

Executive Summary

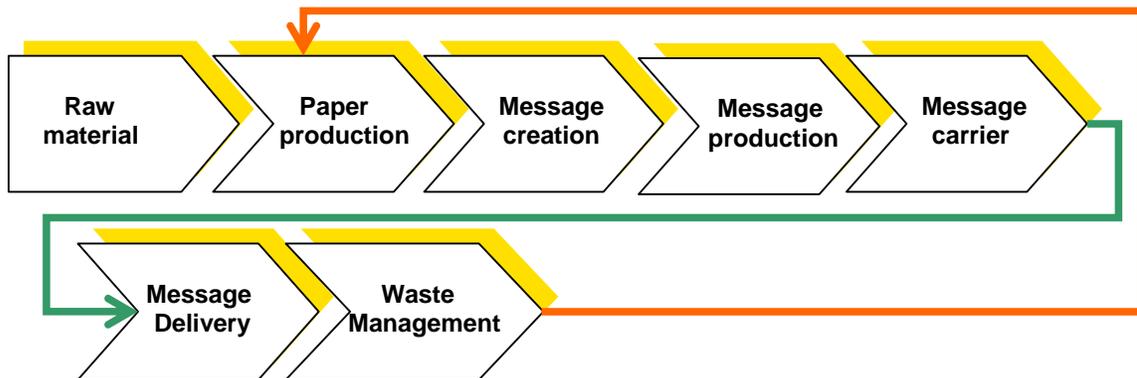
There is growing consensus amongst the general public, politicians, scientists, business customers and others that current climate changes and behavioural patterns are threatening the environment. Especially increasing levels of carbon dioxide (CO₂) in the atmosphere, which are the cause of global warming, are causing concern. In general, the paper mail value chain in Europe recognises that its business activities create CO₂ emissions.

Nevertheless, concerns over the emissions must be taken into context. All business activities create CO₂ emissions - some more so than others. However, to avoid weakening European industries and local communities, it is also important to recognise the work and efforts undertaken so far by industry to reduce its impact on the environment. A lack of understanding and/or unwillingness to understand is highly likely to have contributed to volumes losses, reduced customer loyalty and increasingly restrictive regulation leading to significant (economic and other) losses.

The paper mail value chain has a collective revenue stream in Europe of over 300 billion Euros and is responsible for employing nearly seven million Europeans⁵. In the battle to become environmentally sustainable businesses, these industries have invested millions of Euros to investigate and take actions to mitigate their impact on the environment.

Despite this massive undertaking, our value chain remains one of the main targets of negative commentary on environmental issues. The goal of this document is to provide all stakeholders of the European Mail Industry with objective data and arguments concerning their actual environmental impact and their efforts to reduce it.

In order to reach this goal, seven subsets of the mail industry sector have been analysed thoroughly.



Raw material: the wood production and forestry industry

Criticisms are voiced against the European paper based communications industry that it destroys (ancient⁶) forests to create products such as mailings, brochures, magazines, reports and envelopes. Research shows that these claims are unfounded as most of the world's deforestation occurs in tropical regions located in South America.

In Europe, the situation is very different. 44% of Europe is covered in trees. Excluding Russia, the figure amounts to 38%. The forest area has increased by 30% since 1950. In recent years (since 1990), forests in Europe have increased by 805,000 hectares. Excluding Russia, this increase amounts to 607,000 ha or 1.5 M football pitches each year⁷.

Despite the above facts, European forestry has become a highly sensitive subject for the general public. In response, the forestry industry has become a leader in developing programmes that protect its resource base. The UN reported in 2004⁸ that forest health in Europe is good and improving. This statement is still being reinforced by forest certification standards plus accreditation of certification bodies which are clear examples of environmentally sound practices. These practices have been implemented by the industry, on one side to reduce

⁵ PostEurope estimates based on the analysis of the Postal Users Group 'European Mail Manifesto' published in 2006 and adapted to reflect the expanded European market.

⁶ Ancient forests is a type of forest that has attained great age and so exhibits unique biological features.

