistics movements while generating revenue from the reuse and resale of devices, preventing them from becoming waste.

**VICKY** is an initiative that uses blockchain technology to achieve greater traceability throughout the value chain of modems, routers and TV set-top boxes. This significantly improves recovery rates, refurbishment processes and equipment lifespans. The solution has been recognized for its innovation (Gartner, Forbes) and for encouraging a more efficient, faster, simpler and more sustainable supply chain.

**APOLLO**, meanwhile, improves efficiency in reverse logistics processes by using big data and analytics to optimise collection routes for uninstalled or inactive equipment, both at the customer's premises and at collection points. Both initiatives are being rolled out across the organisation with the aim of reusing 90% of Customer Premise Equipment (CPE) by 2024 and becoming a Zero Waste company by 2030.

#### Waste

The waste we generate is managed outside our facilities by specialised waste management companies that apply the most appropriate treatment according to the best available techniques, the environmental regulations in force and the established contractual requirements.

Whenever waste is collected, the staff responsible ensure that all the information is registered in Telefónica's waste management platform (**GReTel**). This allows us to obtain and analyse real-time data on the origin and destination of waste produced by the Company.

This system enables staff to check how much waste is disposed of, draft reports, analyse information, keep all documentary evidence to ensure proper compliance with **environmental regulations** in each country and thus make better decisions in the interests of promoting circularity.

### 2.3.5.2. Relationship with our customers

We raise awareness among our customers and help them lessen their environmental footprint by providing **Eco Smart** and **Eco Rating** labels, which encourage innovation and the reduction of environmental impacts.



For further information, see 2.11. Sustainable offering and innovation

We also offer our customers repair services but also **buyback and refurbishment** options for **mobile phones** to extend their lifespan and give them a second use. In this way we reduce resource and energy consumption by avoiding the manufacture of new devices.

## One of the Sustainable Development Goals (SDGs) we are working towards is the development of a sustainable consumption and production model.

### 2.3.5.3. Relationship with suppliers

We work together with our suppliers to introduce environmental criteria in product design, encourage the elimination of single-use plastics and choose new models based on digitalisation and dematerialisation, such as the acquisition of products as services.

In addition, we are progressively incorporating **circularity requirements** into our electronic equipment procurement processes, using as our benchmark the criteria set out in the ITU-T L.1023 recommendation on the assessment method for circularity performance scoring. This enables us to assess the **repairability, recyclability, durability and upgradability** of each electronic device acquired.

To further encourage eco-efficient procurement, our Global Supply Chain Sustainability Policy includes environmental and circular economy criteria to be taken into account by suppliers when providing products or services to Telefónica.

### 2.3.6. Progress in 2023

GRI 301-3, 306-1, 306-2, 306-3, 306-4, 306-5

#### 2.3.6.1. Circular design

##### Design of Telefónica branded equipment

Incorporating environmental criteria into the design of our equipment helps us to improve product quality and efficiency by taking into account concepts such as repairability and recyclability. This allows us to produce more durable and environmentally responsible equipment by reducing the consumption of raw materials, energy and emissions associated with manufacturing. One example of this is how, thanks to the reuse and/or repair of customer premise equipment, we avoided the purchase of 3.7 million of new equipment in 2023.

We cooperate with our suppliers to integrate environmental criteria into home connectivity equipment that is designed by Telefónica and bears the logo of one of the Company's brands (Movistar, O2 or Vivo). Our ambition is for all new models of this equipment brought onto the market from 2025 onwards to integrate environmental criteria.

In line with this aim, in 2023 we launched a new Fibre to the Room (**FTTR**) device in Spain, which contains **70% recycled plastic** in its casing. It also features packaging improvements such as the incorporation of lighter boxes made from **FSC-certified recycled cardboard**, the use of paper cable ties and a reduced number of commercial documents provided with the equipment.

At the current time, Company-developed equipment has an optimised design, thanks to integrated antennas and a reduced number and size of status lights, thereby avoiding the unnecessary use of materials.

For example, our new **HGU WiFi 6 2nd generation model**, launched in 2023, has reduced energy consumption by 27% compared to the HGU WiFi 5 model and by 56% compared to the HGU WiFi 6 1st generation model.

In Germany last year, we launched the **HomeSpot 5G Router** on which we conducted a Life Cycle Assessment (LCA) according to the ISO 14040:2006 and ISO 14044:2006 standards in collaboration with the Basque government's public environmental management company IHOBE. Alongside this, we conducted a reparability study according to the UNE-EN 45554:2020 standard and a recyclability study according to the UNE-EN 45555:2020 standard in order to further integrate circular economy criteria into the design stage. Our research confirmed that the HomeSpot 5G Router is **63% repairable** (76% for high-priority parts) and **89% recyclable and recoverable**.

