



Leadership in collection and recycling

The urban forest, recycling

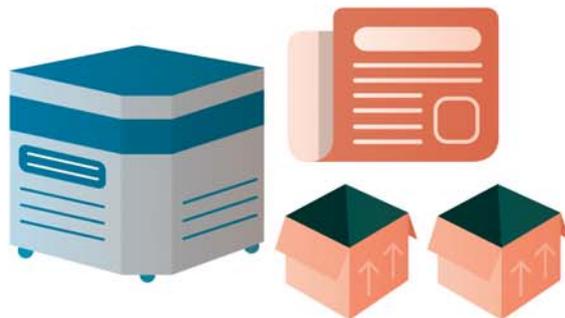
The urban forest has steadfastly stood up to the second recession. Neither the fall in consumption nor the austerity forced on the public administration have been an obstacle to maintaining the high paper collecting and recycling standards achieved. Administration-citizen-industry collaboration, the strength and efficiency of collection systems and our paper industry's recycling capacity have all contributed to a collection rate of over 70% and a recycling rate of around 80%. On top of that, the period ends with the good news that in 2014, paper collection went up again, this time by over 4%.

COLLECTION OF PAPER FOR RECYCLING

4,439,300 TONNES

71%

COLLECTION RATE
(% of total paper consumed in Spain)



PROMOTING COLLECTION AND RECYCLING



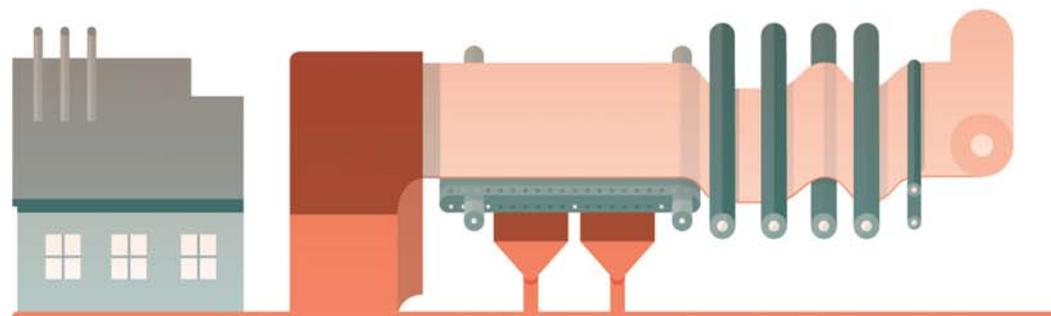
RECYCLING

5,052,900 TONNES
OF PAPER FOR RECYCLING

70% Local
30% Imported

81% RECYCLING RATE
(% of total paper consumed in Spain)