⁷ UN FAO Global Forests Report 2005

⁸ UN ECE The conditions of forests in Europe (2004 Executive Summary)

the threat of forest degradation and, on the other, to enhance the biological diversity of Europe's forests⁹.

Product: the Paper Industry

The industry is made up of around 800 companies and 1,200 pulp and paper mills with an annual turnover of 79 billion Euros. It also employs 260,000 people.

It is often heard that paper production has a big carbon footprint when in fact, because of the carbon sequestration in forests and the carbon fixed in paper products, the paper industry has a lower than expected carbon footprint. In fact, an UN-led seminar on energy and forest products in October 2006 concluded that **paper and print are part of the solution to mitigate climate change**¹⁰.

Trees are mainly harvested for the high-value clearwood used in other industries such as construction and furniture-making¹¹. The raw fibrous materials used for paper-making depend on the grade of paper required – as 'fitness-for-purpose' ensures that the waste is minimised. On average¹²:

- ✓ 50% of the fibre for paper production in Europe is recovered paper.
- ✓ 50% is from new or virgin fibre, most of which is a by-product which may be potentially wasted:
 - ✓ 13%¹³ comes from wood chips, saw dust and the tops of the harvested trees which are generally unmarketable.
 - ✓ 20-25%¹⁴ comes from thinnings which is a management practice required during the lifecycle of a forest to ensure the the forest remains healthy and are safe from risk of fire.

The industry recognises the importance of recycled material in the paper-making process and continues to work on projects to increase recycling in Europe. The paper industry in Europe is a world-leader in recycling. In 2007, more than 64% of the paper and board consumed in Europe was recycled. Most of this material is reused again in the paper-making production process as it becomes raw material to produce new paper.

In fact, paper is recycled more than any other packaging material in Europe. Paper accounts for two-thirds of all the packaging material recovered for recycling -- more than glass, metal, and plastic combined.

The industry is also a leader in supporting environmental projects. It strongly encourages the reuse of paper, in part as it has become a necessary raw material for new paper production.

The industry has also invested 470 million Euros specifically in environmental-related Research and Development projects in recent years. From this investment, the industry has made material efficiency gains and has been able to move towards cleaner energy sources. The CEPI sustainability report (2007) reports that:

- ✓ CO₂ emissions have been cut by 15% from 2003 to 2006
- ✓ Energy consumption has been reduced by 30% in Europe's pulp and paper mills.
- ✓ Of the energy consumed today, 54.5% used in European paper mills is renewable biomass (and biomass is carbon neutral). This is the highest percentage of all industrial sectors in the EU – and the industry expects to grow this to 56% by 2010.

Content: the Communications Industry

The European direct marketing sector represents business revenues of over 75 billion Euros and employs over two million people directly, and many more indirectly, within the EU. It is a commercial communications (strategic) tool which is of considerable importance to governments, fundraisers, charities as well as businesses and consumers.

The Direct Marketing industry aims to avoid or minimise waste. It achieves this by ensuring that campaigns are designed to maximise the response from recipients, that the database of

⁹ EEA Progress towards halting the loss of biodiversity by 2010.

¹⁰ FAO, ICFPA (International Council for Forest and Paper Industries), and IEA (International Energy Agency), in collaboration with UNECE and WBCSD (Seminar, Oct 2006). Find the conclusions at: www.fao.org/forestry/newsroom/en/news/108780/highlight_110246en.html.

¹¹ In Finland and Portugal (and perhaps Austria), some trees are grown and managed to be specifically harvested for paper production. This remains only a small part of the total resource pool in Europe.

¹² CEPI. For more information, see www.cepi.org

¹³As wood chips or sawdust

¹⁴ Weaker or smaller trees are felled early on to allow space for the stronger trees to grow larger

names and addresses are accurate, clean and up-to-date which will minimise irrelevant or undeliverable items being sent out.