We are working on reducing our use of plastic in SIM cards through our Half SIM Card format, which has enabled us to halve the amount of plastic used to manufacture the cards. It also represents an improvement in the **efficiency** of the logistics process, because smaller containers are required to transport and store these SIM cards.

As a result, in 2023 we avoided the consumption of 185 tonnes of plastic. This format has already been implemented at nine of our operations consolidating its position as the Group's main format. We also replaced the plastics used in SIM card packaging in Spain with recycled paper and cardboard.

##### Procurement using circular criteria


In 2023, we updated the template for assessing circular economy criteria in electronic equipment based on the new version of the ITU L.1023 recommendation published in August.

This template is used to assess equipment offered as part of the B2B router and switch procurement process in Spain. Of the models assessed according to the template, 70% had a circularity score of over 60%, with 18% of the models scoring more than 70%.

The assessment process allows the technical areas to determine the circular design level of the equipment offered, in order to provide an additional criterion to be taken into account in the equipment procurement process.

We also worked with technology partners within the O-RAN ALLIANCE sustainability focus group to define the ITU L-1023 criteria that should be considered as a priority when assessing the circularity of network equipment.

Furthermore, we worked with our suppliers **to reduce GHG emissions** in the products and services they provide us with through various initiatives discussed in the section on Scope 3 emissions.

 For further information, see 2.2. Energy and climate change

### 2.3.6.2. Use and recovery

#### Reuse and recycling

Network infrastructure maintenance is our main waste-generating activity, above waste generated in our offices or e-waste collected from our customers.

The vast majority of the waste comes from our network transformation process whereby we migrate from copper cables to fibre optics. In 2023, the transformation process was accelerated thanks to the Granada Plan for closing stations in Spain and the Vivo María do Carmo Project in Brazil.

We promote the **circular economy** in our network transformation by prioritising the reuse of electronic equipment and, where this is not possible, we can extract value from materials through recycling. Recovering this value allows us to generate revenues as the network's transformation advances. In fact, in 2023, we generated 45,756 tonnes of waste (16% less than the previous year) and managed to recycle 97% of this.

#### Telefónica's waste

	Non-hazardous waste			Hazardous waste			Total		
	2021	2022	2023	2021	2022	2023	2021	2022	2023
<b>Total waste generated (t) <sup>1</sup></b>	<b>60,791</b>	<b>50,340</b>	<b>42,180</b>	<b>3,268</b>	<b>2,566</b>	<b>3,576</b>	<b>64,059</b>	<b>52,906</b>	<b>45,756</b>
Total waste generated (t) + reuse	62,998	55,897	49,211	3,268	2,566	3,576	64,100	58,463	52,787
Waste diverted from disposal (t) (includes recycling, reuse and other treatments).	62,468	55,348	48,597	3,200	2,333	3,483	65,669	57,682	52,080
Waste directed to disposal (t) (includes energy recovery, incineration and landfill).	571	548	614	67	233	92	638	781	707
<b>Treatments prioritised according to the waste hierarchy principle</b>									
Reused equipment (t)	2,207	5,557	7,031	n/a	n/a	n/a	2,207	5,557	7,031
Waste recycled (t)	60,030	49,491	41,044	2,520	2,164	3,293	62,549	51,655	44,338
Waste for energy recovery (t)	17	68	42	21	148	16	38	216	58
Other treatments (t) <sup>2</sup>	191	300	522	681	169	190	871	470	711
Waste incinerated (t)	11	0.1	0.3	0.2	13	8	12	13	8.5
Waste sent to landfill (t) <sup>3</sup>	543	480	572	576	72	68	588	552	640

<sup>1</sup> The data on waste generated does not include reuse as the reused equipment has not yet reached the end of its useful life.

<sup>2</sup> Other treatments: includes physical, chemical and biological treatments, secure cells and intermediate treatments prior to recycling.

<sup>3</sup> 2021 data recalculated according to the improvement applied as of the 2022 financial year: separate reporting of waste for landfill and incineration.

### Zero waste by 2030 thanks to reuse and recycling

#### Circularity in electronic equipment

To reduce impact and waste generation, we extend the lifespan of electronic equipment by reusing it wherever possible and recycling the rest:

