

environment

respect and protection

1 Telefónica is committed to preserve the environment...

1.1 A commitment to the environment

- 1996 ● ETNO (environmental charter)
- 2002 ● UN Global Compact
- Global e-Sustainability Initiative
- «Club de Excelencia en Sostenibilidad» (Telefónica Móviles España)

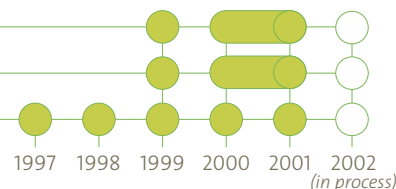
1.2 The environmental management system

ISO standards



1.3 Environmental publications

Reports published



1.4 Environment training actions

1.5 Sponsorship of environmentally friendly initiatives

2 ... and to minimise the environmental impact of its activities...

2.1 Rationalised consumption

Paper savings (*data in tons*)

- 721 Double-sided invoice printing Telefónica de España
- 1.4 Electronic invoice Telefónica de España

2.2 Impact on bio-diversity and the landscape

- 511 Measures of environmental adaptation

2.3 Electromagnetic fields

Compliance with exposure limit regulations

100%

- «Real Decreto 1066/2001» Spain
- «Resolución 505/2000» Chile
- «Resolución 303» Anatel Brazil
- «Resolución CNC 269/2002» Argentina

3

... and to develop services which contribute to the protection of the environment

2.4 Atmospheric emission management

2.5 Responsible solid waste management

100%

- Hazardous waste managed by authorised handlers (Telefónica de España, Telefónica Móviles España y Telefónica I+D)

2.6 Other waste management initiatives

Recycled paper (*data in tons*)

→ 335
TPI Peru

Telefónica offers a range of communication with a positive environmental impact services, including:

- Tele-working, remote offices
- Audio-conferencing, video-conferencing
- Tele-education
- e-commerce
- Personalised mobile information services (e-mocion)
- Services providing added value (network answering service, caller identification, multimedia messaging)

... that contribute to:

- Improvements to transport and distribution systems
- Improved energy efficiency in buildings
- Savings on paper through the use of electronic catalogues and invoices
- Network answering services replace individual answering services (thereby contributing to a reduction in the use of materials)

→ 333
Telefónica I+D projects whose environmental impact has been analyzed

environment

respect and protection

1 Telefónica is committed to persevere the environment

Since Telefónica de España subscribed the environmental charter developed by ETNO (European Telecommunication Network Operators) in 1996, incorporating measures for the protection of the environment and the health and safety of its employees, Telefónica Group has made considerable progress in this area. A total of 23 telecommunications operators have signed up to this scheme so far, and Telefónica is a founding member of the Working Group that looks into the issue of the Environment and Social Responsibility.

1.1 A commitment to the environment

During 2002 Grupo Telefónica has intensified its commitment to the environment by signing up to the UN Global Compact and the GeSI Initiative (Global e-Sustainability Initiative), the later under the auspices of the UNEP (UN Environmental Program) and the ITU (International Telecommunication Union), includes manufacturers and operators from the sector with the aim of promoting sustainable development in the Information Society.

During the course of the year Telefónica Móviles España, in collaboration with another 15 major companies, has founded the «Club de Excelencia en Sostenibilidad» (Sustainability Excellence). This Club was set up in order to allow members to share their experiences in the area of sustainable development, by encouraging training in this field and promoting projects involving companies, public institutions and private organisations in the fields of corporate excellence and sustained growth.

One of the highlights of these initiatives is the involvement of Telefónica Móviles España in the Business and Sustainability pilot scheme «Calificación Ambiental de Proveedores» (Suppliers' Environmental Certificate). This is an initiative promoted by «Fundación Entorno» and sponsored by Spain's «Ministerio de Ciencia y Tecnología» and is designed to offer gradual environmental certification for suppliers, thereby encouraging suppliers and contractors to improve their environmental management systems.