Criticisms such as direct mail is never opened can be refuted by research done in many EU countries showing that Europeans enjoy receiving direct mail. In Belgium, 97% of households check the post daily, 74% open the mail immediately. 80% of all DM is opened – with an average reading time of two minutes. In the UK, levels of opening (67%) and reading (45%) increased in 2005¹⁵. 70% of customers keep direct mail for later use.

Direct Mail is also not responsible for waste landfills. Across Europe, 90% of the paper used in DM campaigns is recycled and Direct Mail only accounts for 1% of the total paper consumption of an average country. The industry encourages consumers and local communities to recycle paper, so that it can be used again¹⁶.

Targeting is an important feature of Direct Mail. Advanced targeting techniques and continuous improvements help to limit excess production. However, Direct Mail is also advertising for the product or brand, therefore non-response does not constitute waste. After consumers have used the information, the material becomes a recyclable product that can be used again and again if treated properly. This is no different from an empty drink can which is discarded correctly so that it can be reused.

Finally, besides efficient data management, the DM industry also makes efforts to reduce its impact on the environment by creating environmentally friendly designs and making the production of direct mail and promotions material more efficient.

Production: the Printing Industry

The European graphic industry employs over 870,000 people and has a turnover of more than 100 billion Euros.

Critics say that printers want to print large runs to sell more to their clients. In reality their main objective is the satisfaction of customers. They have the necessary equipment to deal with small and large runs and they are leaders in the personalisation and customisation of printed products and variable runs.

Each printing process (traditional, digital) has its specific environmental impact with appropriate solutions. Digital printing is not necessarily better for the environment than traditional methods. Indeed, printing shorter runs with digital technology, although lowering paper consumption, is not always the most sustainable option.

Significant efforts have been made, such as the use of vegetable based inks utilising corn, walnut, coconut, linseed, canola and soy-bean oils (all renewable resources). This aids in optimising print processes to reduce waste, innovating new dampening solutions in offset printing, changing and reducing cleaning agents and improving energy management strategies.

Carrier: the Boxes and Envelopes Industry

The paper and board converting industry generates revenues of 60 billion EUR per annum and employs about 380,000 people in the EU (CITPA¹⁷).

The industry provides a fitness-for-purpose solution to ensure that the articles or products transported across Europe arrive safely (undamaged with no breach of privacy) at the final destination.

Paper and board packaging remains the EU champion for recycling. The industry currently recycles over 84% of its paper and board packaging – a level that easily exceeds the target set in Directive 94/62/EC on packaging and packaging waste (set at 60% by 2008).

A study initiative, the total recyclable envelope, was conducted by the *Envelution Forum*¹⁸ to develop guidelines for envelope manufacturers in Europe to produce a recyclable envelope. The study was conducted by the "Centre Technique du Papier" (CTP) following standard testing procedures.

¹⁵ Consumer Direct Mail Trends Survey 2006

¹⁶ FEDMA Recommendation on the Environment 2008

¹⁷ Within this industry, the corrugated board industry has a turnover of 20 Billion EUR per annum and employs 98,000 people across Europe while the envelope industry has a turnover of two billion EUR and employs around 20,000 persons.

¹⁸ FEPE. See www.fepe.org ('Activities' / 'Environment') for more information

The study found that it is possible to recycle envelopes manufactured from standard commercial components within the graphic paper recycling stream without any negative impact on the final recycling product. What is considered as unwanted material in the recycled graphic paper stream today can actually be a valuable source of quality cellulose fibre for recycling mills tomorrow.

The envelope industry has also been working with the European Stationary industry to develop an ecolabel for converted paper products. The objective of the 'Paper by Nature' ecolabel is to offer a clear and trustworthy reference for European consumers of converted paper products. The ecolabel, developed in conjunction with the paper industry and an NGO, sets criteria to be achieved for the entire process – from the raw material stage to the printing and conversion processes. For more information, please see www.paperbynature.com.

Delivery: the Postal Industry

The European postal sector generates revenues of 47 billion and employs more than two million people.

The industry remains one of the key infrastructural services to support the flow of information across Europe. The UPU (Universal Postal Union) confirms that the penetration of the mail network across Europe is almost 100%. In other words, mail operators are capable of providing communications to 100% of registered Europeans.