#### Reused equipment



#### Routers and set-top boxes

3,708,371 Units

#### Mobile phones

491,422 Units

#### Donated equipment

1,913 Units

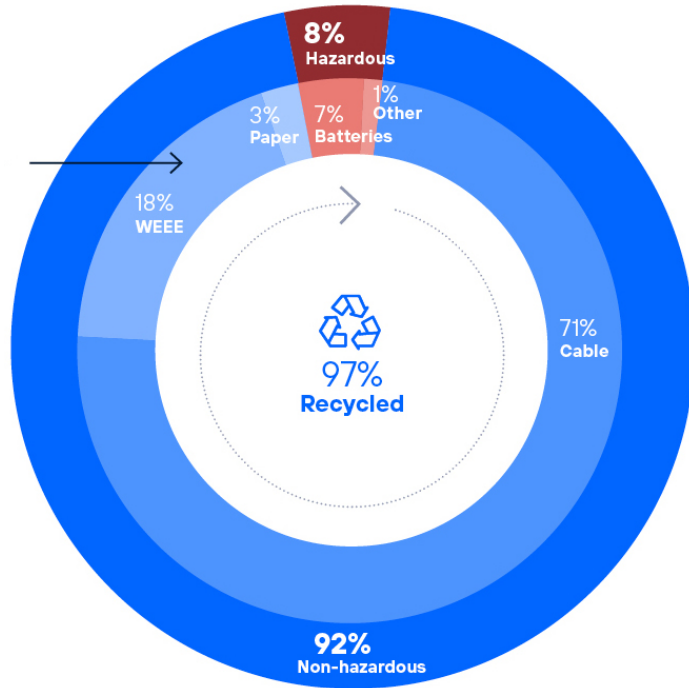
#### Office equipment

7,711 Units

#### Operational equipment

313,805 Units

Total waste generated: 45,756 tonnes





## Electronic equipment

At Telefónica we reused 46% of the total equipment collected and we recycled 54% in 2023. As a result, we reused over 4.5 million items of equipment from operations, offices and customers, avoiding 365,929 tonnes of CO<sub>2</sub> associated with the manufacture of new products:

- **Network equipment:** we reused 313,805 items of equipment, 36% more compared to 2022, thanks to initiatives such as the MAIA marketplace, making progress towards our goal of zero network equipment being sent to landfill by 2025.
- **Office equipment:** we reused 7,711 pieces of equipment and donated an additional 1,913 to non-profit organisations.
- **Customer premise equipment:** we reused 3.7 million routers and set-top boxes, 88% of the total equipment delivered for refurbishment, bringing us closer to our target of refurbishing 90% of this equipment in 2024.
- **Mobile phones:** in 2023 we collected 102 tonnes of mobile phones corresponding to 11% of the total devices distributed, bringing us closer to our target of collecting at least 20% of devices by 2030. In addition, we reused and recycled 99.8% of the total collected, bringing us closer to the target of reusing and recycling 100% of the mobile devices collected from our customers by 2030. Last year, we reused 491,422 mobile devices, 27% more than the previous year, thanks to initiatives such as the buy-back program, refurbishing internally sourced devices, the sale of refurbished phones and repair services.

## Electronic equipment (%)

	2022	2023
Reused equipment	44%	46%
Recycled equipment	56%	54%
Incinerated equipment	0	0
Equipment destined for energy recovery	0	0
Equipment sent to landfill	0.18%	0.06%

## Managed electronic equipment 2023 (Tonnes)

Reused equipment	Tonnes
Mobile phones	69
Customer premise equipment	1,854
Office equipment	10
Operational equipment	5,098
<b>Total</b>	<b>7,031</b>

Recycled equipment	Tonnes
Mobile phones	33
Customer premise equipment	1,320
Office equipment	6,832
<b>Total</b>	<b>8,185</b>

Equipment with other treatment	Tonnes
Customer premise equipment	1
<b>Total</b>	<b>1</b>

Equipment destined for energy recovery	Tonnes
Customer premise equipment	0
Operational equipment	29
<b>Total</b>	<b>29</b>

Equipment sent to landfill	Tonnes
Mobile phones	0
Customer premise equipment	2
Office equipment	7
<b>Total</b>	<b>8</b>

### 2.3.6.3. Circular performance in 2023 at a glance

#### Zero waste by 2030: targets and indicators

Target	Indicator	2023
Zero waste to landfill by 2030	% of waste reused and recycled	97%
100% of new home connectivity equipment designed by Telefónica with environmental criteria from 2025 onwards	% of new home connectivity equipment designed by Telefónica with environmental criteria incorporated	33%
90% refurbished customer premise equipment (routers, set-top boxes, etc.) by 2024	% refurbished customer premise equipment	88%
Reuse 500,000 mobiles a year by 2030 through different programs	Units of reused mobile phones	491,422
GSMA sectoral targets	Indicator	2023
Take back at least 20% of the mobile phones distributed to end customers by 2030	% used mobile devices taken back over total new devices sold/distributed through own channels.	11%
Reuse, resell and recycle 100% of collected mobile phones by 2030	% recycled and reused mobile phones	99.8%
Reuse, resell and recycle 100% of network equipment waste by 2025	% network equipment reused and recycled	99.7%

#### VMO2 UK

The details of the waste indicators for VMO2 for 2023 are given below:

	VMO2 (Fixed and mobile operations)
Total waste produced (t)	5,622
Total waste recycled (t)	4,503

## Milestones

- 1 We reused and recycled 97% of our waste.
- 2 In 2023 we repaired and reused 4.5 million items of electronic equipment, of which 313,805 were items of network equipment.
- 3 The new FTTR device contains 70% recycled plastic in its casing and its packaging is made of FSC-certified recycled cardboard.
- 4 The new HomeSpot 5G Router is 63% repairable and 89% recyclable and recoverable.
- 5 We collected 11% of our customers' mobile phones. Of the total collected, we reused and recycled 99.8%.

