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Going Green

As the eco-friendly movement gains momentum, newspaper companies are adopting and implementing green strategies across their value chains

Shaping the Future of the Newspaper



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Executive Summary

Around the world, newspapers are recognising the value and promise for the future that is created by implementing a green strategy. The move to be more environmentally friendly is happening across businesses, consumers and governments. For their part, news publishers are taking a hard look at efficiencies that can be implemented across their value chains, such as more aggressive recycling schemes, reducing carbon dioxide emissions, lowering electricity usage and better ways of handling e-waste.

Green strategies are starting small, and growing to reach every part of the news publishing business. In turn, these changes are showing communities that their newspaper is not just a business, but is trying to be a good citizen as well. As publishers' relationships with the resources they use become healthier, there are in turn new opportunities for newspapers to grow their relationships with readers both at home and abroad.

“We believe that we should put our own house in order to retain our credibility as a community reviewer. This has been perceived positively by readers and we are an example to

the local business community,” Robert Jonsson and Anders Häggström, of Norrtelje Tidning, told SFN. Norrtelje Tidning was one of the first, if not the first, newspaper in the world to be environmentally certified according to the international standard ISO 14001.

Digital Technologies, Paper and Ink

Today, newspapers are no longer solely print products. As newspaper publishing groups diversify across platforms, they are responsible for an increasing amount of gadgets that one day become e-waste. As publishers plan eco-friendly strategies, they have more issues to take into account than ever before, as digital technologies, paper and ink are all important and intertwined resources for the publishing business.

For example, electronic and electrical waste grows at a rate of 3 percent and 5 percent each year, three times faster than the general waste stream, according to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, a global treaty initiated by the Swiss government that



A pile of e-waste on a roadside in Guiyu, China, where 5,500 businesses are devoted to processing the waste, the largest e-waste site on earth. In Guiyu, the waste has poisoned wells and groundwater, and health reports say the region's children suffer from an extremely high rate of lead poisoning.

Photo: Greenpeace International

took effect in 1992. E-waste includes mobile phones, computers, televisions, e-readers, servers and more.

Because electronics are made from valuable, non-renewable resources, such as precious metals, which require a lot of energy to mine and manufacture, recycling and reusing them conserves natural resources and also reduces air and water pollution, and lowers greenhouse gas emissions that are created by manufacturing new products.

As the media continues growing on digital platforms, the environmental impact of consuming media digitally comes when devices used to consume it are obsolete or need upgrades.

The KTH Centre for Sustainable Communications aims to explore, innovate and evaluate circumstances in which media and communications can make significant contributions towards sustainability.

Regarding the global warming potential of printed newspapers, Web-based newspapers and tablet e-paper newspapers, reading an online newspaper for 30 minutes is more harmful to the environment than printed newspapers in Europe, according to a KTH Centre report. In Sweden, where the report was created and where digital usage is high compared to the worldwide average, printed newspapers' global warming potential was higher than reading online. In both Europe and Sweden, accessing the Web and using e-paper both give off less carbon dioxide emissions than creating a printed newspaper.

Meanwhile, newsprint production resources used to create a newspaper include 40 percent

renewable resources, while other activities involved in creating the print newspaper each used only about 10 percent renewable resources. Paper and board are also sustainable, more easily recycled and biodegradable.

“The main issues related to paper products are fibre supply, the efficiency of mill production processes and emissions, energy use and greenhouse gas emissions and the fate of the product at the end of its life. Forestry plays an important part in the challenge to combat climate change. Deforestation in developing countries is presently responsible for 20 percent of the world’s greenhouse gas emissions. Forest biodiversity degradation through the logging of high conservation areas is another challenge. Forest certification is an important tool in the effort to manage the world’s forests on a sustainable basis and to make sure that wood based raw materials come from sustainably managed forests,” Georg Carlberg, vice president of environment at Norske Skog, stated in the company’s 2007 Sustainability Report.

When it comes to inks, it is up to publishers to ask for more sustainable, eco-friendly inks, said Michel Vanhems, sustainability leader for Sun Chemical in Europe.

Currently, vegetable oil-based inks are best for the environment, but they cost more than mineral oil-based ink. As costs of energy and vegetable resources rise, the cost of vegetable oil-based inks will also rise.

“As more buyers of print implement green and sustainable strategies for their companies, it will directly affect how printers do business,” a 2008 report by InfoTrends states. “Recycled

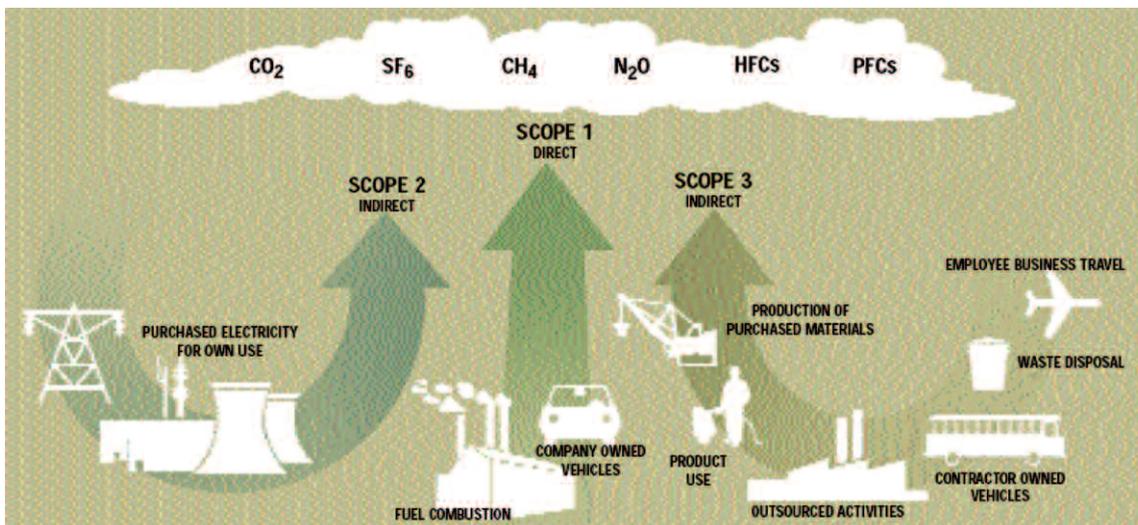
and environmentally friendly products will continue to create new opportunities for suppliers and have adverse affects on those not willing to adapt. Production processes for these new products will become refined and push costs down, allowing for easier, wider-spread industry adoption.”

Putting Green Policies in Place

When businesses make moves to be more eco-friendly, the changes tend to start out small, and grow over time. Initially, steps like increased use of recycling in the office and turning off lights when leaving a room grow to encompass how resources are managed everywhere from the newsroom, to the printing plant and beyond.

“We are a socially responsible media company with a very strong brand in the market ... so we thought we must lead the green strategy action,” said Rolandas Barysas, CEO and editor-in-chief of Verslo Zinios (Business News), in Lithuania.

Publishers are finding that change doesn’t have to be overwhelming. Companies are not taking the weight of the world’s environmental problems on their shoulders, but rather taking care of their own back yards and the resources they bring to it, and keeping in mind that the job is never finished. At every turn, from moving to a new office, to buying new vehicles for their fleets, to shopping for a new printer, publishers are more aware of how greener choices will benefit their products, communities and balance sheets.



Source: “Greenhouse Gas (GHG) Protocol: A Corporate Accounting and Reporting Standard,” by the World Business Council for Sustainable Development and the World Resources Institute

1. Why Go Green?

As the “green” environmental movement gains momentum among businesses, consumers and governments around the world, newspaper companies are adopting and implementing green strategies across their value chains. Tactics include aggressive newsprint recycling schemes, reduced CO₂ emissions for newspaper delivery fleets, reduction of electricity use at offices and printing plants, reduction in use of office paper and many more, designed to help newspaper companies and their suppliers save energy and create cleaner environments for the communities they serve.

In this chapter, the Shaping the Future of the Newspaper project will explore how green strategies are being rolled out by newspaper companies, and will enumerate the challenges and the rewards of developing and implementing a green strategy.

Hearst and MediaEdge Study: What Consumers Want

U.S.-based publisher Hearst Corporation has put environmental stewardship at the forefront

of its business plans. The company announced sustainability to be one of its core values, and has promised to continually review the ways raw materials for newspapers and magazines are sourced.

In 2008, Hearst partnered with MediaEdge for a joint research initiative to learn more about how consumers felt about greener products, both in and out of the publishing world.

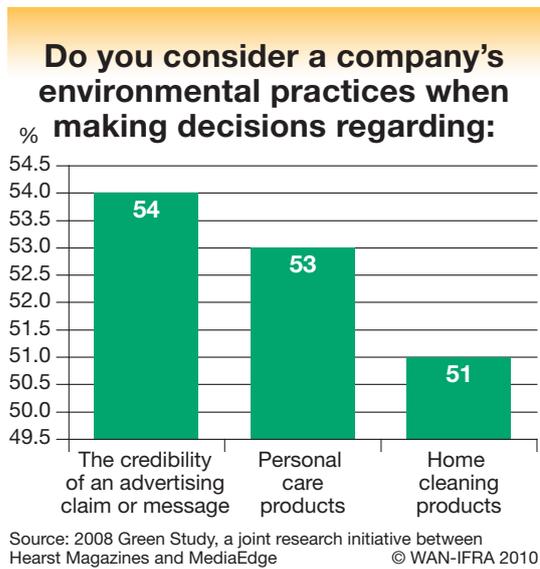
CONSUMERS WANT GREEN PRODUCTS

Nearly four out of five Hearst Magazine readers ages 13 and above are concerned about the environment, the initiative found. Forty-three percent of those surveyed said they would stop purchasing a product they use regularly if it is not eco-friendly, and another 43 percent said they would buy a magazine printed on recycled paper.

Consumers also value greener print products, with 39 percent saying they would pay more for an eco-friendly magazine.

Readers indicated they also want specifics on what companies are doing to lessen their

impact on the environment. Almost 75 percent of respondents said they thought “green” statements in advertising may be false.



CONSUMERS WANT INFORMATION ON THE ENVIRONMENT

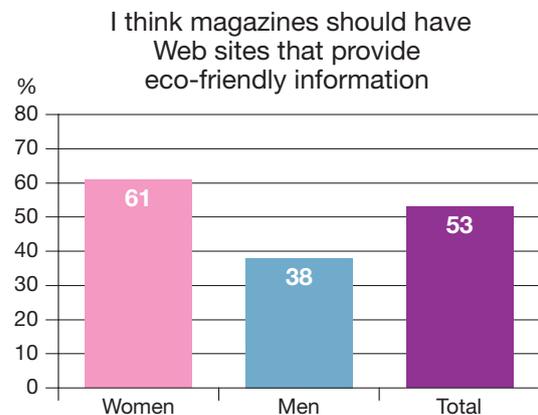
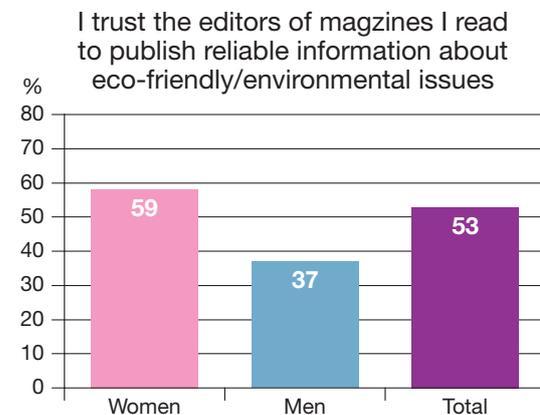
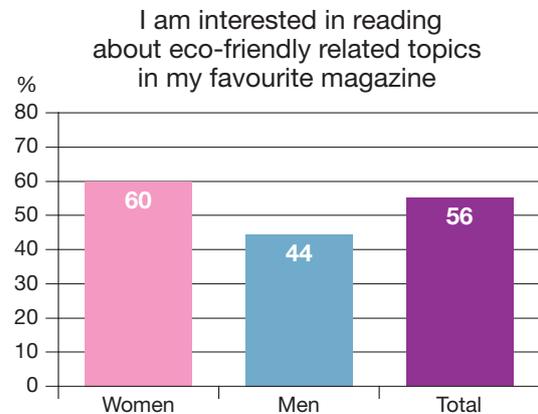
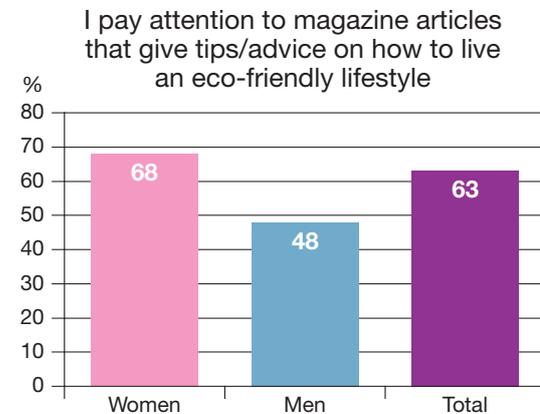
Although the survey focused solely on magazines and not all print content, the results of the survey resonate for companies that publish quality content, especially newspapers. The environment is an important topic for readers, and content that explores that is valued.

Based on a 10-point scale where “10” meant “agree strongly” and “1” meant “disagree strongly,” the majority of respondents overall, and women in particular, expressed high levels of interest and trust in green-related magazine content, the survey found.

Women value content that provides tips and advice on how to live a more eco-friendly lifestyle, with 68 percent of women saying they pay attention to these types of articles, and 48 percent of men saying so.

Green Content

Based on a 10-point scale, where “10” means “agree strongly” and “1” means “disagree strongly”



Source: 2008 Green Study, a joint research initiative between Hearst Magazines and MediaEdge

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Sixty percent of women said they were interested in reading about eco-related topics in their favourite magazine, while 44 percent of men said so. More than half of women also trust magazine editors to publish reliable information about environmental issues, with 59 percent saying so. Just 37 percent of men agreed with that statement.

Online, women are also more interested in finding information about being eco-friendly, with 61 percent saying they think magazines should have Web sites that provide eco-friendly information. Just 38 percent of men thought so.