1.2 Environmental management system

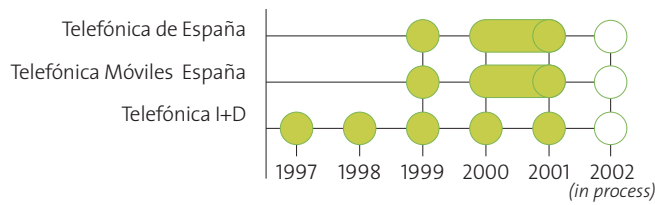
Telefónica de España, Telefónica Móviles España and Telefónica I+D are the Group's companies that have made the greatest progress in implementing Environmental Management Systems (EMS), which now extend to 100% of their activities.

The EMSs implemented by Telefónica Móviles España and Telefónica I+D have held the ISO 14001 in environmental management systems and standards since 1998, whilst in the case of Telefónica de España, the system implemented in its Logistic Centre has recently been awarded the ISO 14001.

In 2001 Telefónica Unifón Argentina set up an environmental working group that, following their diagnosis of the situation, implemented a series of improvement measures during 2002.

In Brazil, Celular CRT has developed a project for the implementation of an Environmental Management System, thereby complying with the requirements laid down by the NBR ISO 14001, which is currently pending approval.

Environmental reports published



1.3 Environmental publications

Various Telefónica companies publish annual environmental reports, which are gradually moving towards sustainability reports, as reflected by «Aenor» in its audit of Telefónica de España's 2001 edition of its environmental report, in line with the guidelines established by the GRI (Global Reporting Initiative).

Telefónica Móviles España has a section on its website devoted exclusively to environmental issues in which visitors have access to the company's reports. The website is complemented by an environmental information line (1473) and an e-mail address: medioambiente@tsm.es

In accordance with its principles of transparency and responsibility, Telefónica Móviles España has carried out a campaign aimed at raising awareness regarding its policies and criteria in the areas of the environment and public health. The following reports have been published and distributed:

- «*Electromagnetic fields: mobile telephones and health*».
- «*Real Decreto 1066/2001: regulations for communication and health*».
- «*Mobile telephones: part of your life*».

In Peru, and through the «Asociación de empresas privadas de servicios públicos», Telefónica has distributed an information leaflet entitled «*Cell phones improve our quality of life*» in order to raise awareness among the general population of the vital role cell phones play in a country with a wild and rugged landscape, as well as mobile telephone operators' full compliance with the regulations governing the maximum permitted exposure to electromagnetic waves established by leading international organisations.

The goal set by Telefónica I+D for 2003 is to improve the Company's social and environmental communications. The Company's web site includes a section where visitors may consult environmental reports.

1.4 Environmental training actions

Telefónica de España, Telefónica Móviles España, Telefónica I+D and TeleSP (Brazil) each have a section on the environment on their Intranets, which all members of the organisation may access from the intranet.

Telefónica de España offers a tele-training course called «*Environmental Management at Telefónica España*», whose main objective is to raise awareness amongst all its employees. A total of 13 courses were held in 2002, which were followed by 270 pupils. In order to improve working space management in its 7,600 buildings, last October Telefónica de España launched an awareness-raising campaign entitled «*Look after your working space. It's your daily landscape*». This campaign dealt with issues such as cleanliness, tidiness and energy and water savings. The possibility of drawing up a code of «*Good Environmental Practices*» for sub-contractors is also currently under development.

Telefónica Móviles España has an internal environmental training scheme open to all its employees. In view of the demand for information on electromagnetic fields and their impact on health, the Company focused most of its efforts in 2002 on looking at this issue. Training was divided in three sections: the first explaining how the mobile telephone network works; a second section describing the possible impact of radio frequencies on health and lastly, a summary of all the activities undertaken by the Company in this field.

Energy consumption

(data in kwh)

1,152,707,738

Telefónica de España (2001)

14,182,150

Telefónica I+D

374,290,849

Telefónica Móviles España

8,600,000

Telefónica Unifón Argentina

1,800,000

Telefónica Móviles Chile

54,190,000

Telesudeste (Brazil)

20,500,000

Celular CRT (Brazil)

Telefónica I+D offers three on-line courses describing the main elements and implications of its EMS, solid waste management and environmental protection activities. During 2002 these training courses were directed at new employees and maintenance staff.