## 2.4. Biodiversity, water and other environmental aspects

### Key points

98%

of Telefónica's facilities are located in habitats with low or very low biodiversity value.

TNFD

(Taskforce on Nature-related Financial Disclosures) is the framework we use to analyse our nature-related risks and opportunities.

12.8%

reduction in water consumption in 2023, with a 6.3% decrease in countries classified as highly water-stressed areas.

### 2.4.1. Vision

We are aware of the need to halt and reverse an unprecedented biodiversity loss, as demanded by the scientific community.

At Telefónica we understand the importance of biodiversity protection and efficient water management. Although these environmental aspects are not relevant to our operations, it is important for us **to manage them responsibly** and to continue working **to minimise their impacts**.

We seek to take a holistic approach that promotes a sustainable digitalisation. This being a process which is compatible with biodiversity preservation, water efficiency and protection of the environment as a whole.

The **relationship between climate and biodiversity** is key for maintaining climate stability and for protecting soil, air and water. In addition to achieving net zero emissions, we must also protect the **health of the ecosystems**.

At Telefónica we have externally certified Environmental Management Systems (ISO 14001), which allow us to monitor all the environmental aspects associated with our activities, such as energy and waste, and others, such as biodiversity, water, paper consumption and noise.

### 2.4.2. Targets

Our fundamental aim is **to manage all natural resources efficiently**, thereby contributing to the protection and conservation of biodiversity. This means optimising the consumption of energy, water and other resources used in our daily operations.

We set ourselves the following targets:

- Identify and assess **nature-related impacts, dependencies, risks and opportunities**, both in our direct operations and in our value chain.
- Apply the **mitigation hierarchy** (avoid, minimise, restore and offset) for limiting the potential adverse impacts on biodiversity from network deployment projects and the operation of our infrastructure.
- Establish partnerships and share best practices with other companies in the telecommunications sector to **maximise the positive impact** on biodiversity conservation.
- Improve **employee awareness** to encourage responsible and efficient use of resources.

## 2.4.3. Policies

### GRI 2-23

We have various internal regulations that guide the Company towards improving its environmental performance. They include commitments such as efficiency in water management and protection of biodiversity and ecosystems, which are key to improving **Telefónica's natural capital**.

- [Environmental Policy](#).
- [Supply Chain Sustainability Policy](#).
- [Energy Management Policy](#).

We also involve our suppliers, who, by accepting Telefónica's policies, undertake to comply with applicable environmental legislation, implement eco-efficiency criteria and protect biodiversity.



For further information, see 2.19. Responsible supply chain management

## 2.4.4. Impacts, risks and opportunities

Telefónica's management of biodiversity risks and opportunities starts with **identifying and assessing nature-related dependencies and impacts**.

After an initial assessment, which included analysing and quantifying the direct impacts of non-linear infrastructures (base stations, buildings, etc.) in the countries in which we operate, the main conclusion was that 98% of our facilities are located in habitats with low or very low biodiversity value, such as urban areas. Furthermore, we do not have facilities located in habitats with high value, which means that our **direct impact** on biodiversity is **not very significant**.

We have also analysed the impacts and dependencies on natural capital at a corporate level, both for our direct operations and those of our suppliers. Internationally recognised protocols, methodologies and tools, such as the Natural Capital Protocol (NCP), ENCORE (from UNEP-WCMC) and the Sectoral Materiality Tool (SBTN) were used for this assessment.

We have examined the contribution of the Telefónica Group's economic activities to the main drivers of biodiversity loss and the dependencies of these activities on the ecosystem services provided by nature, both for our direct operations and for our supply chain.

The results show that there are **greater dependencies and impacts across the supply chain** than in Telefónica's direct operations.

## 98% of Telefónica's facilities are located in habitats with low or very low biodiversity value.

To carry out its activities, the Company needs a number of services provided by nature, known as **ecosystem services**. Telefónica mainly depends on **regulating services**, which are ecological processes that enhance or make life possible, such as flood and storm protection, climate regulation and erosion control. It is important to keep habitats and soil in good condition, as both of these environmental elements act as a protective buffer for the Company's facilities by mitigating the risks associated with adverse natural events or accidents.