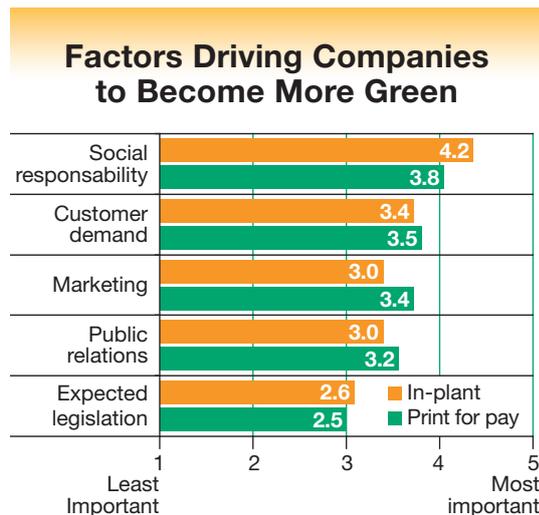
InfoTrends: Green Printing Strategies

InfoTrends, a U.S.-based market research and strategic consulting firm for the digital imaging and document solutions industry, partnered with the North American Publishing Company in January 2008 to create a new quarterly tracking programme called “Emerging Strategies in Production Print.” The project is aimed at polling print service providers on the hottest industry topics.

For their inaugural survey, the groups chose the topic of green printing and sustainability to find out how the print industry was adapting to the rapid trends involving green and sustainable initiatives, and how much was just talk. The survey explored print-for-pay (commercial) businesses and in-plant trends, and found that more than half of the 768 (283 from in-plants and 485 from commercial print) providers surveyed had implemented a green policy, while almost a third of those with a green policy in place had also completed one or more certification programmes. Meanwhile, larger companies (those with 500 or more employees) had a higher adoption rate of green policy implementation, according to the InfoTrends and NAPCO study, “Emerging Strategies: Green Printing and Sustainability.”

The two primary reasons for adopting green policies are social responsibility and customer demand, with customer demand driving green policy adoption in commercial printing more than in-plant companies.

Marketing and public relations also have an impact on implementing green policies, with expected legislation being rated as less of a



Source: Emerging Strategies in Production Print Survey, InfoTrends, March 2008 © WAN-IFRA 2010

factor. This is because many providers routinely must be in line with local and national regulations in their businesses, making expected legislation less of a factor, because it is already part of daily policy.

Meanwhile, although there are costs associated with adopting more eco-friendly policies, most companies were supportive of these initiatives.

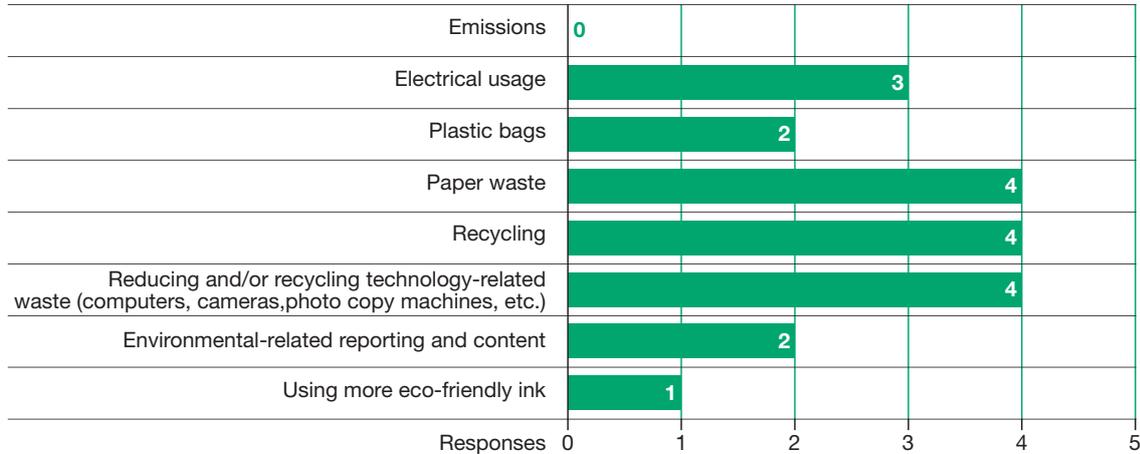
HURDLES AND REWARDS

Among those surveyed, most agreed that their company’s management is very supportive of green issues, with an average response of 3.8 for in-plant respondents and 3.7 for print-for-pay respondents, on a scale of 1 (strongly disagree) to 5 (strongly agree), the study found.

When looking ahead, in-plant respondents leaned toward “agree” when asked whether going green will increase costs, with an average response of 3.5. For consumer print respondents, the average was 3.6. Because most believe costs will increase in the process of becoming more green, printers generally agree not enough tools are available to calculate a business’ environmental impact, which could be a deterrent in implementing new green strategies.

Printers continue to push for ways to become more sustainable and build a greener business, which means vendors will also follow suit, finding ways to lessen the environmental impact of processes, states an article by InfoTrends, written for Printing Impressions magazine.

What areas do the tactics of your strategy to be more green involve?
(Check all that apply)



Base: 5 responding newspaper companies which have green strategies
Source: SFN "Going Green" Survey, 2010

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Three out of these five “green” companies said they are aware of electrical usage, and two said so for plastic bags, and environmental-related reporting and content, respectively.

One of the respondents said all departments have been asked to reduce the use of light, water, paper, ink, etc.

“We have moved partially to green electricity provider. Lights are automatic and go off when no one is in rooms. We are currently exploring Free Cooling for the Comms room which has a high electricity usage rate. We will continue to reduce use of non-renewables and behave in a green way wherever possible,” a respondent wrote, regarding future plans for their green strategy.

Even the company that stated it currently has no green strategies has started planning. “We are in the process of doing our first green audit. Strategy will flow from that,” the company said.

Carbon Footprints: Efficiencies Lower Costs

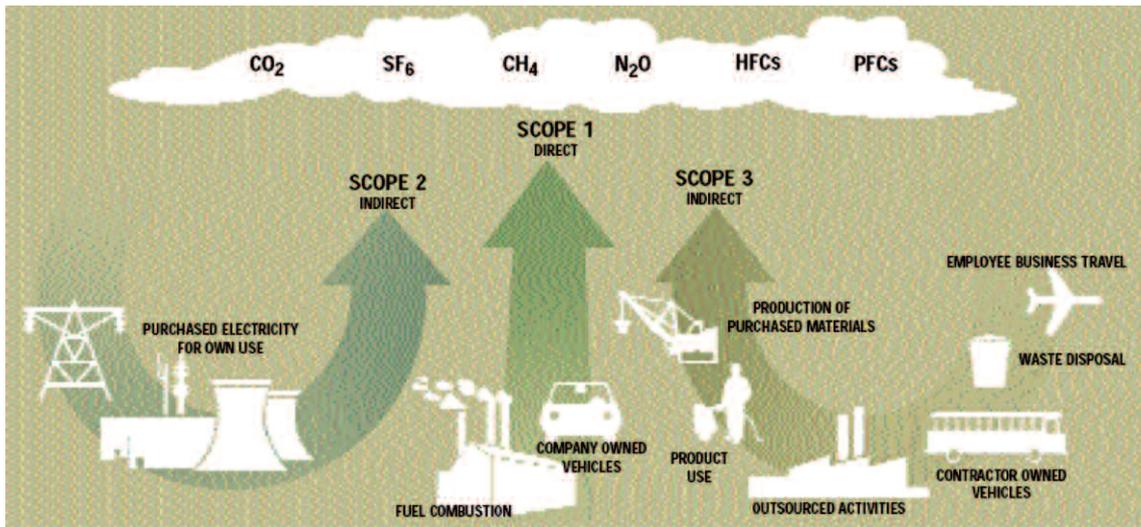
Most newspapers were created to serve the needs and wants of readers, and today, as readers demand products that are eco-friendly, newspapers are positioned to not only deliver a greener product, they are also there to guide audiences with news and information on the environment.

An important step for businesses looking to become more environmentally responsible is to calculate their carbon footprints, take steps to reduce those footprints and even become carbon neutral.

Green glossary

- **Carbon footprint:** The total set of greenhouse gas (GHG) emissions caused by an organisation, event or product.
- **Carbon neutral:** Achieving net zero carbon emissions by balancing a measured amount of carbon released with an equivalent amount sequestered or offset, or buying enough carbon credits to make up the difference.
- **Carbon credits:** A generic term meaning a value has been assigned to a reduction or offset of greenhouse gas emissions. One carbon credit is equal to one tonne of carbon dioxide, or in some markets, carbon dioxide equivalent gases.
- **Sustainability initiative:** Meeting the needs of the present without compromising the ability of future generations to meet their own needs.

– The U.S. Environmental Protection Agency and Wikipedia



Source: "Greenhouse Gas (GHG) Protocol: A Corporate Accounting and Reporting Standard," by the World Business Council for Sustainable Development and the World Resources Institute

There are several methodologies used to calculate a company's carbon footprint, the most popular of which is the "Greenhouse Gas (GHG) Protocol," which was developed by the World Resources Institute and the World Business Council for Sustainable Development. The groups' goal was to help businesses, governments and environmental groups around the world to "build a new generation of credible and effective emissions accounting and reduction programmes to deal with climate change," according to the Newspaper Association of America.

There are three scopes used by the GHG to help a company determine its footprint. According to the GHG's report, "The Greenhouse Gas Protocol."

➔ **Scope 1: Direct GHG emissions.**

These are principally the result of:

- Generation of electricity, heat or steam. These emissions result from combustion fuels in stationary sources.
- Physical or chemical processing. Most of these emissions result from manufacture or processing of chemicals and materials.
- Transportation of materials, products, waste and employees. These emissions result from the combustion fuels in company owned/controlled mobile combustion sources.
- Fugitive emissions. These emissions result from intentional or unintentional releases, such as equipment leaks from joints, seals, packing and gaskets; methane emissions from coal

mines and venting; hydrofluoro-carbon emissions during the use of refrigeration and air conditioning equipment; and methane leaks from gas transport.

➔ **Scope 2: Electricity indirect GHG emissions.** Companies report emissions caused by generating purchased electricity consumed in its owned or controlled equipment or operations.

➔ **Scope 3: Other indirect GHG emissions.** This scope is optional, but it gives an opportunity to be innovative in GHG management. Companies may want to focus on accounting for and reporting the activities that are relevant to their business and goals, and for which they have reliable information.

According to the Newspaper Association of America, many newspapers are using this GHG Protocol to calculate their emissions, but the industry faces challenges that factor into how to best calculate the total carbon footprint, as obtaining information on the GHGs emitted by suppliers can be a challenge. But pushing ahead with green strategies can pay off, Rachel Webber, director of energy initiatives at News Corp., told the NAA.

"Because when you drive efficiency, you cut costs," she said.

News Corp. has announced it will be carbon neutral by the end of 2010. Subsidiary News International Ltd. went carbon neutral in 2009, through using 30 percent combined heat and power sources and 70 percent hydroelectric power.

A smaller way News. Corp.'s is lowering emissions while saving money is through replacing its current field fleet with hybrid vehicles for its News America Marketing. The project will replace 209 cars with hybrids, and is expected to save US\$369,000 over the vehicles' lifetime.

E-WASTE AND CO₂

One of the growing contributors to greenhouse gases are data centres, according to a 2008 McKinsey & Company study, "Data centers: How to cut carbon emissions and costs." The growing demand for data centre capacity globally is contributed to a steady rise in carbon emissions, which means companies need to adopt best practices to reduce pollution while also bettering their images as good corporate citizens, the report states.

Emissions from data centres around the world, with a CAGR of greater than 11 percent, reached 80 metric megatons of CO₂ in 2007. If nothing is done to streamline and lower data centres' emissions, that number could reach 340 megatons by 2020.

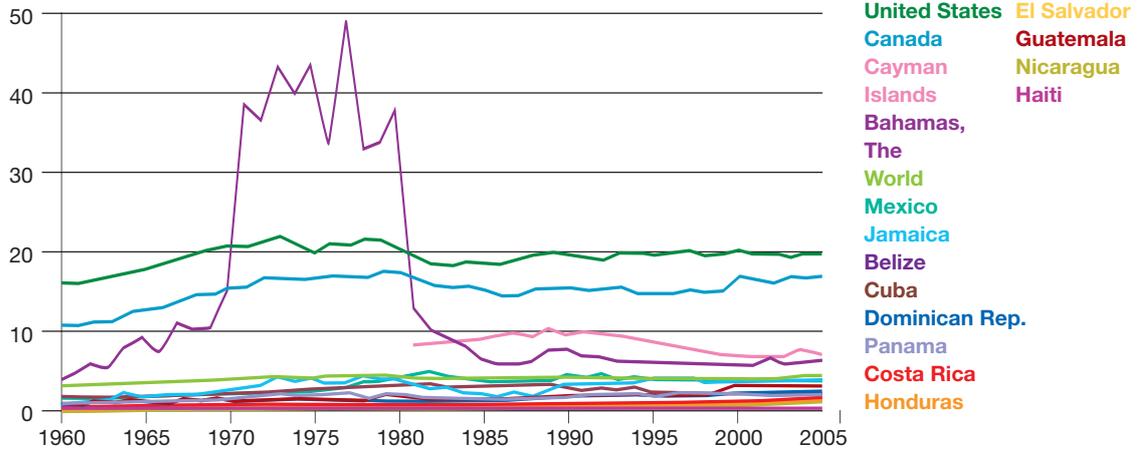
In addition, most IT equipment is not recycled, and becomes e-waste, which releases toxins into the environment. E-waste is the fastest-growing component of municipal solid waste streams, increasing at a rate of 3 percent to five percent in Europe, for example, according to Greenpeace. In developing countries, e-waste is expected to triple over the next five years.

Generally, carbon emissions have continued to rise in every area of the world, and should countries sit back and adopt a "business as usual" approach, the world could see more than double the amount of carbon emissions by 2050, according to a PricewaterhouseCoopers report, "The World in 2050: How big will the major emerging market economies get and how can the OECD compete?"

Economies in G7 countries, including Japan, the United States, Germany, the United Kingdom, France, Italy and Canada, "may need to take the lead in reducing their carbon emissions, given that emissions from the faster-growing emerging economies will almost certainly continue to rise over the next few decades," the report states.