2nd LARGEST PAPER RECYCLING INDUSTRY IN EUROPE



The urban forest is very much alive



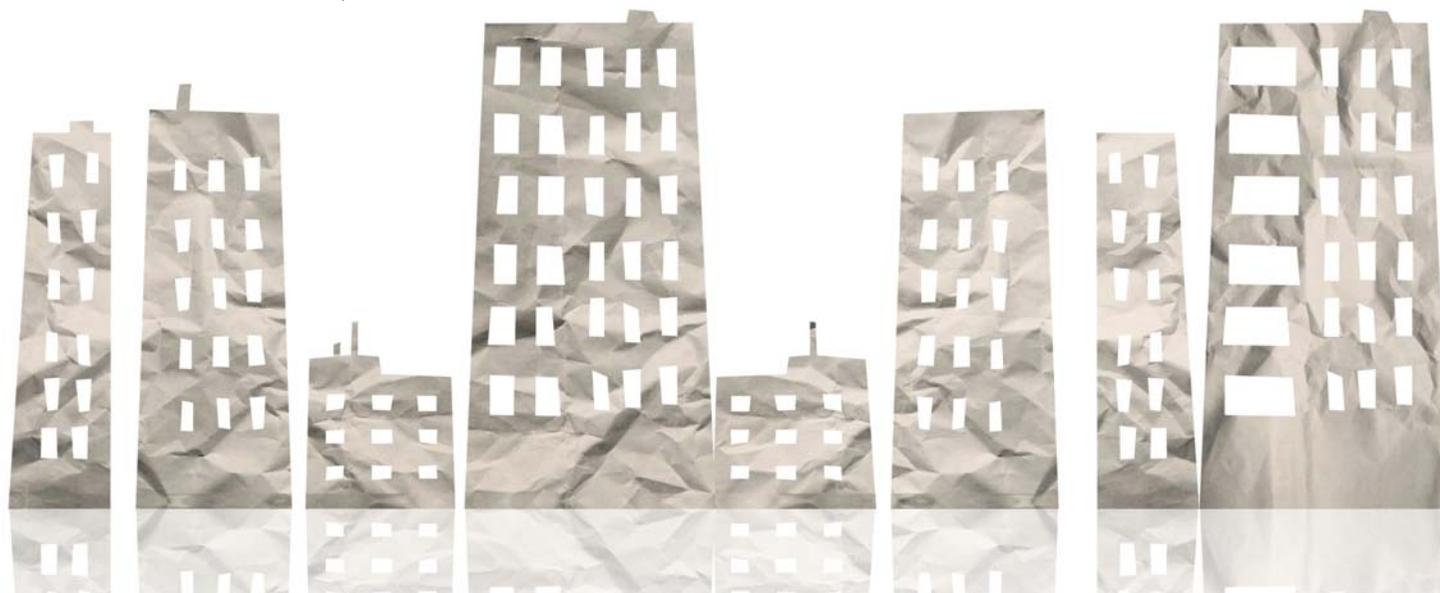
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Of the 135 kilograms of paper that on average each Spaniard consumes in a year, 71% (96 kilos) is collected for recycling in paper mills. That makes a total **in 2014 of 4,439,300 tons collected for recycling**, which constitute what is called the "urban forest". Once used, paper products enter the recycling circuit and thus optimise the use of a natural and renewable resource like wood and close the paper cycle.

To understand the true magnitude of this **71% collection rate**, one should bear in mind that a certain amount of paper cannot be brought into the recycling circuit because we keep it, such as library books, or due to their specific use, such as hygiene papers. It is estimated that the true potential rate of paper and board collection for recycling is about 85% of consumption. Paper collection in Spain reached its record in **2008**, a fraction under **five million tons** and went down in the following years as a result of the crisis, only to be broken by a slight rise in 2011. Coinciding with recovery in paper of consumption (2.8%), **paper collection is growing** again and doing so very strongly, **increasing by 4.1%** in 2014.

The evolution of paper consumption is closely linked to the collection of paper for recycling: if as a result of the crisis, you buy one box of biscuits instead of two, it is clear that only one box and not two will end up in the blue bin. However, in Spain, thanks to citizen awareness, a deep-rooted recycling habit and the healthy performance and robustness of our collection systems, the impact of falling consumption on the urban forest has been minimised: **during the crisis, paper consumption went down by 23% while the fall in the collection of paper for recycling was much more moderate, about 11%.**

There can be no doubt that our urban forest is very much alive and kicking and growing at a rate above the increase in consumption.



Volume of collected and recycled paper and board ('000 ton)

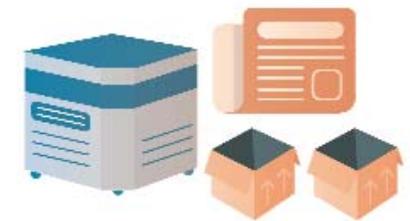


SOURCE: ASPAPEL

DO YOU KNOW HOW THE URBAN FOREST WORKS?



- Once used, paper products are collected for recycling through selective municipal collection systems (the blue bin, door-to-door retail collection and waste disposal centres), as well as collection by private operators from supermarkets, industries, printers, etc.
- The greatest room for improvement lies in household or domestic paper, since the collection rate there is only 60%, whereas in supermarkets, printers, general industry, etc. the rate is 100%.
- All that paper and cardboard goes to the recovery sector's warehouses, where it undergoes a scrupulous process of sorting, cleaning and wrapping in bales.
- Finally, paper mills buy that paper and board to recycle it as raw material for new recycled paper and board.