1.5 Sponsorship of environmentally friendly protection initiatives

- In Spain, Telefónica Móviles has sponsored the first edition of Spain's Environmental Report, a «FUNGESMA» initiative («Fundación para la Gestión y Protección del Medio Ambiente»).
- Telefónica Móviles España collaborates with «Fundación Entorno» and participated in a number of working groups at the 2002 edition of the National Environment Conference.
- Admira is one of the companies that sponsor «Fundación Ecomar», which protects the marine environment.
- In Argentina Telefónica Móviles supports «Fundación Vida Silvestre», which preserves the forest life.
- Telefónica Móviles Peru sponsored the National Environment Prize, awarded by the Tecnológica del Sur University.

2 ... and to minimise the environmental impact of its activities...

2.1 Rationalised consumption

2.1.1 Electrical energy consumption

Supplying both mobile and land communication networks constitutes telecommunications operators'

major source of energy consumption. Telefónica Group operators are implementing considerable improvements designed to maximise the energy efficiency of their networks through the use of monitoring and control systems or the increase in operating temperature of certain equipment (leading to consequent energy savings in cooling systems).

Telefónica de España's environmental goal for 2003 is to reduce energy consumption to levels similar to those of the year 2000 and Telefónica I+D has established energy saving targets for June 2004.

2.1.2 Water consumption

Water consumption in the telecommunications sector may appear insignificant when compared with levels used by other industries or the service sector. The greatest impact is the consumption of water in offices and cooling systems. One of the main actions of Telefónica I+D has been to establish optimisation targets for the quality and amount of water used, planned for February 2003. TeleSP (Brazil) has organised workshops designed to develop initiatives and raise awareness of the need for the rational use of water in its facilities and installations.

2.1.3 Paper consumption

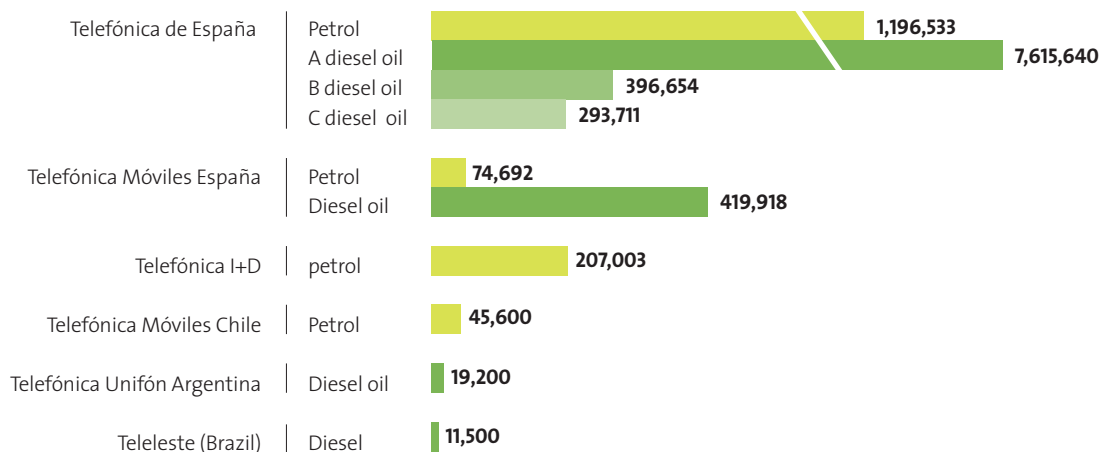
Telefónica Group companies have set up a series of measures designed to reduce paper consumption. Several of these initiatives are described below:

Telefónica Publicidad e Información (TPI)

- In order to minimise the environmental impact of the paper used to publish TPI's guides, all the paper and card used for the company's telephone directories are purchased from suppliers that hold environmental-management standard certificates (ISO 14001).

Fuel consumption

(data in litres*)



(*) Excepting natural gas consumption (in m³): Telefónica de España 239,659 and Telefónica R+D 73,557

- In addition to this, a series of new information channels are currently being created as alternatives to the traditional paper format, including on-line directories available on the Internet or new technologies such as WAP or personal digital agendas (PDAs).

Telefónica de España

- Estimated savings of 721 tons of paper due to double-sided invoice printing, an initiative set up in March 2002.
- A further initiative that has led to reduction in the amount of paper used is the implementation of the electronic invoice. In December 2002, a total of 45,258 clients had opted for the e-invoice, saving a total of 1.4 tons of paper used for the invoices and envelopes.
- The total amount of paper used in 2002 was 4,814 tons, 875 of which are recyclable.