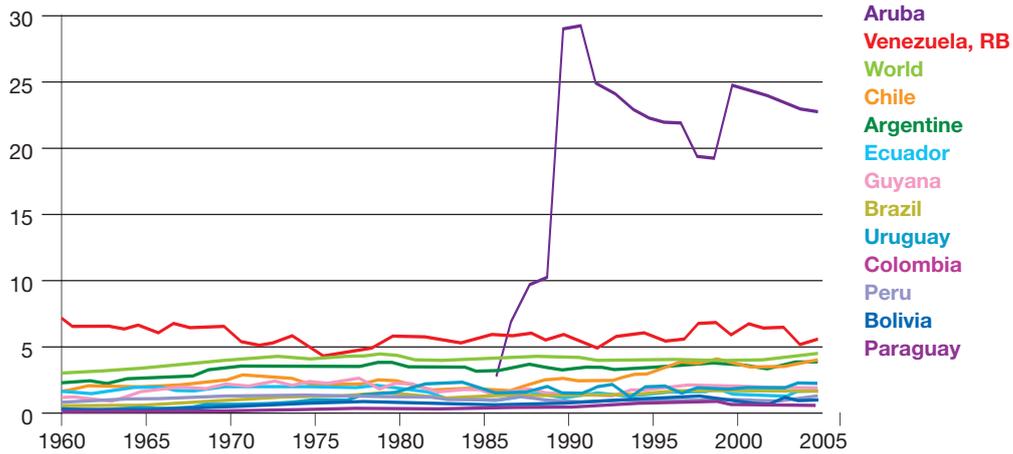
CO₂ Emissions (metric tonnes per capita)

North and Central America*



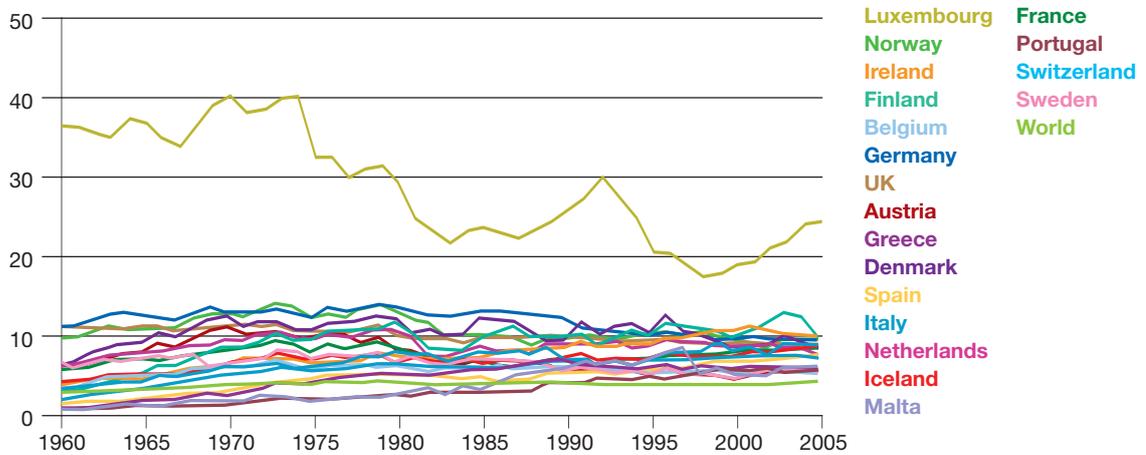
*Not including countries for which there is no data: Puerto Rico

South America*



* Not including countries for which there is no data: Suriname, Guyane

Western Europe*

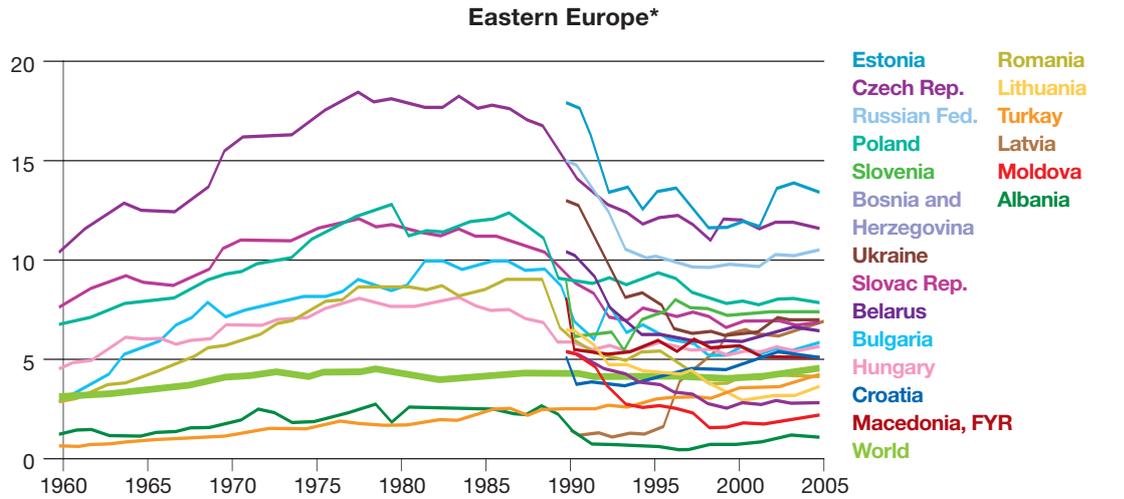


* Not including countries for which there is no data: Andorra, Liechtenstein, Monaco, San Marino

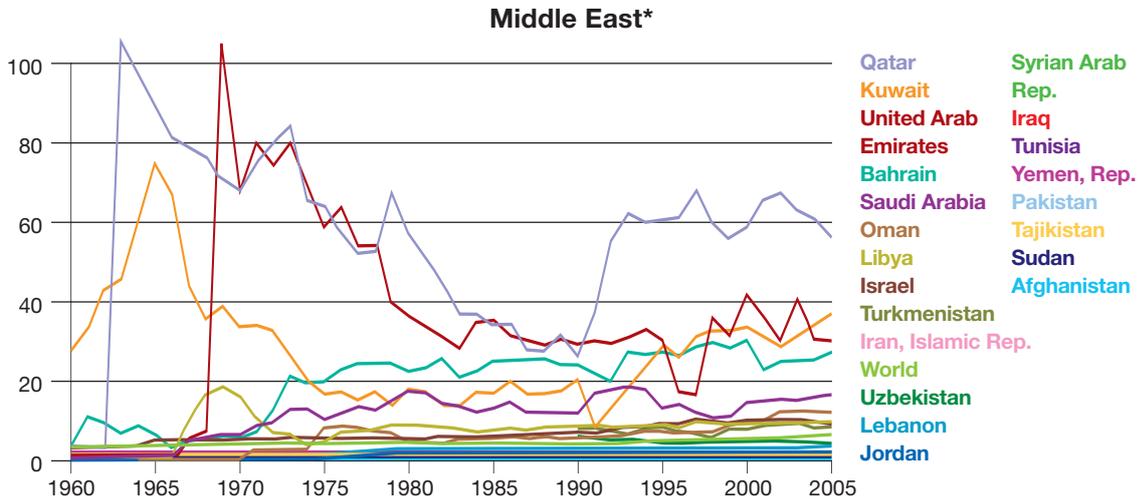
Source: Data from the World Bank via Google public data explorer. Data last updated March 8, 2010

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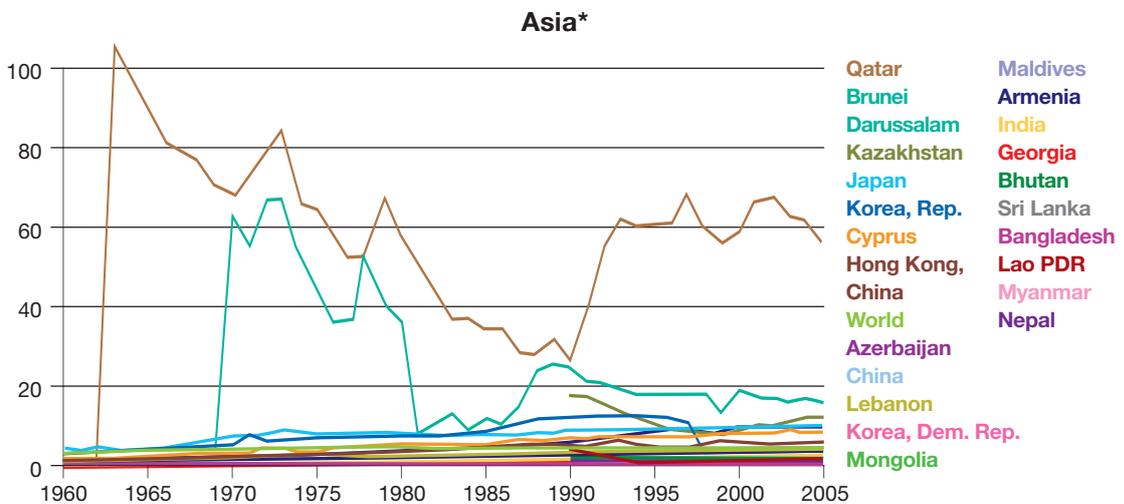
CO₂ Emissions (metric tonnes per capita)



* Not including countries for which there is no data: Montenegro, Serbia



* Not including countries for which there is no data: Palestine

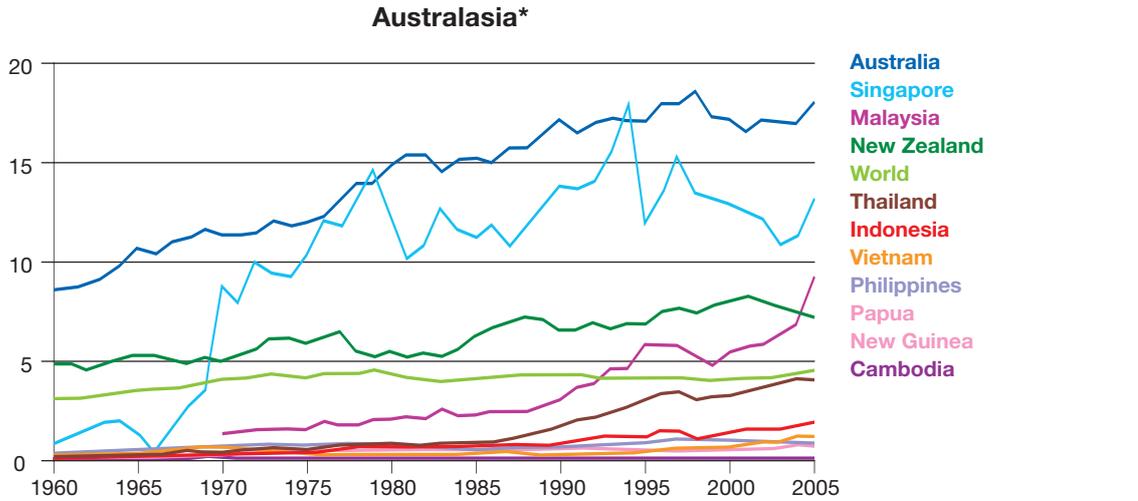


*Not including countries for which there is no data: Burma, Taiwan

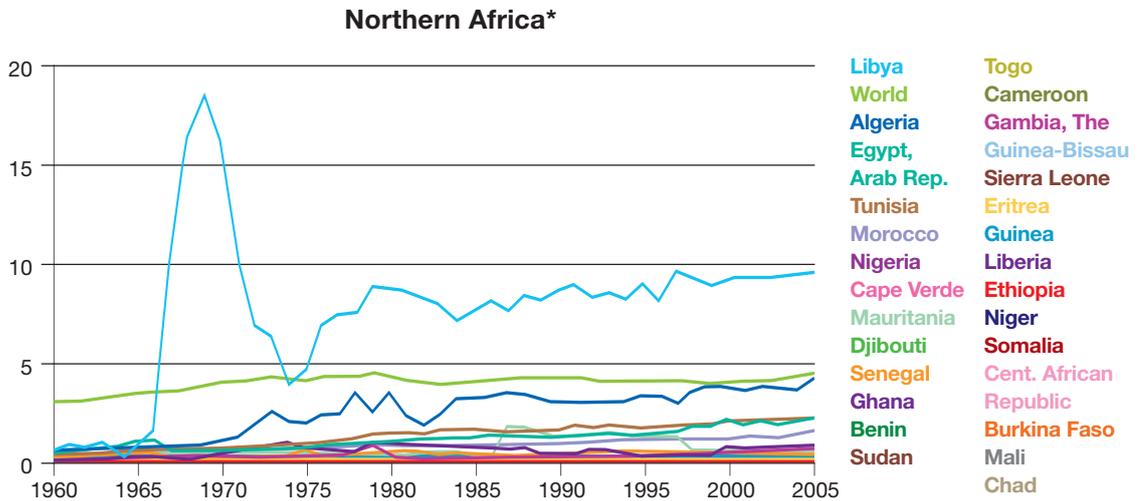
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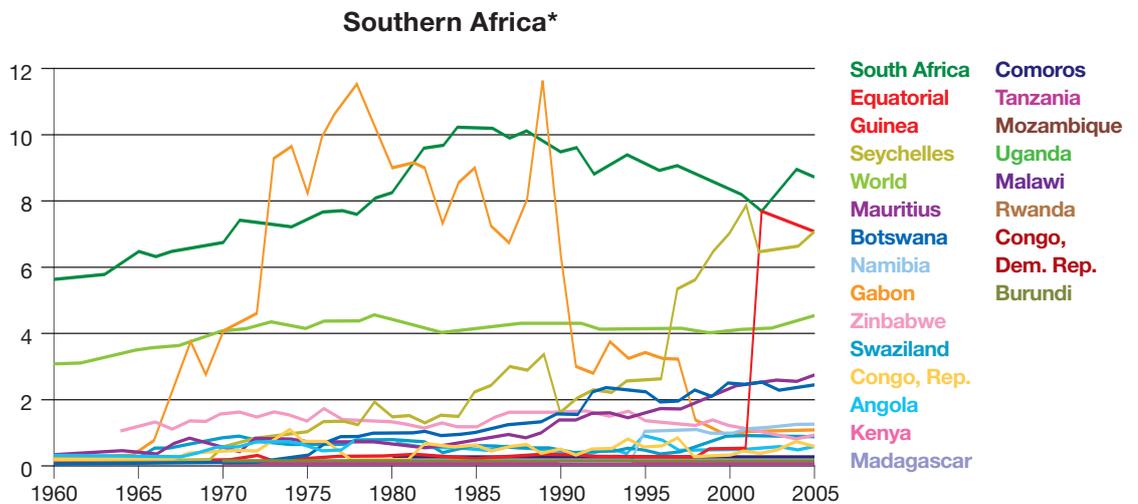
CO₂ Emissions (metric tonnes per capita)



* Not including countries for which there is no data: Burma, Taiwan



* Not including countries for which there is no data: Western Sahara, Canary Islands



* Not including countries for which there is no data: Montenegro, Serbia

2. A Greener Product

As newspapers advance into the 21st century, they are no longer solely print products. Newspapers are increasingly multimedia outlets, offering printed newspapers and other print products, as well as news and information that audiences can access online, on mobile phones, on e-readers and more.