4,439,300

**TONS OF PAPER
ARE COLLECTED FOR RECYCLING**

The paper mill. Recycling local raw material



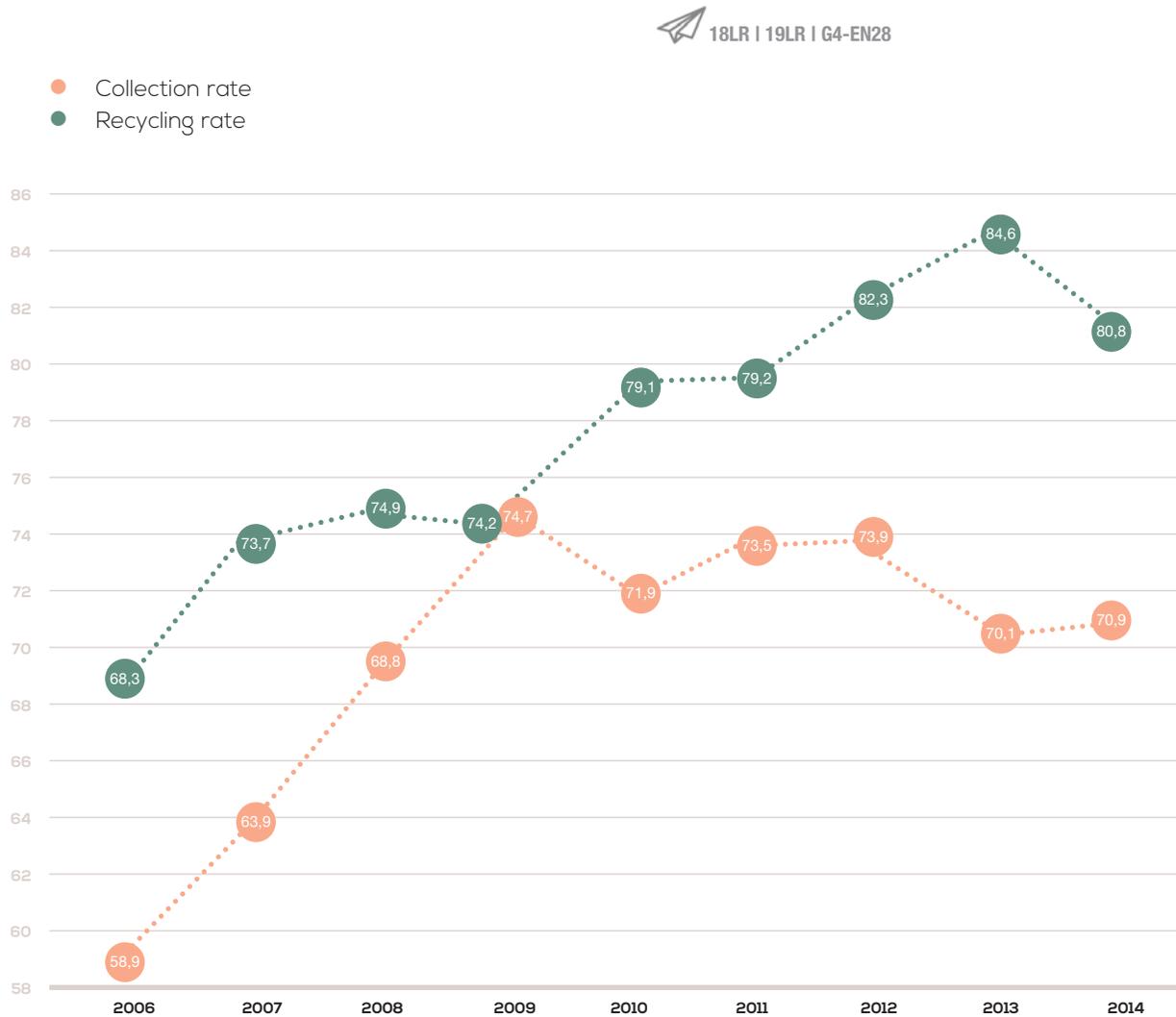
Spain is a recognised leader in paper and board recycling. In 2014, Spanish **paper mills recycled 5,052,900 tonnes of paper and board**. The only country to exceed that recycling volume in the entire European Union is Germany.