With their significant transport fleets, office buildings, post offices and sorting centres, the reduction of CO₂ emissions is the most important environmental challenge for European public postal operators. To this end, postal operators in Europe have invested millions of Euros in environmental initiatives in recent years.

However, criticism of the postal sector's environmental footprint is mostly directed at the product they are transporting and delivering to all 800 million European citizens.

Mail delivery comprises about 0.1% of the total household CO₂ emissions in Europe¹⁹ (14 kg of CO₂)²⁰. Yet at the same time, a single PC emits upwards of 495 kg of CO₂ annually – more than two percent of household emissions²¹.

Assumptions therefore, that electronic communication is better for the environment must continue to be challenged, as should the statement that both customers and companies should only use electronic communications. These statements are based on the erroneous perception that electronic communications have a lesser impact on the environment.

Other statements claim that people do not want paper door-to-door advertising (so called "junk mail"). However, studies in Europe tend to refute this concern. In Belgium alone, sales results at Carrefour can be up to 50% lower if door-to-door advertisements are not delivered or not delivered on time. Furthermore, 52% of households say they purchase products and services seen in advertising mail they receive²².

Advertising mail is therefore, highly relevant to many Europeans. It provides a targeted intelligent communications medium that enhances customer relationships and creates value for all parties involved.

Finally, a large number of postal operators have undertaken significant steps to reduce their environmental footprint by introducing process optimisation, alternative distributions vehicles and fuels (energy sources), etc.

¹⁹ Ave CO₂ emissions per European household is approx 20 tonnes per household per annum. This is based on figures from the International Energy Annual 2005 (7.93 tonnes of CO₂ per capita x a std conversion rate of 2.80 persons per household).

²⁰ The CO₂ of mail per household is based on a European average number of mailpieces of 260 units per capita (approx average of UPU data for Europe) converted using the std factor of 2.80 persons per household (727 items per household). This is then converted to CO₂ equivalents using an industry figure of 20gr of CO₂ emitted per mailpiece (estimated average for Europe based on postal company CSR reports – collected & summarised by Pitney Bowes: http://66.102.9.132/search?q=cache:OIIQ_-lg73oJ:www.insight2foresight.co.uk/_attachments/3335871/Making%2520Mail%2520Relevant%2520v2.ppt+CO2+of+a+transatlantic+flight,+6+minutes&hl=en&ct=clnk&cd=1&gl=be). Note that the figures do not include production of materials which Pitney Bowes estimates to costs 0.9-1.3gr CO₂ per gr of paper (Pitney Bowes - The Environmental Impact of Mail: A Baseline, June 2008). Assuming a 20gr mail piece, this would, in practice, double the CO₂ emissions (to 28 kg CO₂ per household). Still less than 0.2% of annual total household emissions.

²¹ Study of a reference PC in the UK indicates that a PC operating at full capacity for eight hours per day and 5 days per week releases 6.8kg of CO₂ per week or 352 kg of CO₂ per annum. Given that a household PC is also used on weekends, the emissions can be estimated to be as high as 495kg of CO₂ per annum. http://www.zerocarbonfootprint.co.uk/green_computing.htm

²² www.usps.com/directmail/_pdf/04MailMoment.pdf

Waste Management and Recycling

The waste management and recycling sector has an estimated turnover of over 100 billion EUR per year in Europe. It is labour intensive and provides between 1.2 and 1.5 million jobs²³.

The paper industry and its print media stakeholders²⁴ play an active role in supporting waste management and recycling objectives. The European Declaration on Paper Recycling has a recycling target of 66% of paper consumed by 2010. Based on the CEPI data, this means, Europe will recycle 64 million tonnes of paper by 2010²⁵ (an increase of about four million tonnes on 2007 levels which is already eight million tonnes more than in 2004 when the original targets were agreed). Additional and tangible benefits have also been recognised as a result of the programme²⁶:

- ✓ Pulping of recovered paper is less energy intensive: for example 0.4MWEh/tonne in recycling compared to 2-2.5MWEh/tonne in virgin production.
- ✓ Not land-filling the paper directly contributes to the climate as well, saving on Methane emissions from landfills.
- ✓ The 2010 target will save some an additional five million tonnes of CO₂ compared to a scenario of "stagnation of recycling volumes".