As newspaper companies diversify across platforms, they are being challenged to reduce waste, increase efficiencies and lower costs.

New technologies are posing problems in some sectors and causing successes in other areas, and newspapers are finding that serving their audiences also extends to being models for sustainable business in their communities and good global citizens.

E-Waste

Electronic and electrical waste grows at a rate of 3 percent to 5 percent per year, three times faster than the general waste stream, according to the Basel Convention on the Control of Transboundary Movements of Hazardous

Wastes and their Disposal, a global treaty initiated by the Swiss government that took effect in 1992. E-waste includes mobile phones, computers, televisions, e-readers, servers and more.

According to Greenpeace International, the amount of electronic products discarded globally has skyrocketed recently, with between 20 million and 50 million tonnes generated each year, as citizens and businesses continuously upgrade computers, mobile phones, audio equipment, printers and televisions more frequently than in the past. Mobile phones and computers are replaced most often.

E-waste currently makes up 5 percent of all municipal solid waste globally, close to the same amount as plastic packaging; however, e-waste is much more hazardous.

As the media continues growing on digital platforms, the environmental impact of consuming media digitally comes when devices used to consume it are obsolete or need upgrades, said Jennifer Berry, public and strategic relations manager of Earth911, a group that hosts the United States' largest



A pile of e-waste on a roadside in Guiyu, China, where 5,500 businesses are devoted to processing the waste, the largest e-waste site on earth. In Guiyu, the waste has poisoned wells and groundwater, and health reports say the region's children suffer from an extremely high rate of lead poisoning.

Photo: Greenpeace International

recycling database and works with businesses to help them communicate recycling initiatives with their customers. Earth911 has worked with companies including U.S. publisher Hearst Corporation, retailer Sears, Behr paint and more.

Substances of concern

Lead, mercury, cadmium and brominated flame retardants are just some of the substances of concern in electronics, as they cause problems if the products are not managed properly when the consumer is finished with them.

→ **Lead:** Used in glass in TV and PC cathode ray tubes as well as solder and interconnects; older CRTs typically contain on average 4 lbs (1.8 kg) of lead (sometimes as much as 7 lbs – 3.2 kg – in older CRTs), while newer CRTs contain closer to 2 lbs (0.9 kg) of lead.

→ **Mercury:** Used in small amounts in bulbs to light flat panel computer monitors and notebooks.

→ **Brominated flame retardants:** Widely used in plastic cases and cables for fire retardancy; the more problematic ones have been phased out of newer products but remain in older products.

→ **Cadmium:** Was widely used in ni-cad rechargeable batteries for laptops and other portables. Newer batteries (nickel-metal hydride and lithium ion) do not contain cadmium.

– Information from the Environmental Protection Agency

“How many electronic items do you have in your home? Think about the millions of households and offices that have them. The rate at which we consume electronics is incredible, and the rate at which we throw them away is also incredible. The average lifespan of a mobile phone is 18 months, and there are four billion mobile users in the world,” she said.

RECYCLING

Newspapers and other businesses looking to upgrade electronics should find electronics recyclers that will properly dismantle, recycle and dispose of e-waste. Responsible companies will track the movement of discarded electronics through the recycling system. In fact, 80 percent of companies, including 85 percent of those with revenue of more than US\$1 billion, have a programme to recycle or dispose of electronic waste responsibly, according to a December 2009 GreenBiz Intelligence Panel.

Businesses should consider several questions before deciding how to dispose of equipment and/or component parts of electronics, according to the EPA:

Reuse and Donation:

- Do you want to provide a community service by donating equipment?
- Do you want a tax deduction or other compensation your government may give for your contribution?
- What are your data security needs?

Demanufacture/Recycle:

- What are your data security needs?
- Do you want your equipment back out in the resale market place?

- Do you want the equipment demanufactured into raw materials (i.e. metals, plastics, glass) to be marketed as recyclables?
- Do you want the equipment destroyed?

Because electronics are made from valuable, non-renewable resources, such as precious metals, and require a lot of energy to mine and manufacture them, recycling and reusing them conserves these natural resources and also reduces air and water pollution, and lowers greenhouse gas emissions that are created by manufacturing new products, according to the EPA.

If 100 million mobile phones were managed properly at end-of-life and were recycled instead of thrown away, enough energy would be saved to power approximately 19,500 U.S. households with electricity for one year.

“Cell phones have a number of different metals in them which can be recycled – copper, gold, silver, and palladium. Take gold, for example. If we recycled 100 million cell phones, 3.4 metric tons of gold could be recovered – allowing that amount of gold to enter back into production without being mined. Because the mining and processing steps were avoided, 5.5 million tons of loose soil, sand, and rock would not have to be moved and large quantities of waste also would be avoided. Another result is that substantially less fuel would be used, dramatically reducing the emissions of greenhouse gases. Similar calculations could be made for the other metals used in the manufacture of cell phones. 100 million cell phones contain 1,600 metric tons of copper, 35 metric tons of silver, and 1.5 metric tons of palladium,” according to EPA findings.



Photo: Greenpeace International

Old mobiles and obsolete electronics at a recycling plant in Slovakia.

The Information Technology and Communication Sector's Carbon Footprint

| | Emissions 2007 (MtCO _{2e}) | % 2007 | Emissions 2020 (MtCO _{2e}) | % 2020 |
|--|--|-----------|--|-----------|
| World | 830 | 100% | 140 | 100% |
| Server farms/ Data centres | 116 | 14% | 257 | 18% |
| Telecom infrastructure and devices | 307 | 37% | 358 | 25% |
| PCs and peripherals | 407 | 49% | 815 | 57% |

MtCO_{2e} = Metric Tonne Carbon Dioxide Equivalent

Source: “Smart 2020: Enabling the Low Carbon Economy in the Information Age,” by the Global e-sustainability initiative and the Climate Group, 2008

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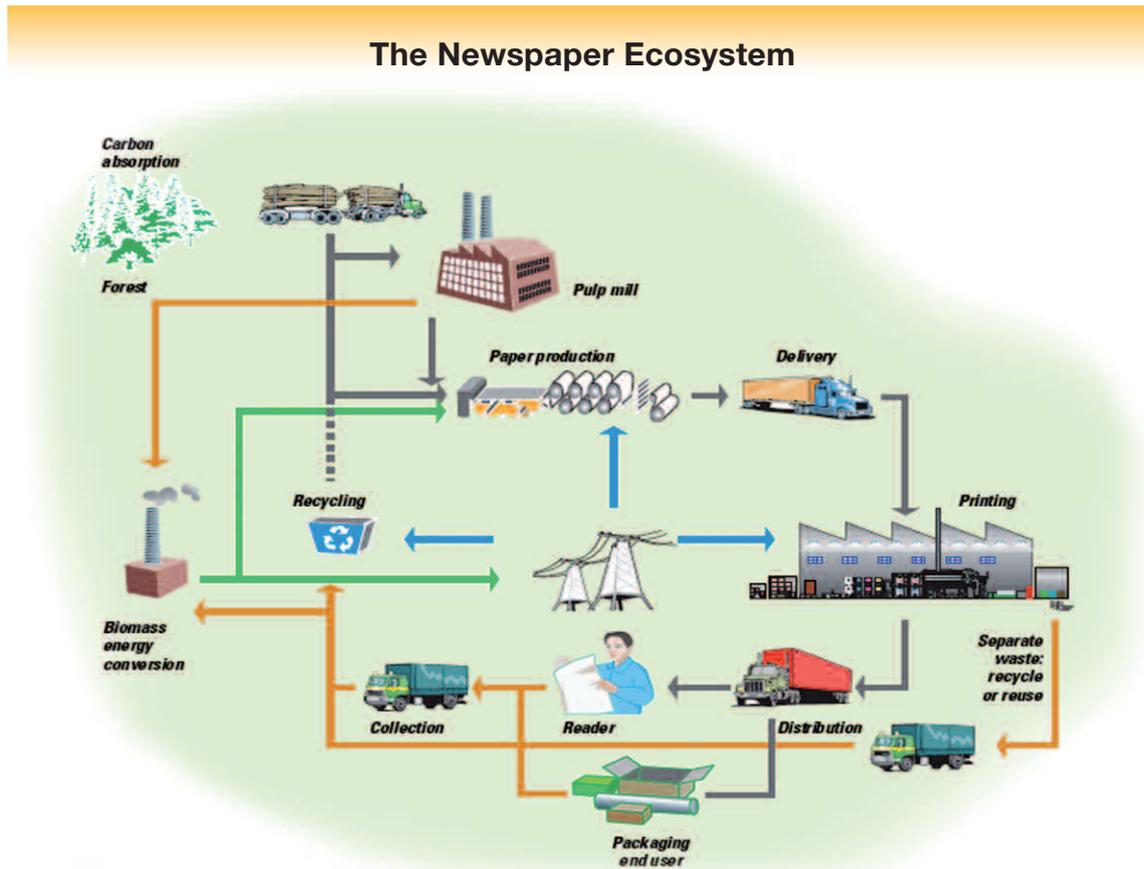
Paper

Unlike digital products, paper and board are sustainable, more easily recycled and biodegradable, and principally manufactured with renewable energy. Paper can be recycled several times before its end-of-life, when it becomes biofuel. Before becoming paper products, sustainably managed forests have the added benefit of absorbing carbon dioxide from the atmosphere.

Wood fibres can be recycled up to seven times before they are too short and weak to use further, but to keep the paper recycling chain going, adding fresh fibre is needed, according to a 2008 report by PrintCity, “Sustainability, Energy & Environment.” However, just because paper is recycled does not necessarily mean it is more environmentally friendly, the report pointed out.

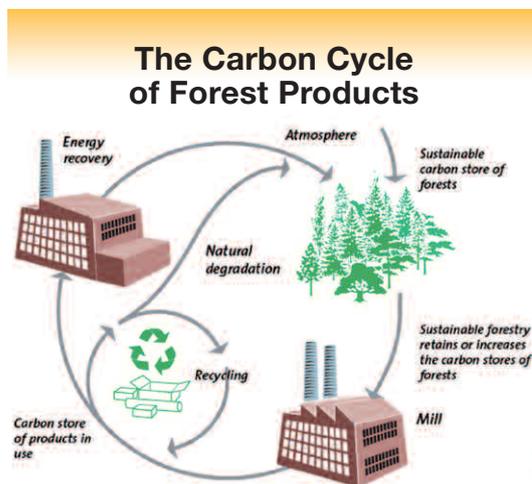
“This depends on factors such as the type of paper being produced and the availability of recycled paper. Recovered paper needs to be available close to the mill to minimise the energy and carbon impact of transportation. Therefore, fresh fibre predominates in countries with a small population and large forest resources, and recovered fibre for countries with a high population and small forest resources,” the report states. “It is important to select the most appropriate fibre composition for each specific end use and the lowest possible environmental impact.

A supply chain based on 100 percent recovered paper is not sustainable, due to fibre loss, according to global newsprint and magazine paper producer Norske Skog, based in Norway.



Source: "Sustainability, Energy & Environment," report, PrintCity

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Source: "Sustainability, Energy & Environment," report, PrintCity © WAN-IFRA 2010

It is more cost-effective and eco-friendly to recycle newspapers locally, rather than ship them to distant mills to be recycled into newsprint, according to Earth911.

Newspapers are often recycled into cereal boxes, egg cartons, pencil barrels, grocery bags and tissue paper. It is important to use recycled fiber, but it must be done in an efficient way that avoids creating a negative carbon footprint.

According to U.S. publisher Hearst Corp., 95 percent of magazines that do not reach the reader, such as print overruns, damaged or unsold newsstand copies, are recycled. However, when consumers are finished reading magazines, just 20 percent are recovered and recycled, and the remainder end up in landfills. Today, as recycling technologies have improved and coated paper and adhesives used to bind magazines are no longer a problem, publishers must do their part to communicate to consumers how they can properly dispose of print products.

Hearst has partnered with Earth911, a network of community-specific environmental resources, to help consumers find the most convenient way to recycle in their neighbourhoods, and educating readers on how they can help recovery efforts by recycling.

Publishers are also called upon to use certified fibre, which means the fibre can be traced to its origin and is managed under third-party audited standards ensuring forests are managed legally and sustainably, according to Hearst.

Forests, Fibre and Sustainability

An excerpt from Norske Skog's 2007 Sustainability Report

by Georg Carlberg, Vice President, Environment

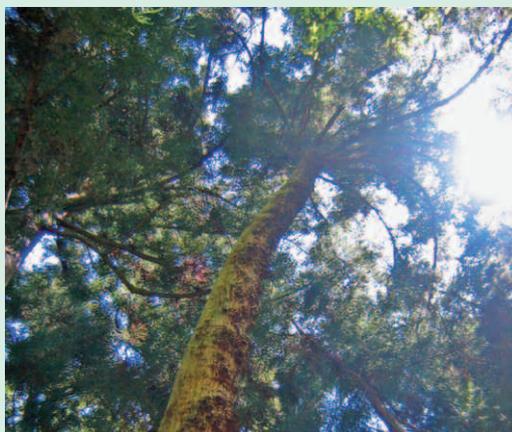
When the environmental sustainability of a product is discussed, often only one part of the value chain is in focus. To make a fair evaluation of the environmental standing of products, we need to look at the issues along the entire value chain.