Telefónica Móviles España

- Recycled office paper consumption totalled 3,342,500 sheets in 2002.
- Double-sided printing has been used for all invoices issued since May 1st 2002, allowing considerable reductions to be made in the amount of paper used.

Telefónica I+D

- The aim is to reduce the amount of paper used by 62% between 1999 and 2009, developing the paper-free office model.
- During 2002 a 19% reduction in the number of sheets used was obtained. In total, 8,166,825 sheets of white paper and 2,337,240 sheets of recycled paper were used.

Atento España

- 22.5% of the total amount of paper used, was recycled paper.

2.1.4 Fuel consumption

The telecommunications sector does not directly consume large quantities of fuel. Most of the fuel consumed is used by its fleets of vehicles, or during emergency plans of action or in order to provide services in remote areas where energy sources are difficult to access.

The objective of Telefónica Group is to collaborate in meeting the goals established at world summits such as Kyoto and to set up control mechanisms designed to reduce consumption and increase efficiency levels. This is clearly reflected in the progress made by Telefónica de España in this area during the course of 2002.

- 18% of the fleet of vehicles without a catalytic converter were replaced with others that fully comply with current legislation regarding gas emissions (83.5% compliance).
- 4% of vehicles without a catalytic converter were taken out of service (152.7% compliance).
- Assessment of the state of boiler fuel deposits and generators (93% compliance).
- Adaptation of boiler fuel deposits and generators to current legislation (70% compliance).

Telefónica de España has set the following objectives for 2003:

- Completion of the adaptation process of deposits in line with current legislation.
- Replacement of 2.7% of the fleet of vehicles without a catalytic converter.

The fuel used in 2002 by Telefónica de España to travel a total of 114,531,959 kilometres can be broken down in the following way: A diesel oil 7,615,001 litres; petrol 653,680 litres; unleaded petrol 542,333 litres.

Water consumption

(data in thousands of litres)

963,445

Telefónica de España

71,246

Telefónica Móviles España

44,106

Telefónica I+D

Paper consumption

(relevant data)

100%

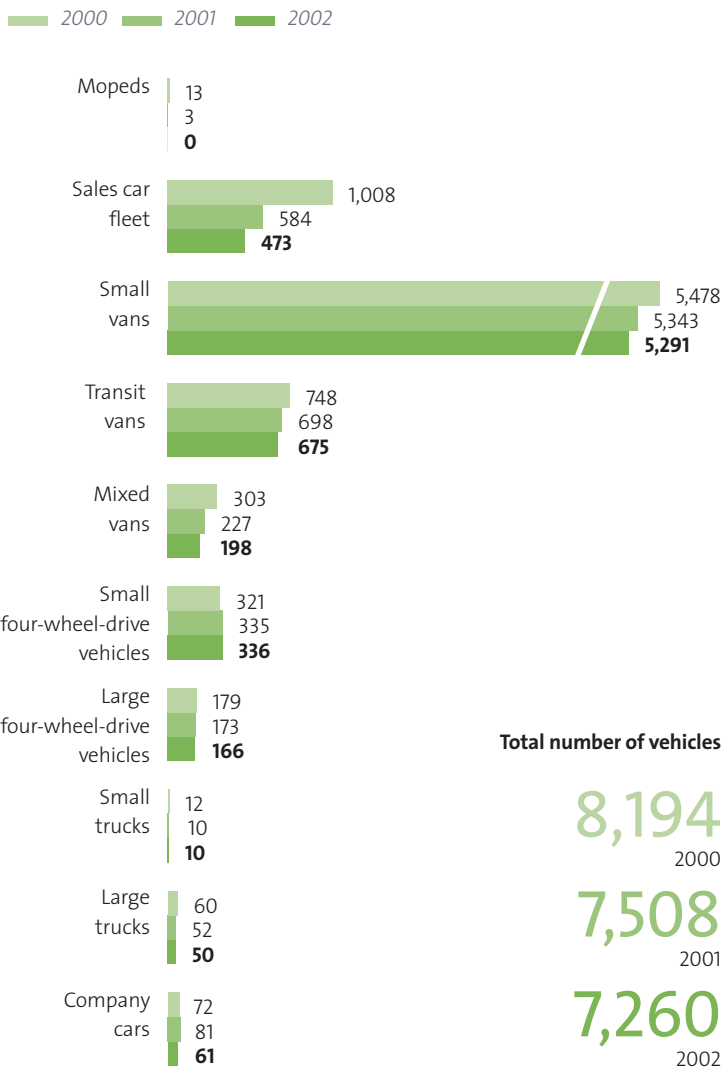
paper purchased by TPI from ISO 14001 suppliers