Conclusions

In addition to reinventing ourselves through new products and services which provide the value that customers are seeking, including in terms of the environment, the incredibly complex communications sector will also need to defend itself better and to publicise the positive value proposition that our industry offers European citizens.

Positive aspects must be reinforced. Our industry provides an essential service to the citizens of Europe that is accessible to all businesses and individuals. Penetration of posts is almost at 100%, mail is highly valued by customers, consumers and businesses alike.

The paper-based communications industry contributes significantly to the well-being of all businesses, citizens and consumers across the whole of Europe. It has made and will continue to make considerable investments and efforts to improve its systems and processes. It operates on the basis of continuous improvement. As a result, it supports the well-being of European forests and minimises waste. The value chain can and must be collectively defended.

²³ <http://ec.europa.eu/environment/waste/pdf/faq.pdf>

²⁴ Includes printers, publishers and converters.

²⁵ This includes exports paper waste for recycling. Recycling in Europe specifically totalled 57 million tonnes

²⁶ http://www.iea.org/Textbase/work/2006/pulppaper/Mensink_Recycling.pdf

QUICK FACTS: TEN KEY FINDINGS FOR PAPER BASED COMMUNICATIONS

- 1. Forests are not being destroyed to produce paper-mail.** On the contrary, the total forest area in Europe is now 30% larger than in 1950 - and growing. Including Russia, European forests cover 44% of the total land area and they are increasing by 805,000 ha per year. Excluding Russia, the figures are 38% of land area and increasing at 607,000 ha per year (1.5 million football pitches).
- 2. The paper industry rarely cuts trees for the production of paper²⁷.** Trees are mostly harvested for the high-value clearwood used in other industries such as construction and furniture-making. The raw fibrous materials used for paper-making in Europe, on average comprises²⁸:
 - ✓ 50% of fibre from recovered paper.
 - ✓ 50% from new or virgin fibre, most of which is a by-product which may be potentially wasted:
 - ✓ 13% comes from wood chips, saw dust and the tops of the harvested trees which are generally unmarketable.
 - ✓ 20-25%²⁹ comes from thinnings which is a management practice required during the lifecycle of a forest to ensure the forest remains healthy and are safe from risk of fire.
- 3. The paper industry does not have a big carbon footprint.** Because of the carbon sequestration³⁰ in forests and the carbon fixed in paper products, the paper industry has a relatively positive (i.e. low) carbon footprint. The UN has said that the wood and paper industries could be part of the solution to mitigate climate change.
- 4. The paper industry does not consume immense quantities of fossil fuels.** 54.5% of the energy used in European paper mills is green biomass, the highest percentage of all industrial sectors in the EU. The CO₂ emissions from this biomass are neutral.
- 5. Mail represents 0.1% of the total household CO₂ emissions³¹.** It amounts to only 14 kg of CO₂ per year based on an average number of mail items for a household of 727 per year³². This is equivalent of³³:
 - ✓ One 70 km car journey or
 - ✓ Five Cheeseburgers or
 - ✓ Nine litres of milk or
 - ✓ 6.6 minutes of a transatlantic flight.
- 6. Paper used in communications should not end up in landfill.** In 2007, more than 64% of the paper and board consumption was recycled in Europe. The industry recognises the importance of recovered material in the paper-making process and continues to work on projects to promote recycling in Europe.
- 7. Paper is recycled more than any other packaging material.** Paper accounts for two-thirds of all the packaging material recovered for recycling -- more than glass, metal, and plastic combined.
- 8. There is no such thing as 'junk mail'.** Studies continue to reinforce the value of Direct Mail as a means of informing Europeans. After consumers have used the

²⁷ In Finland and Portugal (and perhaps Austria), some trees are grown and managed to be specifically harvested for paper production. This remains only a small part of the total resource pool in Europe.