The main issues related to paper products are fibre supply, the efficiency of mill production processes and emissions, energy use and greenhouse gas emissions and the fate of the product at the end of its life. Forestry plays an important part in the challenge to combat climate change. Deforestation in developing countries is presently responsible for 20 percent of the world's greenhouse gas emissions. Forest biodiversity degradation through the logging of high conservation areas is another challenge. Forest certification is an important tool in the effort to manage the world's forests on a sustainable basis and to make sure that wood based raw materials come from sustainably managed forests.

There are two main global forest certification systems – FSC (Forest Stewardship Council) and PEFC (Program for Endorsement of Certification Systems) – that function as umbrellas for endorsed national schemes. In terms of land area, PEFC is currently the globally dominant certification umbrella, with a certified forest area twice as large as that of FSC. In terms of public recognition, the FSC scheme appears to dominate in many regions. Norske Skog regards these two systems as equally valuable and has no preferences to any one system, as all wood used by Norske Skog comes from sustainably managed forests.

The main tool used to follow the fibre raw material through the whole value chain is "chain of custody." This certification process provides an assurance that claims of "certified wood" can be substantiated. >>>

>>> A number of paper purchasers only want paper that is based entirely on recovered fibre. Perhaps they fail to realise that if all purchasers made the same demand, they would all be without paper in a short while. The loss of paper and the natural degradation of fibre through use, collection and reprocessing means that fresh fibre from timber must be added in order to maintain the supply and quality of the paper.



In a world where increasing demands are being placed upon finite natural resources and the ecosystems which supply them, it is important that our production processes are efficient and continuously improving. Environmental management systems are an important management tool in this respect.

Environmental certification like ISO 14001 not only assists in achieving compliance with laws and regulations, it also ensures that we have management tools and processes in place to identify and bring about continuous improvement.

Climate change is the environmental issue receiving the greatest attention today. Our emissions of greenhouse gases are primarily associated with our use of energy. Greenhouse gas emission rates differ considerably between our mills.

The main reason for this lies in the different energy sources used both for externally purchased energy and for energy produced on-site. Energy is supplied from a variety of sources, including hydroelectric and nuclear power (which produce no green-house gas emissions), bioenergy (which is greenhouse gas neutral) and fossil fuels like gas, oil and coal (which emit greenhouse gases). Purchased energy is mainly electrical energy used for fibre processing and to operate machinery. On-site produced energy is mainly used to heat processes and to dry paper on the production line. In many cases we use energy several times. For example the thermo-mechanical process which uses electricity to separate wood fibres generates steam which can then be used to heat other processes or dry paper. >>>

>>> The choice of raw materials, the products made, process efficiencies and historical investments also influence the energy use of a mill and its greenhouse gas emissions. The main strategies available to reduce greenhouse gas emissions involve reducing the consumption of energy and/or changing the source of the energy we use.

At Norske Skog, for example, we established a greenhouse gas reduction target in 2007 (a 25 percent reduction in total emissions by 2020) in order to provide added focus on this issue.

Increased use of bioenergy is an important strategy to reduce greenhouse gas emissions. The source of the bioenergy is wood-based production waste, sludge from biological effluent treatment plants and demolition waste.

The use of recovered paper as a raw material resource is positive from a climate change perspective. It takes less energy to separate the fibres in recovered paper than from wood chips during fibre processing. The fibres from the recycling process which are no longer suitable for paper making may then be converted into renewable electricity or heat. Even at the end of its life cycle our product has a positive contribution to make to the environment.

An increased focus on the environmental impact of our lifestyles and activities is both necessary and important if we are to become a sustainable society. When making these evaluations it is important that we see how the different parts interact and affect each other. Focusing on single issues is often counterproductive and can lead to poor decision making. So when we look at paper products and their alternatives we need to look at the whole picture.

The forest-based industry has a unique position when it comes to the environment. The raw material is renewable, the products are highly recyclable and both raw materials and products store carbon. Sustainably managed forests will absorb the carbon dioxide from the combustion of forest-based material. At the end of their life cycle the products can be used to produce bioenergy, which is neutral with regard to climate change. ■

Norske Skog is a world leading producer of newsprint and magazine paper, with 14 paper mills around the world. It is one of SFN's four strategic business partners.

Ink

Ink manufacturers are working to offer products and services that help conserve energy and reduce emissions, as well as aid in waste recovery with the recycling of inks and solvents. An increasing number of printers are using renewable and recyclable inks that are made up of vegetable oil, soy and starch.

Publishers are also trying to avoid inks that contain heavy metal components that can be hazardous to workers and the environment, and must ensure that inks must comply with regulatory requirements in their specific markets, according to PrintCity.

Ink Technologies

→ **Sheetfed inks:** Seeing improvements by reducing volatile organic compound (VOC) emissions, lowering energy consumption by rapid setting and reducing paper wastes through quick start-up. They are also now using up to 100 percent renewable vegetable oil.

→ **Energy curable UV inks:** Absence of VOC and low energy needed for curing.

→ **Coldset inks:** Can use renewable soy oil and lower VOC emissions.

→ **Water-based inks:** VOC free.

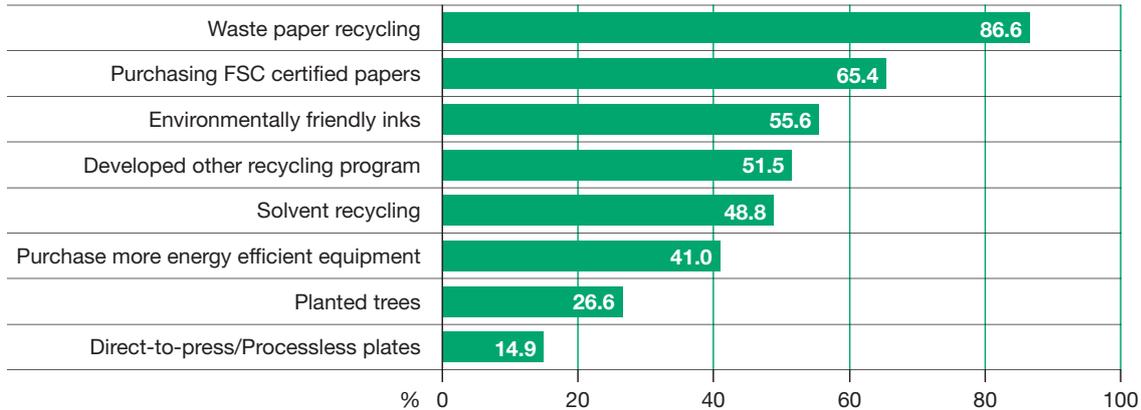
→ **Solvent-based inks:** Bioethanol is being used.

– PrintCity

According to a 2008 report by InfoTrends, “Emerging Strategies in Green Print and Sustainability,” print providers are very supportive of green strategies, but many believe implementing these strategies will increase costs. Solvents and toner are an important issue, as their disposal can be costly and must be done with great care to avoid negative environment consequences. They are an issue especially for pay-for-print businesses.

Solvents with VOCs are regulated more tightly, and may be harder to dispose of. Meanwhile, toner disposal is a bigger problem for print-for-pay printers because there is lower adoption of digital devices, and toner recycling programmes with vendors or other third-party companies may not yet be available, according to InfoTrends.

Which of the following eco-friendly steps have you considered or implemented?



Source: "Emerging Strategies in Green Print and Sustainability," by InfoTrends

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COST VS. SUSTAINABILITY

Vegetable oil-based inks are better for the environment and more sustainable than mineral oil-based, but currently usage of vegetable oil-based inks is not growing, all due to cost.

"In terms of green, it's limited for the moment because of cost, especially. In the short term, we do not have any new requests for these kinds of things, and this has been [going on] for more than a year. In fact, some of the last customers may stop choosing this kind of ink," said Michel Vanhems, sustainability leader for Sun Chemical in Europe. "It can be a volatile market."

The price of vegetable oil-based inks are substantially more expensive than mineral-based, at around 50 percent more for colour, and even more for black, he said. The higher costs are caused by several factors, such as investors putting money into raw materials, causing buying and investing, which increases the price. Additionally, there is competing usage for vegetable oils, such as in biofuels and food.

Vegetable-based oils are valuable, and as the cost of energy continues rising, the cost of other things, such as the price of vegetable resources, will increase in parallel, due to competing usage, he said. Because ink makers will produce what consumers demand, Vanhems said turning the tide toward sustainable inks is in the hands of publishers.

"Publishers should push printers to energy efficiencies. They haven't taken a proactive

approach," he said. "In terms of sustainability there could be a number of choices in technology."

The power to turn toward greener business practices is in the hands of print buyers, the InfoTrends report agreed.

"As more buyers of print implement green and sustainable strategies for their companies, it will directly affect how printers do business," the InfoTrends report states. "Recycled and environmentally friendly products will continue to create new opportunities for suppliers and have adverse affects on those not willing to adapt. Production processes for these new products will become refined and push costs down, allowing for easier, wider-spread industry adoption."

Printing

Printing presses today are leaner and more energy efficient than in the past. As new technologies emerge across the value chain, they are reducing waste, saving energy and working more dynamically than ever before.

The top three sources of energy consumption in a printing plant include the building and services, internal transport and production equipment, according to PrintCity. Improving energy efficiency can be done most easily when the entire press, its ancillaries, operating environment and procedures are an integrated system.

Where the Energy Goes



Building energy consumption is around half to one third of that used for production. Potential for readily available savings includes: eliminating excessive consumption from overheating, lighting areas not in use, draughts, heat loss and air leaks; computerised control of heating, ventilation, air conditioning and other support systems; new lighting technologies that can save up to 50 percent of energy; improving energy efficiency of buildings and their use.

Minimising workflow distances using best practice operating procedures can improve internal transport efficiency. Effective maintenance of roll and fork lift truck units will significantly lower their energy consumption.

Improving production equipment energy efficiency will also help optimise overall process efficiency and quality. Regular preventative maintenance is essential to ensure correct lubrication and settings, and that air filters are not blocked. Ancillary equipment can be the source of significant energy savings – compressors, cooling, drying. When assessing new equipment it is important to assess lifetime energy consumption.

– PrintCity



NEW INVESTMENTS MAKE CHANGE EASIER

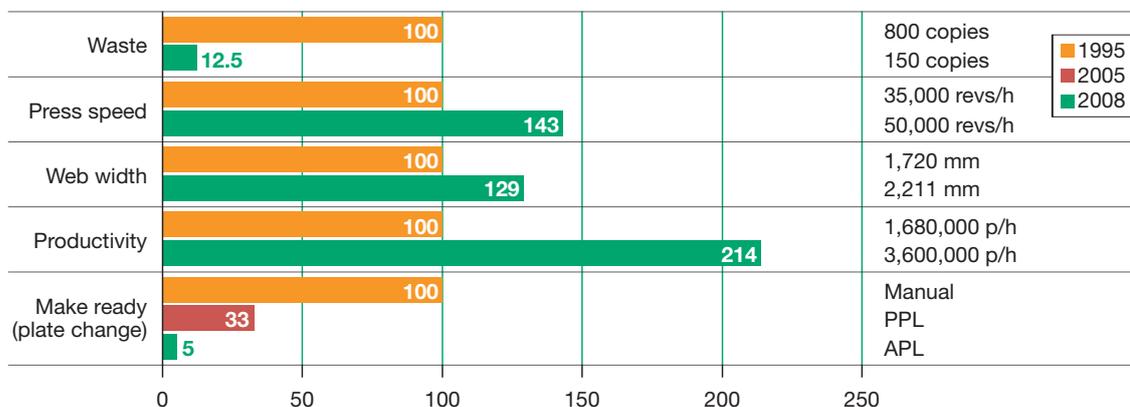
Investing in new presses is the perfect time to save on energy and costs, by assessing the optimum press format size in relation to the work being produced.

One option when buying a new press is a flexographic press, which uses less energy, according to the Newspaper Association of America. A typical offset press “has between 10 and 13 ink rollers, a plate cylinder, a blanket cylinder and a water system with electrical drives on each side of a press printing couple or for each colour on a printing couple.” Meanwhile, the equivalent flexo unit “has one ink roller, one plate and one impression cylinder.”

Frank Anthony, vice president of operations at the Chattanooga Times Free Press, told the NAA that switching to a flexo unit means that a “significant amount of electricity” is saved, because just 25 percent of the rollers and electrical components are needed to run it, and there is less weight to spin and drive. At the same time, the new press, made by manroland AG, uses water-based inks with less than 2 percent volatile organic compounds, compared to the 5 percent to 9 percent VOC typically found in offset inks.

New production methods are already saving on waste, time and increasing productivity, according to printing systems manufacturer manroland. Waste has gone down 87.5 percent between 1995 and 2008, while press speed has increased by 43 percent and productivity has increased by 114 percent.

Development in Newspaper Production 1995-2008



Source: manroland

© WAN-IFRA 2010

Meanwhile, Web width has also increased by 29 percent, and plate change was down by 67 percent from 1995 to 2005, and decreased another 28 percent from 2005 to 2008.

Starting Points for Technical Solutions

→ Paper has the largest saving potential

- Waste reduction by automation

→ Efficient usage of consumables

- Automatic washing devices, dosage and recycling of washing agent

→ Reduction of energy consumption, such as electrical power, gas and compressed air)

- More efficient drive concepts
- Reduction of driven masses
- Reduction of frictional losses
- Avoidance of emissions (paper dust)

– manroland

BROXBOURNE: WHERE COST SAVINGS AND ENERGY SAVINGS MEET

As newspapers increasingly outsource their printing to other sites, they are looking for the right location and lower costs. News International Ltd.'s Newsprinters operation in Broxbourne, England has become a success story not only in the outsourcing realm, but also as a symbol of energy savings and increased eco-friendly policies.

News International invested £650 million in the Broxbourne plant, which is larger than 20 football fields and contains 12 full-colour manroland Colorman XXL presses, which can produce 3.2 million newspapers each night. The plant prints all of News International's titles, including The Sun, the Times, Sunday Times, News of the World and the London Paper.