savings of

721 tons

due to double-sided invoice printing by Telefónica de España

Telefónica de España's fleet of vehicles
(number of vehicles per category)



Telefónica I+D vehicles used approximately 50,000 litres of fuel. Company employees made a total of 642 domestic and 430 foreign trips.

2.2 Impact on bio-diversity and the landscape

When undertaking network distribution, Telefónica Móviles operators take into consideration the need to blend structures into the landscape or to camouflage them in urban or countryside areas which are protected due to their environmental, historical or artistic value. In order to achieve this, a number of basic techniques are employed: the reuse of existing infrastructure; the reduction in the number of aerials per site; infrastructure sharing; camouflaging of aerials, etc.

During the planning phase of its base stations, Telefónica Móviles carries out a landscape impact analysis, based on the calculation of visual fragility, a parameter which determines the degree to which the landscape will be altered by an action carried out upon it. During the course of 2002 a total of 511 environmental adaptations were carried out on the network.

Telefónica Móviles España and Telefónica de España also carried out a number of environmental impact studies at the request of official bodies. These were designed to offer a range of alternatives that not only protect the environment but also ensure customers are provided with a quality service.

In keeping with these measures, and in accordance with the development of new technologies, during 2003 Telefónica Móviles plans to establish a series of environmental criteria for the deployment of its UMTS networks.

2.3 Electromagnetic fields

In compliance with «Real Decreto» 1066/2001, Telefónica Móviles España completed its Monitoring Plan, carrying out checks on all base stations situated in inhabited areas. The monitoring and approval procedures were carried out in accordance with the terms and conditions stipulated in «Orden Ministerial» CTE/237/2002, and the results obtained have been compared with limits for exposure to electromagnetic fields included in the aforementioned «Real Decreto». The results showed that all the base stations are well within the permitted limits recommended by leading international organisations, such as the ICNIRP (International Commission on Non-Ionising Radiation Protection), the World Health Organisation and the EU.

Telefónica Móviles España is also involved in a number of other working groups, such as that set up within the context of «ANIEL» with the aim of explaining all aspects of antennae, emissions, etc. Full details are available on the web site at www.sociedadmovil.com, which received a total of 27,000 visits in 2002.

Telefónica Móviles España participates actively in working groups on electromagnetic fields within the framework of ETNO (European Telecommunication Network Operators) and is involved in the majority of actions carried out by COST (European Co-operation in the Field of Scientific and Technical Research).

In Chile and in accordance with current legislation, Telefónica Móvil completed the monitoring of its aerials. The results showed that all the emissions are within the limits laid down in the regulations included in Resolution 505/2000.

During the course of 2002, and in compliance with ANATEL «Resolución» 303, Telesudeste Celular, Teleseste Celular and Celular CRT have begun to carry out a series of monitoring procedures throughout Brazil. To date, all the results have shown that emissions fall well within the limits permitted by the ICNIRP and the WHO.

In Argentina, Telefónica Unifón is responsible for monitoring electromagnetic emissions in accordance with the provisions laid down in «Resolución» CNC 269/2002. It was shown that all the sites comply fully with national and international regulations and standards.

In Peru, random monitoring tests undertaken by INICTEL («Instituto Nacional de Investigación y Capacitación en Telecomunicaciones») at base stations of all existing operators have shown compliance with the limits set out by leading international bodies.

2.4 Atmospheric emission management

As part of a series of initiatives designed to reduce atmospheric emissions, Telefónica de España has achieved the following objectives during the course of 2002:

- Identification of the cooling agents used in cooling equipment (90% compliance).
- Removal of any existing 1301 halon (97.5% compliance).