²⁸ CEPI. For more information, see www.cepi.org

²⁹ Weaker or smaller trees are felled early on to allow space for the stronger trees to grow larger

³⁰ The process by which carbon sinks remove CO₂ from the atmosphere is known as carbon [sequestration](#)

³¹ Ave CO₂ emissions per European household is approx 20 tonnes per household per annum. This is based on figures from the International Energy Annual 2005 (7.93 tonnes of CO₂ per capita x a std conversion rate of 2.80 persons per household).

³² The CO₂ of mail per household is based on a European average number of mailpieces of 260 units per capita (approx average of UPU data for Europe) converted using the std factor of 2.80 persons per household (727 items per household). This is then converted to CO₂ equivalents using an European industry figure of 20gr of CO₂ emitted per mailpiece (estimated average for Europe based on postal company CSR reports - collected & summarised by Pitney Bowes: http://66.102.9.132/search?q=cache:OIIQ_-lq73oJ:www.insight2foresight.co.uk/_attachments/3335871/Making%2520Mail%2520Relevant%2520v2.ppt+CO2+of+a+transatlantic+flight,+6.6+minutes&hl=en&ct=clnk&cd=1&gl=be).

Note that the figures do not include production of materials which Pitney Bowes estimates to cost 0.9-1.3gr CO₂ per gr of paper (Pitney Bowes - The Environmental Impact of Mail: A Baseline, June 2008). Assuming a 20gr mail piece, this would, in practice, double the CO₂ emissions (to 28 kg CO₂ per household). However, this is still less than 0.2% of annual household emissions.

³³ Pitney Bowes (Making Mail Relevant) http://66.102.9.132/search?q=cache:OIIQ_-lq73oJ:www.insight2foresight.co.uk/_attachments/3335871/Making%2520Mail%2520Relevant%2520v2.ppt+CO2+of+a+transatlantic+flight,+6.6+minutes&hl=en&ct=clnk&cd=1&gl=be

http://66.102.9.132/search?q=cache:OIIQ_-lq73oJ:www.insight2foresight.co.uk/_attachments/3335871/Making%2520Mail%2520Relevant%2520v2.ppt+CO2+of+a+transatlantic+flight,+6.6+minutes&hl=en&ct=clnk&cd=1&gl=be

information, the material then becomes a recyclable product that can be used again and again if treated properly. This is no different from an empty can of coke which is discarded correctly so that it can be reused.

9. **The Postal network is guaranteed to reach 100% of registered European citizens.** The postal industry remains the only effective communication network that is guaranteed to reach 100% of Europe's citizens. This fact is enshrined in European law. The postal industry provides a strategically essential service that simply cannot be replaced.
10. **Electronic communications are not more environmentally friendly than paper based communications.** PC's account for more than two percent of annual household CO₂ emissions³⁴. This cost is always underestimated by commentators. A Swedish study confirmed that reading a newspaper released 20% less carbon than reading a newspaper online for 30 minutes³⁵.

.....AND WE ARE ALL INVESTING TO MAKE FURTHER REDUCTIONS.....

³⁴ Study of a reference PC in the UK indicates that a PC operating at full capacity for eight hours per day and 5 days per week releases 6.8kg of CO₂ per week or 352 kg of CO₂ per annum. Given that a household PC is also used on weekends, the emissions can be estimated to be as high as 495kg of CO₂ per annum. http://www.zerocarbonfootprint.co.uk/green_computing.htm.

³⁵ <http://www.forest.fi/smyforest/foresteng.nsf/95f358fab7d84d8c2256f4b003725e1/5c5a49462ac05185c22574ba001ba997>. Note that the study assumed that the newspaper was only read once and by one person whereas the ENPA (www.ENPA.be) state that 140 million newspapers are distributed daily in Europe and are read by 280 million people. Further, the study does not consider the full cost of disposal of the PC and screen.