"We had to work very hard for efficiency," Ian McDonald, managing director of operations at News International, said at the World Association of Newspapers Power of Print conference in 2009. Technology helped create those efficiencies, which ended up saving £250 million, through reducing headcount from 1,400 to 812, and by saving 3.5 percent on newsprint.

The site also now prints The Telegraph, a competitor, which pays to be printed there.

The result of the increased efficiencies has meant a 28 percent shorter press, using 20 percent less space and less air conditioning, as well as 33 percent less components, 33 percent less maintenance and cleaning and 20 percent lower energy consumption, he said.



News International's Newsprinters plant is the largest newspaper printing facility in the world, located in suburban London.

© World Association of Newspapers and News Publishers 2008-2009



According to PrintCity, energy saving technologies can be found across the printing value chain:

→ **Prepress:** Process-less can save up to 30 percent of energy by eliminating the processing step.

→ **Direct motor drives:** Electrical efficiency of common DC drive solutions is 78 percent to 91 percent, with a power loss of between 9 percent to 22 percent, while direct drive is between 95 percent and 96 percent efficient, with a power loss of just 4 percent to five percent. This means a reduction in electricity costs of between 20 percent and 50 percent, depending on the application. Adding energy regeneration with the drive means even more savings, and energy efficient drive systems also reduce CO₂ emissions.

→ **Blankets:** Can minimise energy in the printing unit by up to 20 percent.

→ **Rollers:** Choosing the correct set of components, such as rubber rollers, can lower heat build-up and save energy. Rollers that are not set properly reduce quality and use more energy. Self-adjusting roller lock-up systems automatically and dynamically adjust the roller nips, and drying and curing can use a lot of energy for heatset and sheetfed printing that can be minimised.

→ **Heatset Web offset:** Integrated regenerative thermal oxidation (RTO) dryer oxidisers save the most energy possible – 97 percent heat exchange efficiency versus 65 percent for recuperative technologies. The system does not require additional energy in many production conditions because it is self-sustaining, by using only the energy from process solvents. Most dryer-oxidisers can be fitted with secondary heat exchangers for energy recovery to produce warm or hot water, or electricity.

→ **Sheetfed IR/hot-air dryer:** New designs that have individual dryer output adjustment through stepless control ensure energy utilisation is optimally matched with substrates, inks and coatings used to consume only as much energy as necessary. The optional hot air recovery system is used to pre-heat dryer input air to give energy savings of up to 30 percent.

→ **Sheetfed UV curing:** UV curing uses less energy than IR/hot air, and the total cost of printing is about the same as for conventional oil-based inks.

→ **Ancillary equipment:** A typical source of significant energy savings for chilled water, compressed air, damping solution cooling units and air supply. A pressroom climate having constant air temperature and relative humidity is essential for stable, high quality production, which impacts how much energy is required.

→ **Heatset process cooling:** An evaporative cooling tower combined with water-cooled refrigeration can save a significant amount of energy, as long as there is good PLC control to maintain precise temperatures in all circuits with automatic monitoring. Presetting temperatures for the ink oscillator and ductor rollers before the press starts and adjusting temperature automatically to printing speed improves efficiency even more.

→ **Inline finishing:** Eliminate multiple processing. Inline finishing of sheetfed and Web print products can save big on energy consumption, paper waste and logistics. Energy efficiency per finished product rises and paper waste declines with every pass through the press that is saved.

→ **Inline quality control:** Minimises total waste and production energy while optimising delivered quality.

This excerpt was taken from the PrintCity report "Sustainability, Energy and Environment." PrintCity is a cross-industry alliance that fosters cooperation across the graphic arts value chain. Its goal is to help respond to some of the major ongoing challenges facing the industry. For more on PrintCity, visit www.printcity.de.

3. A Greener Workplace

Energy and resource usage extends from the newsroom, to other businesses, to forests, to data centres, and to homes around the world. Newspapers that put a green strategy in place in its office and across its value chain will see those eco-friendly effects everywhere from newsstands, to the attitudes of customers and other businesses, to utility bills, to natural resources both near and far.

Everywhere a newspaper does business, from the office to the delivery vehicle, presents a chance to become more efficient and more eco-friendly. Both in and out of the office, little things can be done that create big results, from decreasing the size of carbon footprints to cutting energy bills into fractions of what they once were. Studying where energy goes and how it is used is the first step to creating efficiencies.

Energy Used to Create and Consume a Newspaper

Newspapers are accessed across platforms, and with those platforms comes the use of different resources and the output of different levels of

pollution. Sweden's KTH Centre for Sustainable Communications has studied energy usage and pollution output created by print and various digital technologies, and found that reading the news online for 30 minutes or more is more polluting than using a printed newspaper. However, increasingly efficient technologies are growing by the day.

DIGITAL

Digital technology, as discussed in Ch. 2, not only creates e-waste, but also uses energy when devices are not turned off, and in many cases, unplugged. However, the good news is that better technology today means more efficient energy use. Today's personal computers, and especially laptops, use substantially less energy when using them for reading, according to a 2009 report by the KTH Centre for Sustainable Communications, "Screening environmental life cycle assessment of printed, web based and tablet e-paper newspaper."

The average PC and LCD screens on the market in 2005 used 110 watts in idle mode,

Energy Used for Reading Web-Based Newspaper

| | 10 minutes reading/day | 30 minutes reading/day |
|--|------------------------|------------------------|
| Energy use, PC, screen, modem, Internet (9 kWh/GB) | 50 Wh/day | 150Wh/day |
| Energy use, PC, screen, modem, Internet (16 kWh/GB) | 70 Wh/day | 190 Wh/day |
| Energy use, laptop screen, modem, Internet (9 kWh/GB) | 40 Wh/day | 110 Wh/day |
| Energy use, laptop screen, modem, Internet (16 kWh/GB) | 60 Wh/day | 150 Wh/day |

Source: KTH Centre for Sustainable Communications report, "Screening environmental life cycle assessment of printed, Web based and tablet e-paper newspaper," second edition, by Åsa Moberg, Martin Johansson, Göran Finnveden and Alex Jonsson. Stockholm, 2009 © WAN-IFRA 2010

and laptops used 32 watts, according to the report. A modem adds an additional nine watts.

In Sweden, where the report was created and where digital usage is high compared to the worldwide average, the average household of two people use the Internet about 160 minutes per day. However, because equipment that is not turned off when not in use also uses energy, the non-active time is 1,280 minutes per day.

Energy use per amount of data transferred was estimated at an average between nine to 16 kWh/GB for U.S. networks in 2006 by the 2008 report "Estimating Energy Use and

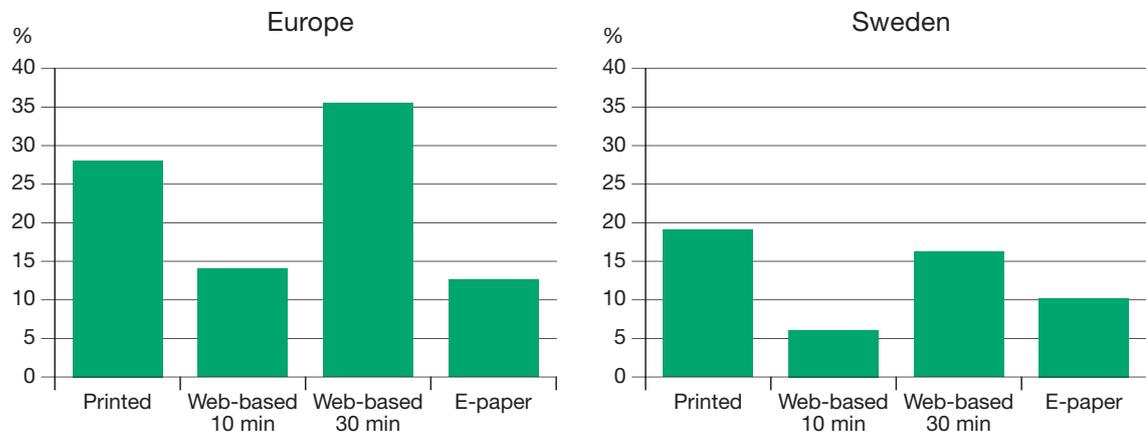
Greenhouse Gas Emissions of Internet Advertising," by Bruce Taylor and Jonathan Koomey. Electricity used per GB transferred continues to grow more efficient, dropping each year by 30 percent, that report found.

Regarding the global warming potential of printed newspapers, Web-based newspapers and tablet e-paper newspapers, reading an online newspaper for 30 minutes is more harmful to the environment than printed newspapers in Europe, according to the KTH Centre report. However, in Sweden, printed newspapers' global warming potential was higher than reading online. In both Europe and Sweden, accessing the Web and using e-paper both give off less CO₂ emissions than creating a printed newspaper.

E-books are one aspect of digital that have not yet been studied at great length; however, a February 2010 report by the KTH Centre found that unless users read more than 33 e-books of 360 pages or more each during an e-reading device's lifetime, "there are no good reasons to claim that e-books have a better eco performance" than print.

Two months after the KTH Centre released its report, the iPad was released by Apple, allowing for books, magazines, newspapers and other documents to be accessed via the one device. "In that way the environmental impact of the reading device is spread across several uses," stated the report, "Pappersbok och elektronisk bok på läsplatta," available only in Swedish.

Global Warming Potential



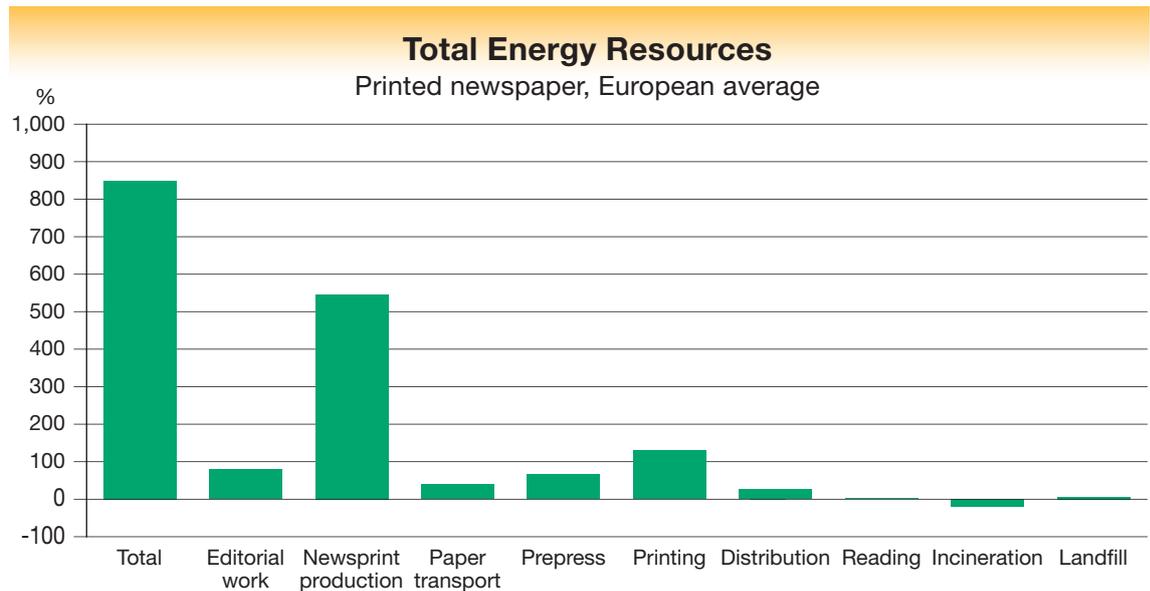
Source: KTH Centre for Sustainable Communications report, "Screening environmental life cycle assessment of printed, web based and tablet e-paper newspaper," second edition, by Åsa Moberg, Martin Johansson, Göran Finnveden and Alex Jonsson. Stockholm, 2009 © WAN-IFRA 2010

PRINT

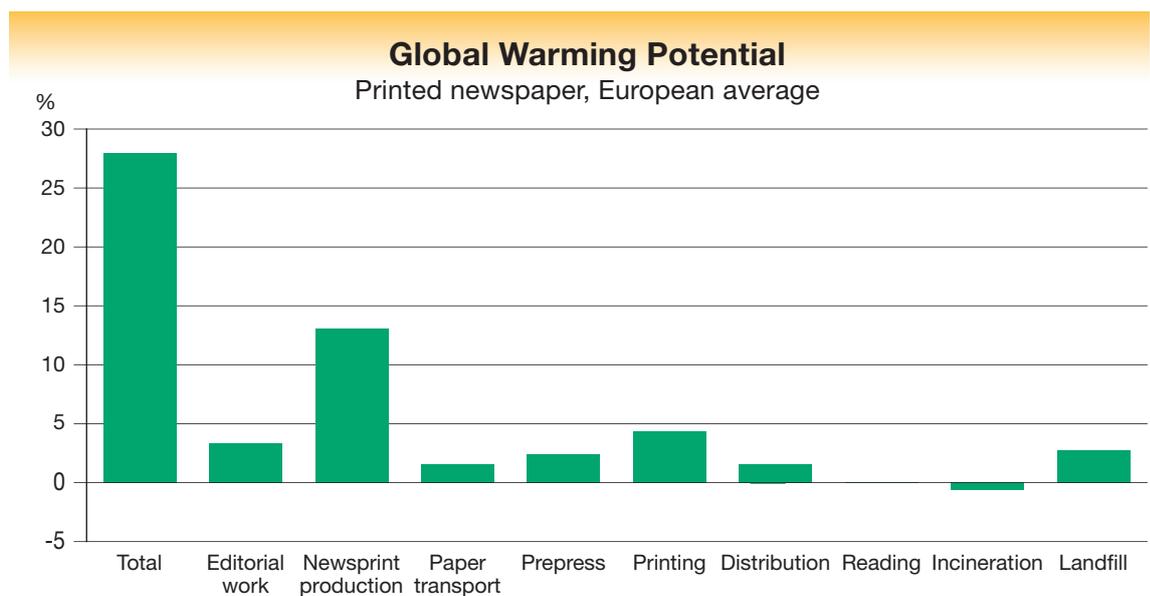
When printing a newspaper, the newsprint production link in the value chain used more than half of the total resources needed for the product system. However, newsprint production resources used include 40 percent renewable resources, while other activities involved in the print newspaper each used only about 10 percent renewable resources. Main resources used for total energy, from most used to least used are: biotic material, natural gas, uranium, hard coal, crude oil, hydropower and lignite.