The following are the objectives set by Telefónica de España for 2003:

- Elimination of cooling agents used in cooling equipment in order to comply with existing legislation.
- Completion of the removal of 1301 and 1211 halon.

Electromagnetic fields

100%

compliance with the limits set by:

Real Decreto
1.066/2001
Spain

Resolución
505/2000
Chile

Resolución
ANATEL 303
Brazil

Resolución
CNC 269/2002
Argentina

Solid waste management at Telefónica de España in 2002

(data in kilograms)

Non-hazardous		Final use
· internal plant	136,806	scrap
· wiring	5,519,156	scrap
· telephone equipment	1,618,534	scrap
· telematic equipment	132,900	recycling and scrap
· waste paper	877,757	recycling
· vehicles taken out of service	557,210	scrap metal
Hazardous		
· bio-sanitary	9,672	authorised handler
· radiological	1,575	authorised handler
· batteries	1,262,519	recovery and authorised handler
· hazardous from Logistic Center	328	recovery and authorised handler
· 1301 halon removal	87,051	authorised handler

Volume of waste generated by Telefónica I+D in 2002

(data in kilograms, except when otherwise specified)

Non-hazardous	
· decantation tank grease	3,340
· metal oil filters	2,560 litres
· building work waste	242 m ³
· obsolete electrical equipment	22,931
· toner cartridges	580 cart.
Hazardous	
· dead fluorescent tubes	268
· metal oil filters	7
· contaminated empty packaging	153
· housing oil	200
· alkaline and button batteries	347
· paper stained with chemical products	102
· dead batteries	7,356
· inorganic waste products	107
· contaminated absorbent material	176
· bio-sanitary waste	172

Volume of waste generated by Telefónica Móviles España in 2002

(data in kilograms)

	Hazardous	Non-hazardous
Offices	1,348	301,988
Network	164	823,000

2.5. Responsible solid waste management

Telefónica classifies and deals specifically with each type of waste produced during the course of its activities, with particular attention being given to hazardous waste products that are dealt with by authorised handlers.

In 2002, Telefónica de España generated a total of 10,203,508 kilograms of solid waste, 1,361,145 of which were hazardous.

The objectives set for 2003 in this area are listed below:

- Extension of Telefónica de España's registration as a producer of hazardous waste material.
- Reduction in the amount of micro-computerised waste produced by workstation printers. (Installation of 200 networked printers, the removal of 4,000 individual printers, 1,000 of which will be re-used).
- Reduction in the amount of micro-computerised waste produced by workstation computer terminals. (Removal of 5,000 obsolete PCs, 900 of which will be recycled and re-used).

Participation in collaboration with major mobile telephone manufacturers and operators in the initiatives «Recicla tu móvil» and «Tragamóvil» set up by ANIEL and ASIMELEC respectively, designed to recycle and effectively deal with obsolete mobile phones and accessories.

Telefónica Móviles has set up an Integrated Management System designed to remove and handle correctly any hazardous waste products. This system includes the collection and management of both

hazardous waste products (fluorescent tubes, batteries and mobile phone batteries) and solid urban waste (paper, cardboard, printing waste products).

Telefónica Unifón Argentina has taken a large number of base station batteries out of service, either because they have completed their pre-established life or they contain cadmium. Certified contractors have eliminated more than 70 sets of batteries have been eliminated in total, plus 20,000 kilograms of waste products.

2.6 Other waste management initiatives

Telefónica Móviles has come up with a series of initiatives for the management of disused terminals and batteries in the various countries in which it is present.

Telefónica Publicidad e Información carries out annual campaigns for the collection of obsolete telephone directories in all the countries in which it operates. In Peru the third consecutive campaign was carried out for the collection of the previous year's phone directories. A total of 335 tons of «Páginas Amarillas» and «Páginas Blancas» were collected, 21.8% more than the estimated 275 tons. The paper collected was sold as recyclable material and the money was donated to the «Hogar Clínica San Juan de Dios», in collaboration with the Fundación Telefónica.

Atento organises the paper collection and recycling in Argentina, Chile, Spain and Venezuela.

Telefónica Móviles donates recyclable materials in Argentina, Brazil and Chile to organisations that donate the money obtained to social projects and initiatives.