In terms of impacts, Telefónica's direct operations do not contribute significantly to the drivers of biodiversity and natural capital loss (resource exploitation, pollution, etc.). However, some medium-level impacts have been identified in relation to land- and sea-use changes, water consumption (especially in water-stressed areas) and climate change.

Based on the information from the impact and dependencies assessment, we are working to identify **nature-related risks and opportunities**, using the reporting framework provided by the Taskforce on Nature-related Financial Disclosures (TNFD). The TNFD identifies three types of risks and opportunities: physical, transition and systemic.

Lastly, regarding water resource management, **the most significant issue is water scarcity**. This is even more acute in water-stressed areas, where a decrease in water availability could lead to a range of problems (e.g. a potential impact on business continuity or on our relationship with local communities).

## 2.4.5. Action plan and commitments

GRI 2-23, 3-3

In line with the commitment to protect biodiversity and ecosystems as established in our Environmental Policy, we are developing a **biodiversity strategy**, which will set out our roadmap and define the mechanisms needed to achieve it.

### 2.4.5.1. Interface with natural capital

TNFD is a global initiative that provides a framework for factoring nature into financial and business decisions, enabling businesses to analyse their nature-related performance.

At Telefónica we are working to adopt the TNFD recommendations, focusing on identifying and assessing the **nature-related dependencies, impacts, risks and opportunities** of our activities.


### 2.4.5.2. Mitigation hierarchy


The deployment and maintenance processes that support the operation of our networks sometimes implies the ecosystems' land use change.

Telefónica **applies the mitigation hierarchy**, identifying and avoiding the potential impacts of the deployment, operation and dismantling of its telecommunications networks through prescriptive Environmental Impact Assessment processes.

Furthermore, in order to minimise non-avoidable impacts on the environment, we adopt best practices such as noise insulation measures when necessary and co-location of our facilities with other operators. This enables us to optimise land occupation and reduce our visual impact, energy consumption and waste generation.

We also implement eco-efficiency measures, carry out preventive maintenance of infrastructure, promote the use of renewable energy and replace equipment with energy-efficient equipment or encourage its internal reuse. This allows us to optimise our water, paper and energy consumption.

 For further information, see 2.2. Energy and climate change

 For further information, see 2.3. Circular economy

Lastly, and whenever necessary, we implement corrective and compensatory measures for affected resources.

### 2.4.5.3. Partnerships and initiatives


We believe that sharing opinions and experiences concerning natural capital is essential to making all our stakeholders aware of the value of biodiversity.

That is why Telefónica participates in related working groups, such as the Natural Capital Working Group of the Spanish Green Growth Group (GECV), the Biodiversity Group of the GSMA and the Nature Focus Area of Nokia's Customer Advisory Council.

We have also joined the World Economic Forum's [1 trillion trees](#) initiative, under which we have committed to grow and conserve 1.5 million trees between 2020 and 2030. This action will not only avoid and absorb 700,000 tonnes of CO<sub>2</sub> from the atmosphere in ten years, but will also help to conserve forest ecosystems, reducing biodiversity loss.

In Brazil, we participate in initiatives organised by the Water Thematic Chamber of the Brazilian Business Council for Sustainable Development (CEBDS) and the UN Global Compact Platform for Action on Water and Oceans. Its aim is to promote efficient water use and to propose possible reduction measures. Telefónica Brazil is also a member of the TNFD Early Adopters initiative.

Moreover, we are committed to driving innovation in digital services and products that contribute to solving environmental problems such as water scarcity and improve our competitiveness and that of our customers.

 For further information, see 2.11. Sustainable supply and innovation

## 2.4.6. Progress in 2023

GRI 3-3

### 2.4.6.1. Interface with natural capital

The European Central Bank published a paper in late 2023 which found out that in the euro area around three million companies (72% of non-financial corporations) are highly dependent on at least one ecosystem service. In the telecommunications sector, we also need services provided by nature.

In order to analyse Telefónica's interaction with natural capital and biodiversity, in terms of **dependencies and impacts**, we conducted a natural capital **materiality assessment** at corporate level during 2023. This study, which considered both direct operations and those of the upstream value chain, will allow us to prioritise which actions should be implemented. For each of Telefónica's economic activities, it identified the degree of dependence on ecosystem services and elements of the natural environment, as well as their contribution to the main impact drivers and the specific pressures that generate them.

Our analysis, developed using the ENCORE tool, concluded that economic activities related to wired, wireless or other telecommunication activities are the most nature-dependent.

For these activities, we primarily depend on ecosystem services that provide protection from disruption to the production process. This is the case, for example, with erosion control delivered through vegetation cover or climate regulation provided through the long-term storage of carbon dioxide in soils, vegetable biomass and the oceans.