When considering the global warming potential for different parts of the printed newspaper’s life cycle, the KTH Centre report also reported the European average, which found newsprint production created the most CO₂ emissions per year and per unique reader, followed by printing.

The global warming potential for a year’s worth of consumption added up to 28 kg of CO₂-eqv. per year and per unique reader. The biggest factors for toxicological impacts were emissions to air and water from electricity production, the report noted.



Source: KTH Centre for Sustainable Communications report, “Screening environmental life cycle assessment of printed, web based and tablet e-paper newspaper,” second edition, by Åsa Moberg, Martin Johansson, Göran Finnveden and Alex Jonsson. Stockholm, 2009 © WAN-IFRA 2010



Source: KTH Centre for Sustainable Communications report, “Screening environmental life cycle assessment of printed, web based and tablet e-paper newspaper,” second edition, by Åsa Moberg, Martin Johansson, Göran Finnveden and Alex Jonsson. Stockholm, 2009 © WAN-IFRA 2010

Recycling

Recycling is usually the first, most basic step newspapers and workplaces everywhere can take toward a more green future. But newspapers, unlike other businesses, also have a paper-based product, which makes recycling even more important.

Recycling one tonne of newspapers saves three tons of wood pulp and the equivalent of 3,000 kilowatt hours of electricity, or 23 percent of the energy needed to process a ton of newsprint from new pulp.

How a newspaper is recycled:

- Shredded magazines are added to newspaper so that their clay content will separate the ink from the newspaper fibres, which are then turned to pulp.
- The pulp is washed, and screens remove contaminants.
- The pulp is bleached and mixed with pulp from wood chips to strengthen it.
- Pulp is poured on a screen to drain, then flattened and dried as it passes through steam-heated rollers.
- Finally, it is trimmed and rolled to be reused as newspaper.

– Information from the Grays Harbor County Department of Public Services

Having recycling bins available throughout the workplace gives employees an easy way to sort their waste – putting paper in one bin, plastic in another, and other waste into a third bin. In some places, such as a break room or cafeteria, a bin for glass should also be put in place.

Recycling one tonne of plastic saves 7.4 cubic yards of landfill space, and for each tonne of glass that is recycled, one tonne of raw materials to process new glass is saved. This includes 590.9 kilograms of sand, 190.9 kg of soda ash and 172.7 kg of limestone, according to Earth911. When plastic downcycles, it can be used to make lower-quality products. However, glass is 100 percent recyclable, and can be recycled endlessly. Metals can also be recycled endlessly, as long as the metal is pure.



Paprec Recyclage in France recycles millions of tonnes of newsprint each year.

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Steps to a Greener Building

As a whole, commercial buildings use more than half their energy for heating and lighting, with electricity and natural gas serving as the most common energy sources, according to the U.S. Energy Information Administration.

Even when electronics are turned off, if they are plugged in they are still consuming power. For example, a lamp that is turned off but still plugged in is still drawing energy from the grid.

“It’s called ‘phantom load,’ or ‘vampire power,’” said Jennifer Berry, public and strategic relations manager for Earth911.

“Microwaves use more power when they’re off; in fact, 40 percent of electricity comes from vampire power drain in the average home.”

In offices, looking for electronics that are energy star certified and have power saving features are important for when they are on, and unplugging them or using a power strip that doesn’t consume vampire power when they are off are important tools for saving energy and money, she said.

HEARST

The Hearst Tower is an example of a recently built green building. It is the most

Greening a current building doesn't have to cost much, and can save a lot more in the long run. Easy things that can save money are:

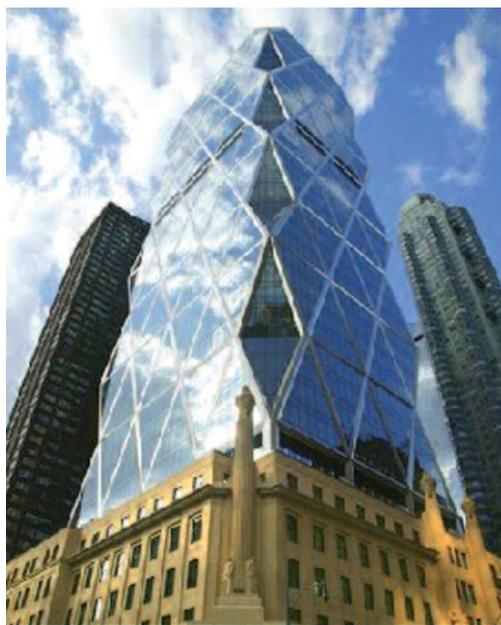
- Use natural lighting when possible.
- Switch regular lightbulbs for energy-efficient ones.
- Remind employees to turn off lights when a room is not in use, or install timers that automatically turn off lights when they're not in use.
- When replacing carpet and chairs, choose new ones that are made with recycled content.
- Use reusable dishes, such as ceramic and glass, instead of plastic and paper.
- Use native plants and landscaping in green areas outside the building to save water and control dust and soil runoff.
- Plug electronics, such as computers and printers, as well as things like desk lamps, into power strips that don't consume vampire power when they are turned off, and watch energy bills plummet.

environmentally friendly office tower in New York City history. More than 90 percent of the tower's structural steel contains recycled material, and its high-efficiency heating and air conditioning equipment uses outside air for cooling and ventilation 75 percent of the year, according to Hearst Corporation.

When it was built, 85 percent of the original six-floor structure was recycled, and the new structure, a diagrid system, used 20 percent less steel (2,000 tonnes) than the typical office building, according to Hearst.

Inside, sensors turn off lights automatically when an office is empty or there is enough natural light from outside. Floors and ceiling tiles were made with recycled content, walls have been painted with low-vapor paints and concrete was treated with low-toxicity sealants.

In all, 26 percent less energy is used than in a building constructed to standard building code, and the yearly carbon dioxide reduction associated with the decreased energy usage totals 869 tonnes.



Hearst Tower in New York.

Instead of funneling rainwater to the city's sewer system, the tower collects rainwater on its roof and stores it in a 14,000 gallon reclamation tank. It then uses the water to replace moisture lost to evaporation in the office's air conditioning system, waters plants and trees on the premises, and flows into a three-story "sculpted water feature" in the building's atrium called "Icefall." The collected rainwater reduces the amount of water dumped into the city's sewer system during rainfall by 25 percent.

Travel

Travel, whether for commuting, delivery or other transport, is an area ripe for saving on carbon emissions. The global economic downturn in recent years pushed fleet managers to save more money, which has mostly good implications for the environment, according to a GreenBiz research report, "State of Green Business 2010."

FLEETS

"On the one hand, the recession is generating increasing interest in driver education and training for some companies – a simple, low-cost initiative that can produce immediate results by lowering fuel consumption and associated greenhouse gas emissions.

On the other hand, declining business activity meant there were fewer vehicles on the road that, in some cases, were driving fewer miles,

causing many fleet managers to hold on to older vehicles longer rather than trade up for newer, more efficient models. Some green fleet initiatives were further delayed by the woes of the auto industry, which caused carmakers to postpone, reduce or discontinue some models,” the report points out.

The largest factor shaping green initiatives for company vehicles is the price of fuel, and companies “are well aware that climate change and the potential for regulation aren’t going away.” This means that as new vehicles are bought to replace old ones, many companies are converting their fleets to hybrids, setting minimum fuel efficiency policies and eliminating gas-guzzling models, according to the report.

COMMUTING

In order to cut down on overhead costs, such as heating and lighting office space, businesses are increasingly allowing workers to telecommute.

A company that gives workers more telecommuting options decreases the company’s carbon footprint and the footprint of each individual employee. If 53 percent of white collar workers telecommuted two days per week in the United States, for example, fuel consumption would be reduced by 9.7 billion gallons and and US\$38.2 billion would be saved each year, according to a 2008 study conducted by Telework Exchange.

Those numbers are so high because 84 percent of Americans rely on their own means to get to and from work, with an average worker spending \$2,052 on gas and 264 hours traveling each year on commuting alone.

If U.S. workers telecommuted half the time, the country could save \$500 billion a year, Persian Gulf oil imports would go down by 28 percent and the equivalent of seven million cars would be taken off the road, according to estimates by research network Undress4Success.

Even in cities where most workers use public transport or walk to work, telecommuting has its place. Public transit, although more eco-friendly than driving, still create pollution, and large office buildings tend to not be energy efficient, according to Earth911.

“The most profound [environmental benefits to telecommuting] include reducing pollution and carbon emissions associated with transportation, reducing oil consumption and

minimizing carbon footprints with lower office energy use and business travel,” Sara Sutton Fell, CEO of FlexJobs, told Earth911.

“Telecommuters use far less paper than their office-worker counterparts, more often scanning and faxing documents instead of printing. Also, they tend to use online document storage much more than paper file cabinets.”

4. How Newspapers are Going Green

When businesses decide to be greener, the changes start out small, with steps such as turning off lights and conserving paper. Over time it can grow into something much bigger, effecting change in the environmental policies of other businesses and laying the foundation of how business will be conducted in the future.

The impetus toward becoming more environmentally friendly usually begins when a publisher wants to become a better citizen in the community of businesses, and begins to conserve resources and find efficiencies in the little places. Over time, conservation and efficiencies grow, efficiencies result in savings and goodwill from audiences, the community and other businesses increases.

As the publishers in this chapter have found, change doesn't have to be overwhelming. Companies are not being called on to save the world, but rather to take care of their pieces of it, and know that the job is never finished.

The Irish Times

Dublin, Ireland

When The Irish Times moved its offices from an old building to a modern one nearly four years ago, the transition was a prime opportunity to put in place more eco-friendly policies.

“It made sense to make [the new building] as efficient as possible and also to raise staff awareness of their ability to play a big role in this at the same time. Staff would have also been to the forefront of looking for the company to become more green-aware,” said Susan Cody, strategic planning manager of The Irish Times Ltd. “The building makes a vast difference and the move here was a major trigger for making the changes we have made. However, it is an ongoing process, and ... communications are key.”

Daily use of resources, from lights to computers to paper, are all seemingly small things employees are asked to conserve, through turning off lights when a room is not in use, shutting down computers for the night, using double-sided printing and avoid printing



The Irish Times moved offices to this building on Tara Street in Dublin nearly four years ago. Moving from an old building to a new one was a perfect opportunity to institute new green policies.

when it's not necessary. All departments also use waste separation bins, divided by paper, plastics and general waste.

"Most of the responsibility for identifying ways to reduce energy usage and to increase environmental awareness and provide supporting processes lies with facilities. Operationally they are also responsible for waste management, including waste separation and the promotion of the three Rs [reduce, reuse, recycle], with feedback on this; lighting efficiencies (original lights replaced by sensory ones in offices, washrooms and car park); and generally increasing awareness across the company."

Technology and distribution are two main departments affected by the newspaper's strategy to be more eco-friendly. IT has helped to identify where technology can help reduce energy use, such as making logouts and shutdowns of computers automated when feasible.

"IT is the heaviest user of energy and we are currently exploring ways to reduce this," Cody said.

DISTRIBUTION AND PRINTING

To make distribution greener, The Irish Times had to find the most wasteful aspects and remedy them.

"The main focus here is on reducing the level of returns and hence waste, and also on optimising routes to reduce fuel consumption. Printing in the UK also reduced our carbon footprint associated previously with shipping heavy newspaper loads from Ireland," she said.

At the printing plant, high quality processes are used to reduce the number of spoiled copies, there has been an increase in the use of environmentally friendly inks and papers are printed on paper with a high recycled element, Cody said.

So far, employees have been positive about the changes being made in the newspaper's attempts to be greener, but they still feel more can be done.

"Communications are key not just in requesting staff to get involved and to turn off lights, PCs, etc., but also in highlighting successes," she said. "We intend to restart and hopefully do more on the communication side this year. Our objective with this is to provide information to our employees that is as valid and as useful in their home in terms of reducing waste [and] energy [use] and associated costs, as it is in work."

The Irish Times has not yet highlighted its strategy with readers, but is planning to hold a month dedicated to environmental awareness in the future, Cody said.

Verslo Zinios

Vilnius, Lithuania

Bonnier-owned Verslo Zinios is unique in that it did not decide to adopt a more eco-friendly policy to save money; rather, the newspaper wanted to use its position as a member of the community to affect positive change as both a business leader, and to also educate and help readers better their own lives through environmental awareness.

“The initiative to implement a green strategy came from inside the company as a response to the overall understanding that media must start first if it wants society to sell this idea. There was no cost saving strategy behind it, as under our office rent contract we had to pay a fixed price for utilities,” said Rolandas Barysas, CEO and editor-in-chief of Verslo Zinios (Business News).

“We are a socially responsible media company with a very strong brand in the market ... so we thought we must lead the green strategy action,” he said. Verslo Zinios has previously been elected as one of Lithuania’s Superbrands.

“THE ZONE OF RESPONSIBLE BEHAVIOUR”

By 2007, “we experienced how difficult [it was] to change bad habits” and decided to begin a broader campaign that included readers, called “The Zone of Responsible Behaviour,” Barysas said.

Verslo Zinios has used multiple platforms to help the campaign for saving energy and sorting waste to reach readers, including the Web, the newspaper and conferences.

“Every second week we were publishing full page advertisements which included logos of Lithuanian companies who shared our views and took action to implement a green strategy. Office building owners had to find places outside the buildings to place different colour boxes for sorted waste, [and] companies had to replace single waste baskets [with] multi-waste baskets. We invited [everyone] to use less paper and distribute bills electronically or use both sides of the paper for printers and copy machines.”

Companies that joined Verslo Zinios in the campaign received stickers with a picture of a green tree and the logo “The Zone of Responsible Behaviour,” which they all placed at their entrances.

IN-HOUSE CHANGES

Within the newspaper’s offices, each department must abide by the tenants of the campaign: waste must be sorted each day, energy must be saved, usage of both sides of paper is a must, and all one-sided printers were replaced by those that could print on both sides. Used paper is collected and recycled, and marketing and other departments use only electronic presentations on PowerPoint, instead of printing out many copies of information. In addition, all electronic devices and batteries are collected and sent to be recycled instead of thrown away.