Similar programmes are also run by Atento in Argentina and Telefónica I+D (excess computer equipment is auctioned off amongst employees, and the money obtained is donated to charity).

Collection programmes for obsolete equipment in users' possession

(country and situation)

Argentina	<ul style="list-style-type: none"> • Battery collection and recycling programme, in collaboration with the «Fundación Vida Silvestre». A total of 500,000 batteries have been deposited in Company stores. • Collaboration agreement with Nokia and Ericsson for terminal recycling.
Brazil	<ul style="list-style-type: none"> • Battery collection programme in advance of the resolution to be issued by the «Consejo Nacional de Medio Ambiente» (National Environment Committee / CONAMA) whereby battery collection will become compulsory. The batteries are returned to the manufacturer for recycling purposes.
Chile	<ul style="list-style-type: none"> • 3,500 kilograms of terminals and 3,500 kilograms of batteries have been collected. This material has been sent to a recycling company authorised by the «Servicio de Salud Metropolitano del Medio Ambiente» (the Metropolitan Environmental Health Service).
Spain	<ul style="list-style-type: none"> • An Integrated Management System including selective containers for batteries and mobile phone batteries installed in regional offices and Company stores. • Participation in collaboration with major mobile telephone manufacturers and operators in the initiatives «Recicla tu móvil» and «Tragamóvil» set up by ANIEL and ASIMELEC respectively, designed to recycle and effectively deal with obsolete mobile phones and accessories.

Environmental impact

333

Telefónica I+D projects whose environmental impact has been analyzed

3 ... and to develop services which contribute to the protection of the environment

The benefits to the Environment from telecommunications have been endorsed by two reports:

- a) A report published by the United Nation's Environment and Development Programme, entitled «The role of industry in sustainable development. 10 years after Río: UNEP declarations», highlighting the achievements obtained by companies from the Information and Communication Technology sector, and their contribution to sustainable development.
- b) A report presented at the Johannesburg Conference (2002) looking into the impact of the Information and Communications Technology sector on sustainable development. This report was published by GeSI (Global e-Sustainability Initiative), subscribed by Telefónica in 2002.

The use of telecommunications services by the industrial, commercial, farming and service sectors and in the home has a positive impact on the Environment. Among the environmentally friendly opportunities offered by these services are:

- Tele-working, remote office, mobile office, etc.
- Audio-conferencing and video-conferencing
- Tele-education
- e-commerce
- Access to mobile information services (e-mocion)
- Services providing added value (network answering service, caller identification, multimedia messaging, etc.)
- Fleet management

These initiatives make a positive contribution to:

- Improvements to transport and distribution systems

- Improved energy efficiency in buildings
- Savings on paper through the use of electronic catalogues and invoices
- Equipment savings based on the substitution of individual answering services with network-based answering services (thereby contributing to a reduction in the use of materials).

In January 2002 Telefónica I+D set up a procedure for the systematic assessment of the impact on the environment of its new developments. The results of a total of 333 projects were subjected to analysis during 2002, the majority of which allowed for improvements to be made in the remote control of customer facilities, thereby making a direct contribution to cutting transport needs (with the consequent reduction in associated negative impacts: fuel consumption, gas emissions, etc.) A number of products which have had a positive impact on the environment are described below:

- **Fibre Radio System:** designed to allow for the fine distribution of radiant aerials located in urban settings, which provides the following advantages:
 - Reduction in radio power levels emitted by each aerial, due to the fact that they are distributed at more regular intervals providing coverage for a smaller area.
 - More attractive urban settings, as the aerials used to provide coverage are smaller and easier to camouflage.
- **Sensor networks integrated into the base stations.**
The «EOLO» Project: A proposal has been made for the creation of a network of sensors which would be integrated into Telefónica Móviles España's base stations, capable of providing information in real time

about the various physical parameters of the area surrounding aerials, such as the wind speed and direction. The first application to be implemented as a part of the network is the development of a project in base stations in Cantabria and Vizcaya.

- **EOC-Energy:** the centralised management of telephone energy equipment (power panels, air conditioning, energy panels, transformers, permanent energy supply systems, as well as mobile phone equipment). The remote control of this equipment allows for the rapid detection of any faults, thereby avoiding unnecessary energy consumption and optimising staff movements between facilities.