We also depend to a lesser extent on production process enablers, such as soil quality, which is provided through weathering, decomposition and fixing processes.

The table below shows how Telefónica's direct operations depend on ecosystem services. Only major dependencies (classified in ENCORE as medium, high or very high) are listed.

**Main dependencies on ecosystem services for direct operations of Telefónica**

Ecosystem service type	Ecosystem services (included in ENCORE)	Wired telecommunication activities	Wireless telecommunication activities	Other telecommunication activities	Other economic activities of Telefónica Group (*)
Enabling factor for a production process	Water quality				
	Soil quality	•	•		
	Nursery habitats maintenance				
	Ventilation				
	Water flow maintenance				
	Pollination				
Mitigation of direct impacts associated with a production process	Bio-remediation				
	Dilution by atmosphere and ecosystems				
	Filtration				
	Mediation of sensory impacts				
Input into a production process	Fibres and other materials				
	Animal-based energy				
	Genetic materials				
	Ground water				
	Surface water				
	Disease control				
Protection from disruption to the production process	Buffering and attenuation of mass flows	•	•		
	Climate regulation	•	•	•	
	Flood and storm protection	•	•	•	
	Mass stabilisation and erosion control	•	•		
	Pest control				






(\*) Includes some economic activities of Telefónica Group for which no significant dependencies on ecosystem services and elements of the natural environment have been identified. These are as follows:

- Television programming and broadcasting activities.
- Data processing, data hosting and related activities.
- Computer consultancy and computer facilities management activities.
- Computer programming activities.
- Other information technology and computer service activities.
- Activities of holding companies.

The study also concluded that the **supply chain is more dependent** on natural capital and biodiversity. Telefónica's supply chain depends on ecosystem services such as flood and storm protection, erosion control, water availability (input into the production process) and mitigation of direct impacts associated with a production process.

In relation to **impacts**, we used SBTN Sectoral Materiality Tool, which provides an indication of the degree to which different economic activities contribute to the main drivers of natural capital and biodiversity loss. The five **drivers of biodiversity loss**, identified by the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) in its latest report, are detailed in the table below:

**High contribution of Telefónica's direct operations to the various impact drivers**

Drivers of biodiversity loss	Pressure category	Wired telecommunication activities	Wireless telecommunication activities	Other telecommunication activities	Television programming and broadcasting activities	Data processing, data hosting and related activities	Computer consultancy and computer facilities management activities	Computer programming activities	Other information technology and computer service activities	Activities of holding companies
 Ecosystem use change	Terrestrial ecosystem use	•	•	•						
	Freshwater ecosystem use									
	Marine ecosystem use	•								
 Resource exploitation	Water use				•	•	•		•	
	Other resource use									
 Climate change	GHG emissions	•	•	•						
 Pollution	Non-GHG air pollutants									
	Water pollutants				•		•		•	
	Soil pollutants				•		•		•	
	Solid waste									
 Invasive species and other	Disturbances	•								
	Biological alterations/interferences	•	•	•						

According to the results, **the overall impact is higher for Telefónica's supply chain** than for its direct operations.

In terms of **direct operations** (wired telecommunication, wireless telecommunication and other telecommunication activities), the pressures of climate change and land use change are the most significant. This is due to the intensive energy consumption for the operation of telecommunication networks and the need of ecosystem use for network deployment (construction of base stations and cable laying).

With regard to the **supply chain**, if all economic activities are taken into account, the pressure "Greenhouse Gas