“To reduce electric usage we installed more switches and cut office space lights into smaller zones which [are able to] switch off the light in the places where nobody works, [which is] especially important in big newsrooms, call centres and circulation/advertising departments,” Barysas said.

All regular light bulbs have been replaced by energy saving bulbs, and stickers have been placed close to light switches reminding people to turn off unused devices and switch off lights when leaving the work space, even for a short period of time.

For recycling paper, old paper boxes are used instead of plastic baskets, and each employee uses a ceramic or glass cup instead of plastic for water, coffee and tea.

RESULTS

A few years after the campaign began, more than 100 companies have joined Verslo Zinios and implemented green strategies. Clients have also responded positively, and the newspaper sends electronic bills to 99 percent of them.

“Our employees support green efforts – without that we definitely would fail,” Barysas said. Employees also participate in environmental-related events, and many have implemented green strategies in their own homes.

Norrtelje Tidning

Norrtälje, Sweden

Stampen-owned Norrtelje Tidning was one of the first newspapers in the world to be environmentally certified according to the international standard ISO 14001.

“ The international standard ISO 14001 shows that the business is able to identify and control the environmental impact of its activities, products or services; to improve its environmental performance continually; and to implement a systematic approach to settling environmental objectives and targets, to achieving these and to demonstrating that they have been achieved. The ISO 14001 standard does not specify levels of environmental performance; rather, it provides a framework for a holistic, strategic approach to the organisation’s environmental policy, plans and actions.

– *The International Organization for Standardization* ”

Norrtelje Tidning was certified on Oct. 9, 2000, and the following year its printing company was certified. The Swedish daily faces 52 requirements, and is checked by an external accountant each year to make sure it is in compliance with ISO 14001 demands. The newspaper is re-certified every three years, Robert Jonsson, managing director, and Anders Häggström, environment coordinator, told SFN.

The fee to the ISO is small when renewing the certification, but the initial fee to get certified for the first time is much larger, Jonsson said. The accountant, meanwhile, finds any problems, and also checks to make sure the company takes care of the problem in a timely manner.

“It isn’t bad if you have some things that don’t work – that’s normal. You have to take care of those things, say when you’ll have it done and how you’ll fix it. That’s very important for the accountant,” Jonsson said.

Initially, Norrtelje Tidning did a study on the newspaper’s overall environmental impact, and following the evaluation target areas for improvement were listed.

Norrtelje Tidning is also carbon-neutral.

“We pay €20 per tonne in compensation. We work together with the consult Respect Europe and use their online calculator to calculate our CO₂ emissions. Our environmental impact through travel to our customers, to and from work, and energy are inevitable. But there are always opportunities to reduce emissions through wise choices,” according to Jonsson and Häggström.

GETTING STARTED

“We started with heat, electricity [and] recycling,” Jonsson said. “Then we looked at the major things – heating and electricity is major. We work very hard to get green electricity – they have companies in Sweden that sell greener electricity, which comes from water power. Today, most of our issues are related to traveling.”

The newspaper has goals related to its transport, and at the same time must be mindful of finances and how the economy is doing.



Norrtelje Tidning is powered by green electricity, which comes from water power. The Swedish newspaper is carbon neutral, and one of the first in the world to obtain environmental certification according to the international standard ISO 14001.

“You can maybe say, ‘OK, we’ll put more pressure on that next time we buy cars,’ or ‘next time we have new green electricity.’ Every year you look at these things and see if it’s possible to do more,” he said. “It never ends. Every year, if you can do something, you should do it.”

Norrtelje Tidning began its green strategy in 1999, after deciding that environmental issues are becoming more important to customers and society.

“The world’s focus on environmental issues reinforced our strategy,” Jonsson and Häggström stated. “We believe that we should put our own house in order to retain our credibility as a community reviewer. This has been perceived positively by readers and we are an example to the local business community.”

Customers are increasingly more interested in the environment, and when Norrtelje Tidning went carbon neutral it received a lot of our attention.

“I think it’s growing, and the last year it’s been a big interest for people in Norrtälje,” Jonsson said. Outside companies that do business with the newspaper must also meet the high eco-demands. “When you’re going to buy something or do a contraction, you say you have to have an environmental system, to show us what you do, otherwise we won’t buy from you. That’s a very effective way to put pressure on other companies.”

ECONOMIC ADVANTAGES

Being environmentally friendly means the business is more lean, and resource efficiency has given the newspaper an economic advantage, according to Jonsson and Häggström.

When Norrtälje Tidning puts pressure on companies it buys products from, that results in pressure on the economics, Jonsson said. “It’s bonded together.” In addition, buying green electricity is a better price than electricity that isn’t green, he said.

“The mindset that you look at things from every year is that you have to get efficient. We also try to not have computers on standby – you have to turn it off when you leave. We try to not travel when we don’t have to – all these things – we care and it’s important to us to not waste anything. And in that, we save money,” he said.

“We see it as this: when the whole company thinks in the same way, you get results.”



Blizzards in London, heatstroke in Melbourne.

Melting glaciers on Greenland. Floods in Bangladesh. Concerns in the Maldives and Gothenburg that they will be under water. A debate on how environmentally-friendly green fuel really is. And what should we do about nuclear power?

We are all familiar with the headlines and the debates. Our readers and advertisers turn to us with their questions and demands. How many trees are required to print one newspaper – and is Stampen really managing its environmental impact?

The answer is that we are, and that we are now coming to grips with any areas where we did not. And we are not doing this because of customer demand – we are doing it because it is right.

At Stampen, we have concluded that the best way in which to carry out sustainable environmental work is to allow a certification institute to review and approve our approach to environmental issues. Before the end of 2010, all majority-owned operating companies within the Stampen Group will obtain certification in accordance with the international ISO 14001 standard.

Environmental certification brings with it obligations and is a long-term undertaking which affects all Stampen’s management groups and employees. Certification is dependent on the adoption of an environmental policy and environmental targets, on the inclusion of environmental issues in the management system and on the follow-up of the results of improvements. An environmentally-certified company must, in addition, make continuous improvements.

Stampen is not starting from scratch. V-TAB’s plants have, for many years, adopted an active approach to the environment and have already obtained environmental certification. Norrtelje Tidning is at the top of the class – not only does it have environmental certification but it has also chosen to produce a completely climate-neutral product.”

Excerpt from Stampen’s 2008 yearly report



Sydsvenska Dagbladets AB

Sweden

In 1995 four newspapers at Swedish media company Sydsvenska Dagbladets AB, owned by Bonnier AB, decided they needed to better their relationship with the environment.

Newspapers Sydsvenskan, Kristianstadsbladet, Ystads Allehanda and Trelleborgs Allehanda began creating a green strategy, and by 1999 were working with newspapers across the country, said Torbjörn Friberger, environmental and security manager.

The network was initiated by TU (the Swedish Media Publishers' Association), KTH (the Royal Institute of Technology) and the newspapers. Today the group includes about 20 newspapers, and the group works together on a research project that examines the newspapers' environmental impact by measuring the emission of carbon dioxide from the newspapers. Some of the group's findings are detailed earlier in this chapter.

Also by 1999, the group had completed measurements of carbon dioxide emissions. Two years ago, the group started Climate Alliance in the southern Swedish town of Kristianstad. Several different companies from different industries also joined the alliance, including the local newspaper, Kristianstadsbladet, Friberger said.

Sydsvenska Dagbladets also worked with Swedish sustainable business group Respect, which challenged the newspaper company to take the step into being climate neutral.

To become climate neutral, the company had to follow certain criteria, he said:

- Identification of the company's climate impact according to international standards (Greenhouse Gas Protocol)
- Elaboration and implementation of an effective action program to reduce emissions
- Reporting and review
- Communication and dissemination of good practice
- The product should have low carbon footprint compared to other alternatives with the same function. Climate impact must be assessed in a lifecycle perspective.
- The company should continually work to improve the climate performance of the product, or, as a benchmark, the carbon

footprint should be reduced by 10 percent over six years.

- The climate impact should be compensated with reductions achieved by buying shares in approved projects like international climate projects (CDM). The projects follow the intentions of the Kyoto Protocol and are controlled by the United Nations.

To meet the requirements, Friberger said, the company has implemented the following measures:

- We have changed to green electricity.
- We have a travel policy (always use the train if possible).
- We gradually change our cars.
- We are gradually replacing our petrol cars with bio-gas powered cars.
- We use video conferencing when it is possible instead of traveling to the meeting.
- We demand of our suppliers that they will deliver the most climate-friendly option to us.

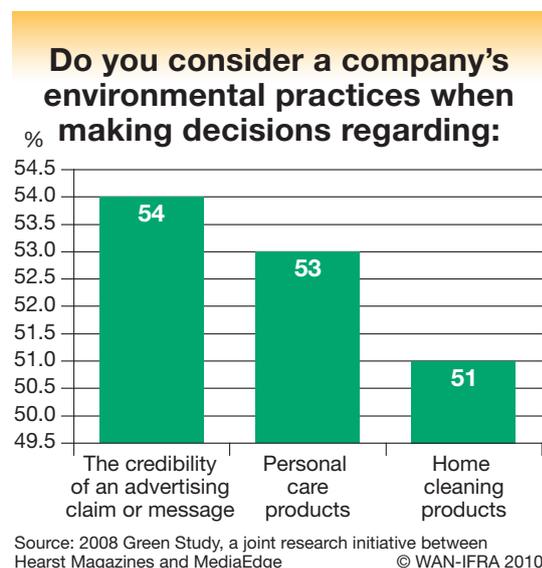
Conclusion

News publishers that take the time to find efficiencies and establish more environmentally friendly policies are creating benefit for both the environment and their businesses. Acting as a better local and global citizen by adopting a more eco-friendly way of doing business is the next step in newspapers' positions as long-time centres of news and information. Being kinder to the environment has strong implications for renewing and strengthening readers' trust and lowering costs.

Around the world, readers are increasingly looking for greener products and communicating that they are even willing to pay a bit more for a product that does less harm to the environment.

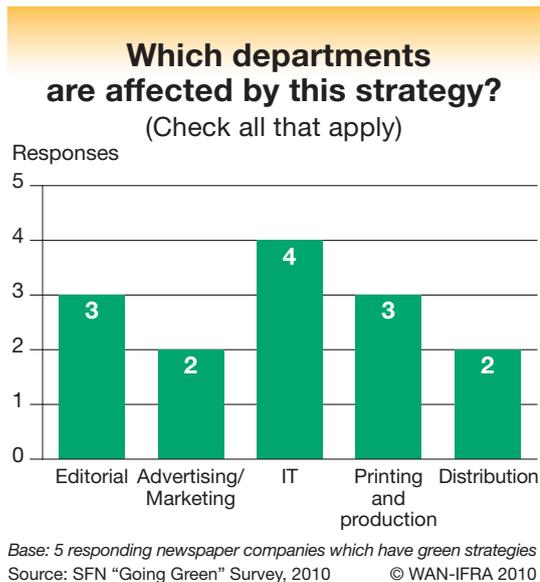
According to a Hearst and MediaEdge study, 39 percent of consumers said they would pay more for an eco-friendly magazine, and 43 percent said they would stop purchasing a product they use regularly if they found it to be not environmentally friendly. Readers also want more information from companies that claim to be putting out a greener product, with almost 75 percent saying they believed "green" statements in advertising may be false.

Newspapers making changes for the benefit of the environment, the business and the reader, recognising that the three are intertwined. They are starting by tackling smaller jobs, and moving into larger tasks over time, from energy efficiencies in the office, all the way to carbon neutrality in the long term.



The SFN team contacted several newspaper companies worldwide to learn more about their strategies to become greener, and five of the six respondents, from Europe, North America and Africa, said they have a green strategy in place. The one respondent without a green strategy said the company is currently in the planning phase.

“We are in the process of doing our first green audit. Strategy will flow from that,” the company representative stated.



Publishers experiencing success, such as The Irish Times, are making changes when appropriate, such as moving into a new office building.

“It made sense to make [the new building] as efficient as possible and also to raise staff awareness of their ability to play a big role in this at the same time. Staff would have also been to the forefront of looking for the company to become more green-aware,” said Susan Cody, strategic planning manager of The Irish Times Ltd., in Ch. 4. “The building makes a vast difference and the move here was a major trigger for making the changes we have made. However, it is an ongoing process, and ... communications are key.”

Other than creating efficiencies and lowering resource usage in its new building, The Irish Times also put in place more efficient processes in the printing plant and started using more environmentally friendly inks in order to make better use of resources and lower waste.

“The main focus here is on reducing the level of returns and hence waste, and also on optimising routes to reduce fuel consumption. Printing in the UK also reduced our carbon footprint associated previously with shipping heavy newspaper loads from Ireland, Cody said.

Green strategies that are implemented over time and when the opportunities present themselves are generally the easiest, most cost-effective ways to transition into becoming more eco-friendly. Basic changes that can be made include:

- Use natural lighting when possible.
- Switch regular lightbulbs for energy-efficient ones.
- Remind employees to turn off lights when a room is not in use, or install timers that automatically turn off lights when they're not in use.
- When replacing carpet and chairs, choose new ones that are made with recycled content.
- Use reusable dishes, such as ceramic and glass, instead of plastic and paper.
- Use native plants and landscaping in green areas outside the building to save water and control dust and soil runoff.
- Plug electronics, such as computers and printers, as well as things like desk lamps, into power strips that don't consume vampire power when they are turned off, and watch energy bills plummet.
- Talk to suppliers about greener options. Find out where they get their resources, and how those resources are disposed of.

THE PUBLISHER

World Association of Newspapers and News Publishers
Paris, France and Darmstadt, Germany
Tel.: +33 1 47 42 85 00
Fax: +33 1 47 42 49 48
E-mail: contact_us@wan.asso.fr

WAN-IFRA CEO
Christoph Riess

SFN DIRECTOR
Martha L Stone
mstone@wan.asso.fr
+ 1 847 778 9806

SFN EDITORIAL MANAGER AND REPORT PROJECT MANAGER
Leah McBride Mensching

SFN BUSINESS ANALYST
Erina Lin

PAGE AND GRAPHICS DESIGNER
Marianne Audouard

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Shaping
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