Our paper industry's recycling capacity guarantees that all paper and board collected in Spain is recycled, thus closing the cycle in our country. In fact, **in 2014, 4.4 million tonnes were collected** and our industry recycled more than 5 million tonnes. However, exports of paper for recycling, bound mainly for China, rose by 34% to 891,600 tons and our paper industry was forced to import 1.5 million tonnes of paper for recycling from France and Portugal.

Despite growing exports, 70% of the paper for recycling used in 2014 by the Spanish paper industry was locally sourced and the remaining 30% was imported from neighbouring countries.



Paper and board collection rate and recycling rate (%)

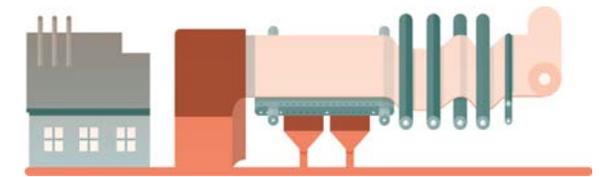


COLLECTION RATE: collection of paper for recycling expressed in % of overall paper and board consumption
RECYCLING RATE: consumption of paper for recycling as raw material for the industry expressed as % of total paper and board consumption

SOURCE: ASPAPEL

DO YOU KNOW HOW THE RECYCLING MILL WORKS?

- At the paper mill, paper for recycling is mixed with water. In a series of cleaning and screening stages, the cellulose fibres are separated from staples, plastics ... and in the case of printed paper, the inks are removed by a flotation process.
- That forms a pulp of clean fibres which is fed to the paper machine. The pulp paste formed and only for clean fibres passing to the paper machine, where it forms a wet band or web of paper, from which water is successively removed by gravity, vacuum, pressure and finally with heat drying.



SPANISH MILLS RECYCLED
5,052,900
TONS OF PAPER AND BOARD

Recycling: key in the paper circular economy



Recycling - consubstantial with papermaking - is a key player on the road towards the circular economy in which the paper industry in Spain is immersed and is therefore one of the fundamental pillars of the sector's sustainability strategy.

The paper industry advocates a new policy for raw materials that involves all stakeholders in the virtuous circle of recycling, from the citizen, through government and industry and paper and board recovery firms to the paper mills where final recycling is carried out.

First, we have to set **ambitious and homogeneous targets for the recycling of all materials**. Recyclable waste should be banned from going to landfill given that it is a valuable resource.

We must **strengthen municipal selective collection systems** through investments in more bins and bin replacement, and we should encourage selective collection from small retail outlets and offices.

New **framework legislation** should be passed to enhance the competitiveness of recycling in Spain, by not charging recycled waste at the same rate as untreated waste. At the same time, we need to continue working on alternative uses that allow waste from recycling processes to be valorised on site or in alternative industries.

To support the recycling industry and the paper mills where final recycling takes place, encouragement needs to be given to ensure **waste collected in Spain is recycled in Spain or in the EU**, thus creating value and wealth precisely where capital investments and efforts to collect and recycle waste are made.

To improve citizen awareness and co-operation, it is essential to increase **information transparency**, publishing regular reports on the outcome of recycling and the final destination of selectively collected waste. In order to ensure such reporting is comparable, it is paramount that waste streams be measured in an homogeneous and uniform fashion across Europe.

The work of **informing and reporting** is also essential in order to change consumption patterns and put the preference on materials that have better environmental performance. These new patterns of consumption will run parallel to a decrease in the impact of waste on the environment through effective preventive measures and eco-design.

Set ambitious and uniform **objectives for recycling** of all materials.

Enhance **municipal selective collection systems**.

Promote a suitable **legal framework and final recycling in Spain or the EU**.

Transparency of **information given to citizen**.

Establish new **consumption guidelines**.

Eco-design for paper-based products.