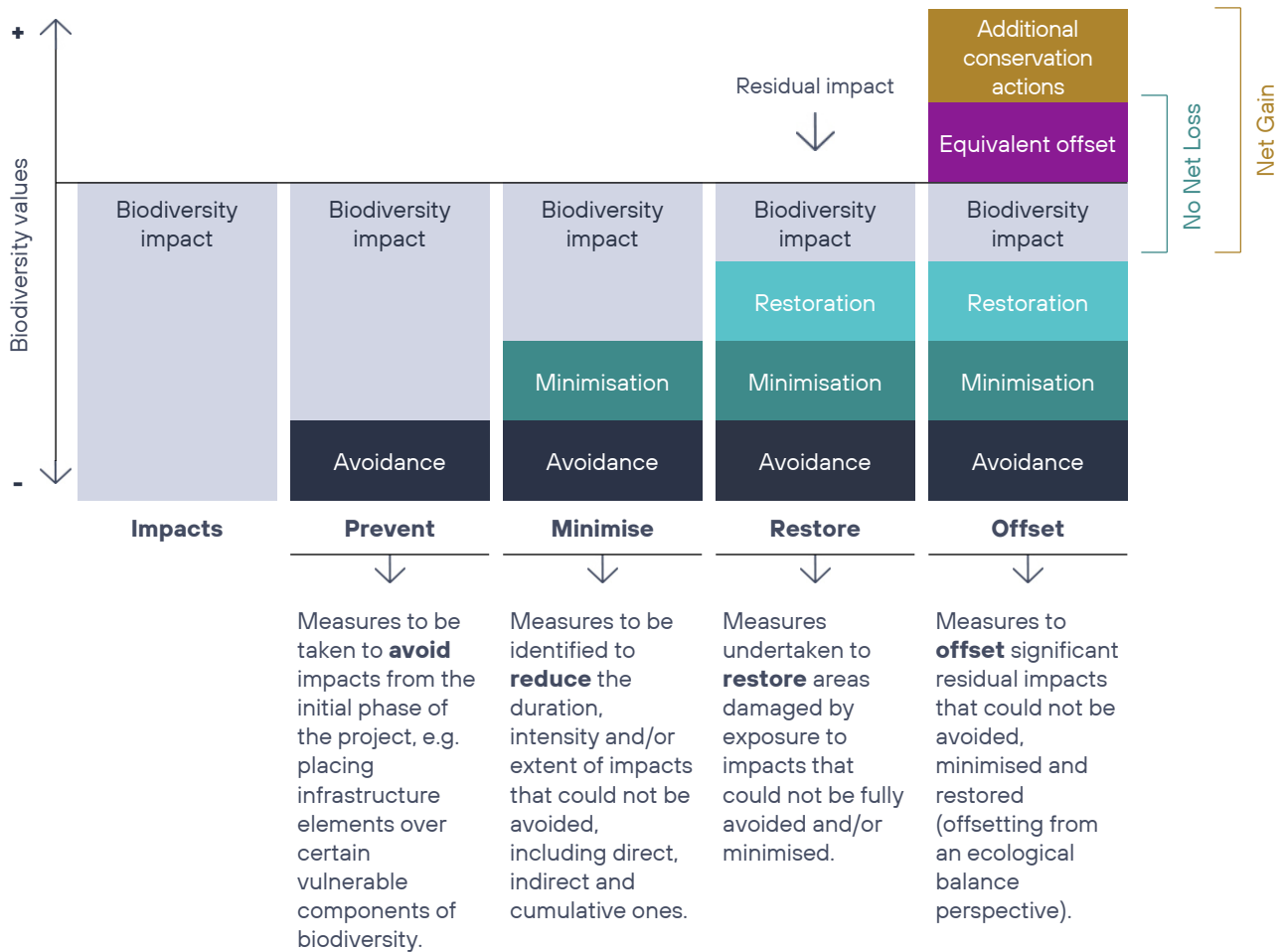
Emissions" is the most significant. Terrestrial/freshwater ecosystem use change and the disturbances to different biodiversity components are also relevant.

### 2.4.6.2. Mitigation hierarchy

#### Biodiversity

To manage impacts on biodiversity, we follow the mitigation hierarchy throughout the **network's lifecycle**, which allows us to identify predicted impacts, act to prevent them, minimise them and carry out restoration measures to offset residual impacts or losses.

#### Mitigation hierarchy





In 2023, Telefónica Group operations conducted 269 environmental impact assessments prior to the deployment of certain infrastructure. This ensures that all environmental impacts are identified and mitigation measures are developed. Measures are also taken to avoid impacts.

Emergency plans are regularly updated for all our facilities. In addition, there are always **preventive** containment measures in place to minimise soil and water pollution in the event of a potential accident, as well as the possible impact on the vegetation and fauna in the surrounding area. Special attention is given to areas of high biodiversity value.

In this regard, Telefónica Brazil designs base station installation projects, always prioritising locations outside protected natural areas. They also have working instructions that set out guidelines for optimal environmental monitoring, aiming to mitigate the impact of construction activities in their initial stage.

In order to **minimise** the impact on ecosystems, preventive/corrective actions are also undertaken. For example, at Distrito Telefónica, the corporate headquarters located in Spain, we undertook a study in collaboration with SEO BirdLife on bird collisions with the windows of our buildings. As a result, priority areas were identified and “bird-saving” patterns have been installed to help birds see that glass is there and prevent collisions.

In Colombia, ecological and geomorphological **restoration** plans were carried out during 2023 in areas affected by the dismantling of telecommunications stations located in protected areas, such as the Galeras Fauna and Flora Sanctuary. These initiatives followed the guidelines established by the state agency Parques Nacionales Naturales de Colombia. Activities included recovering the geomorphology and vegetation cover prior to the installation of the telecommunications structure, revegetating with species typically found in the “superparamo” ecosystem. All restoration projects are followed up and monitored in order to ensure their sustainability over time.

Furthermore, under Telefónica's **offsetting** strategy, our unabated carbon emissions will be removed from the atmosphere preferably through nature-based solutions, such as afforestation, reforestation or sustainable forest management.