TEN KEY STRATEGIES FOR PAPER COLLECTION AND RECYCLING

- 1 Set ambitious and **homogeneous recycling targets** for all materials.
- 2 **Ban the entry of recyclable waste in landfills.**
- 3 Strengthen the **municipal selective collection system** through investments in new bins and bin replacement.
- 4 Enhance **selective collection** from **small retail outlets and offices.**
- 5 Encouragement must be given to **ensure waste collected in Spain is recycled in Spain or the European Union.**
- 6 Recycled waste should **not be penalised** with the same cost as untreated waste.
- 7 **Allow recycled waste** to be valorised on site or in other industries.
- 8 Encourage **citizen cooperation** through transparent information on the results of recycling and end destination of their waste.
- 9 Measure waste streams across Europe **homogenously** to ensure they are comparable.
- 10 **Change consumption patterns** by giving preference to materials that have better environmental performance.

The citizen needs to know more in order to recycle more and better



Paper and board recycling is undoubtedly the environmental strategy in which Spanish citizens are most involved in terms of both numbers and high level of commitment.

A survey of paper in Spain (TECEL ESTUDIOS-SIGMADOS for the Paper Forum, 2012), the broadest opinion survey on the subject carried out to date in our country, detected that **recyclability is paper's most highly valued characteristic** by citizens (8 out of 10). And that was despite the fact that only a small percentage of respondents were aware that we currently collect more than 70% of the paper we consume for recycling: in fact, eight out of ten citizens believed that we collected less.

Even though they are generally not aware of the true extent of the success of paper & board recycling in our country, **citizens have a positive opinion about how collection systems operate** (with a score of 7 out of 10); and they also reveal a high degree of interest in recycling, which is precisely the paper-related topic about which they **demand more information** (67% of respondents).

Understanding the final recycling destination is a powerful motivational tool. The citizen knows that the effort made by dropping paper and board in the blue bin is worth it because it results in the creation of added value, wealth and green employment, and entails environmental benefits such as reducing landfills and the emissions that come from them and optimises the use of a renewable resource like cellulose fibre from wood.

DO YOU KNOW HOW YOU CAN COLLABORATE WITH RECYCLING?



- **A collective task.** Recycling paper and board is a collective task in which we are all involved: government, industry and citizen cooperation is a key link in that chain.



- **All your paper and board into the blue bin.** Drop all your used paper and board in the blue bin, as paper and board is 100% recyclable. It is important to separate paper and board from other materials to prevent staining and facilitate recycling.



- **Only paper.** Do not put other materials apart from paper and board (such as plastic bags, strings...) into the blue bin.



- **Fold boxes.** Remember to fold boxes before putting them into the bin so they take up no more space than necessary. And if a box does not fit it, leave it folded and attached to the side of the bin.

Promoting collection and recycling



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ASPAPPEL promotes paper and board collection and recycling with its Tu Papel 21 programme as part of the Tu Papel Es Importante project. The aim is to develop selective collection and recycling of paper and board at municipal level and contribute to sustainable development.

Tu Papel 21 is a system of evaluation, assessment and certification of paper and board collection for local authorities, currently involving more than 130, of which 30 have already been certified.

Tu papel 21 certification is recognition of good municipal management, local citizen commitment, and co-operation of those involved in paper and board collection.



DO YOU HOW *TU PAPEL 21* CERTIFICATION WORKS?

- Local authorities (or groups of local authorities) of over 50,000 inhabitants and provincial capitals are eligible to take part. Nevertheless, any local authority that asks to take part in the programme will be considered by ASPAPEL.
- The certification process starts with an assessment and environmental audit of the general situation of paper and board collection in the town based on 21 indicators, grouped into 5 blocks: Blue bin collection, supplementary collection, public information and awareness, regulation and planning, and outcome and traceability to final recycling.
- The *Tu Papel 21 certification* process is a dynamic system that involves continuous improvement in paper and board collection. When certified, the local authority is committed to fulfilling a plan to move forward on issues that have been identified as opportunities for improvement.
- Periodically, the local authority's environmental assessment is updated to renew certification and verify compliance with the improvement plan.

Awarded municipalities with *TU PAPEL 21* certification



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030-2015	Rivas Vaciamadrid
029-2014	Soria
028-2014	Coslada
027-2013	San Fernando (Cádiz)
026-2013	Valladolid
025-2012	Segovia
024-2012	Alcorcón
023-2012	Sant Boi de Llobregat
022-2011	Logroño
021-2011	Sabadell
020-2010	Cádiz
019-2010	Alcoy
018-2010	Burgos
017-2010	Salamanca
016-2009	Gijón
015-2008	Barcelona
014-2008	Costa del Sol Occidental
013-2008	Palma (Mallorca)
012-2007	León
011-2007	Pozuelo de Alarcón
010-2007	Bilbao
009-2007	A Coruña
008-2006	Ciudad Real
007-2005	Granada
006-2005	Reus
005-2005	Oviedo
004-2005	Lleida
003-2005	San Marcos (Gipuzkoa)
002-2005	Comarca de Pamplona
001-2005	Fuenlabrada

NOTE: Although Rivas Vaciamadrid Municipality received his certificate in 2015, the process was developed in 2014

Objectives

Fulfilment

Two objectives had been set in the field of paper and board collecting and recycling for the period 2011-2014: to keep the collection rate above 70% and to guarantee all selectively collected paper in Spain would be recycled.

1. Despite the crisis, **the collection rate has remained at over 70%** throughout the period: 73.5% in 2011; 73.9% in 2012; 70.1% in 2013 and 70.9% in 2014. ASPAPEL's work through the **Tu Papel 21 advisory and certification programme** and **drafting and publishing statistics** on paper and board collection in large cities and regions have helped to keep these good figures up in a difficult period.
2. In regard to the second objective, both recycling capacity and recycling data (consumption of paper for recycling as a raw material) in the Spanish paper industry have remained firm during the difficult period of the second recession, above the amount collected, thus renewing each year the **guarantee that all paper and board collected in Spain will be recycled**.

ASPAPEL works with local authorities in **promoting recycling made in Europe** in Spanish or European paper mills, in a determined approach to encourage local recycling and the circular economy. That way helps to create an industrial fabric, to add value, and generate green employment and wealth precisely in the places where the effort and investment to collect waste have been made and where guarantees are given that it will be recycled according to the European Union's high environmental standards.



In its objectives for the period 2015-2017, The paper sector goes one step further in promoting collection and recycling and puts the emphasis on quality and co-operation with the other stakeholders in the recycling chain.

1. Keep the paper collection rate above **72%**.
2. Push for local collection to account for **87%** of all paper recycled in Spanish mills, according to the provisions of the Waste Act 22/2011.
3. Achieve a standard in which the non-paper components present in paper for recycling do not exceed **2%** and that quality standards are measured on at least **70%** of input material to mills.
4. Arrange for a common work structure with suppliers of paper for recycling that represents at least **60%** of recovery volumes.
5. Implement a specific project to collect at least a further **20,000** tons per year from archives.

Objectives for collection and recycling

FULFILMENT OF OBJECTIVES 2011-2014

COLLECTION

1. COLLECTION RATE OVER 70%



(quantify commitment of most significant cities)

COLLECTION RATE

2010: 71.9%
2014: 70.9%

TU PAPEL ES IMPORTANTE

Tu Papel 21 certification
Draw up statistical report

RECYCLING

2. GUARANTEE RECYCLING OF ALL PAPER SELECTIVELY COLLECTED IN SPAIN



Commitment from Administration and large generators

RECYCLING

2010: 5,103,400 t
2014: 5,052,900 t

COLLECTION

2010: 4,637,100 t
2014: 4,439,300 t

TU PAPEL ES IMPORTANTE

Tu Papel 21 certification
"Made in Spain" recycling

COLLECTION OF PAPER FOR RECYCLING



NEW OBJECTIVES 2015-2017

COLLECTION



1. COLLECTION RATE OVER 72%



2. SPECIFIC PROJECT RECOVERY OF AN EXTRA 20,000 ton/yr. FROM ARCHIVES



3. COMMON WORK STRUCTURE WITH SUPPLIERS

(who represent at least 60% of total recovery)

RECYCLING



4. IMPROVE QUALITY OF PAPER FOR RECYCLING

(less than 2% of non-paper components and quality monitoring in 70% input to mills)



5. PROMOTE LOCAL RECYCLING

(so it accounts for 87% of the paper recycled in Spanish mills, according to Waste Act 22/2011)

RECYCLING