For further information, see 2.2. Energy and climate change

We believe that these regenerative actions have co-benefit for ecosystems that go beyond carbon, such as biodiversity enhancement, deforestation reduction or water quality improvement, while reducing the risk of natural disasters.

That is why we are part of the **“1 trillion trees”** initiative, a World Economic Forum platform. By joining it, we have pledged to conserve and plant 1.5 million trees. So far, the conservation and reforestation projects in which Telefónica has invested, together with corporate volunteering initiatives related to reforestation projects, led to the restoration of 579 hectares, the conservation or planting of over 300,000 trees and the sequestration of 167,000 tonnes of CO<sub>2</sub>e.

## Water

### GRI 303-5

In 2023, our overall water consumption was 2,785 ML (2.8 Hm<sup>3</sup>), of which 717 ML was in high water-stress areas and represents 26% of the total. This consumption was mainly due to sanitary use and to a lesser extent due to its use in air conditioning. For this reason, in each country where we operate we establish specific **measures to improve efficiency** in water use and **reduce consumption**, especially in highly water-stressed areas, as is the case in Spain, Chile and Mexico.

Over 1,700 buildings currently have a Sustainable Water Management Plan, which includes measures such as:

- Employee awareness campaigns, including World Day of Water and Conscious Consumption.
- Clauses being included in building maintenance and cleaning contracts to encourage efficient and responsible water use by our suppliers.
- Preventive maintenance to avoid leaks in taps, cisterns and water heaters.
- Water-saving systems and pressure monitors.

In terms of the measures carried out in **areas with high water stress**, the following stand out:

- Treatment systems in cooling towers at Telefónica Chile.
- The maintenance of the grey water treatment plant for the reuse and collection of rainwater and the installation of energy-saving devices and sanitary supply valves with sensors that limit consumption in the Torre Telefónica building in Mexico.
- The sustainable water use plan implemented at our headquarters in Madrid (Spain), which reduces consumption by collecting rainwater and other water-saving systems in sanitation.

**Details of water consumption in 2023 (m<sup>3</sup>)**

Total consumption	2,784,642
Consumption from the municipal network	99.3%
Withdrawal of surface water	0.2%
Withdrawal of groundwater	0.5%

Thanks to the savings measures implemented, the increase in consumption has been slowed down (due to the return to office-based working after two years of teleworking because of the pandemic). In 2023 we reduced water consumption by 12.8% compared to 2022.

**Water consumption from all areas (ML)**

2020	2021	2022	2023
2,777	2,949	3,194	2,785

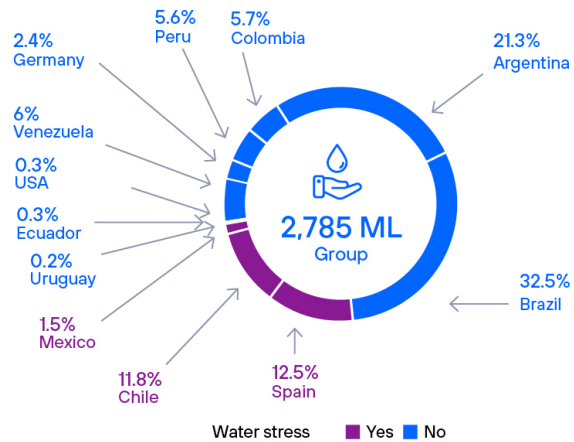
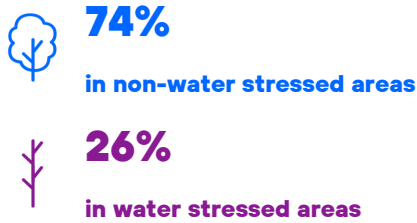
**Water consumption from areas with high water stress (ML)**

2020	2021	2022	2023
750	765	765	717

Water consumption in countries with high levels of water stress according to the Aqueeduct Baseline Water Stress Atlas, from the World Resources Institute (Spain, Chile and Mexico).

**Total water consumption**

We adopt specific measures to achieve efficient consumption, especially in places classified as highly water-stressed areas



**Paper**  
GRI 301-1

Of the paper we consumed in our offices last year, 97% was of recycled or certified origin (FSC, from the Forest Stewardship Council, or PEFC, from the Programme of the Endorsement of Forest Certification schemes).

In addition, 191 million customers chose **paperless bills**. We therefore generated over 875 million electronic bills which avoided the consumption of 4,375 tonnes of paper and the felling of almost 74,000 trees.

## Milestones

- 1 We reduced total water consumption by 12.8% compared to 2022.
- 2 We have sustainable water management plans in over 1,700 buildings.
- 3 We follow TNFD recommendations to minimise our impact on biodiversity