Pearson

Environmental Review 2016

1. Introduction

As an education company, we are committed to helping people of all ages to learn.
We also have a duty to play our part in making sure everyone has a healthy and sustainable planet in which to progress.

This thinking underpins why Pearson has a long track record of investing in green initiatives. Our flagship environmental initiative is climate neutrality but our commitment goes wider to embrace a concern to protect the natural resources on which we all depend.

Our vision is shared by others in the world of education and many of the institutions we serve are environmental leaders both in thought and practice. We know that our customers and learners value the commitment we have to being a responsible environmental citizen.

In 2015, Pearson reviewed its sustainability strategy through an inclusive process involving internal leaders within the company as well as external experts. As a result, we adopted our 2020 Sustainability Plan and confirmed our most material issues. This process confirmed Greenhouse Gas emissions and climate change as one of our nine issues which we believe as our most material at this time.

We report on the highlights of our environmental activities within our annual report and broader sustainability reporting but also produce this companion report providing additional detail on our climate neutral commitment as well as on paper purchasing as our two most material environmental areas that impact on GHG emissions and climate change.

2. Our climate neutral strategy

In 2006, concern over climate change first emerged onto the public policy agenda, rising up the list of issues raised by investors and was of interest to authors, employees, students and customers alike.

Pearson wanted to respond. We decided to adopt 'climate neutrality' as our flagship environmental goal that we could use to focus the organisation on reducing our environmental impact. Climate neutrality was achieved in 2009 and has been renewed and refreshed every year since.

Our climate neutral commitment covers company operations under our direct control such as buildings and travel. The commitment excludes supply chain activities such as our digital supply chain, paper purchase, printing and distribution. Our strategy is built on three key areas:

1. **Measure**. We have an established, independently-verified process to measure our climate footprint relating to our buildings and from business travel.

2. **Reduce**. We consistently cut the Greenhouse Gas emissions relating to our buildings and business travel year-on-year. We have introduced energy-efficient design across our buildings, invested in alternatives to business travel such as video conferencing as well as purchase and generate renewable energy to meet our global electricity needs.

3. **Offset**. Whatever emissions we have not been able to reduce or avoid are offset each year by supporting a range of forest based projects that either save or absorb a tonne of carbon for each tonne that we emit.

We involve all parts of Pearson in achieving our climate neutral commitment:

- Facilities departments work on introducing energy efficiency design and upgrades together with looking at renewable energy options across our main buildings.
- Internal communications teams have helped update Planet Pearson, our dedicated environmental collaboration space. It is available globally, bringing together information, ideas and signposts to local green groups as well as encouraging colleagues to work together. We also highlight environmental issues in our company newsletters.
- Our marketing teams have continued to develop innovative partnerships to raise awareness of environmental issues and boost our reputation.
- Editorial colleagues' commission learning curricula covering a wide range of environmental issues.
- Our purchasing teams have worked with industry partners and with suppliers on assessing and measuring our total carbon footprint.
- Finance colleagues offer budgetary funds to stimulate new ideas and innovation.

Our Approach

Development and implementation of our strategy is overseen by the Responsible Business Leadership Council. The council is chaired by the chief corporate affairs and global marketing officer and includes senior executives from across the company. Progress is reported to the Reputation and Responsibility Committee, a formal committee of the Board.

We have a network of country-specific committees supported by around 20 eco-committees at our key buildings that look for additional opportunities for improvement.

Pearson has a global online data collection system in place covering utilities, waste, water and business travel. As part of our due diligence, we commissioned two independent reviews of the system. The first was carried out by Deloitte in 2014 and looked at management and implementation of the reporting system and subsequently data verification is assessed annually through an assurance process carried out by Corporate Citizenship.

3. Environmental management and measurement

Globally, our operations are accredited against the Carbon Trust Standard. Pearson was the second ever organisation to be certified against the standard which recognises leadership in measuring, managing and reducing year-on-year carbon emissions. Our Carbon Trust Standard certification was reviewed and reconfirmed in 2016.

Pearson first introduced its environmental policy in 1992. Our businesses in the UK and Australia are accredited against ISO 14001, the international environmental management standard. Other parts of the world apply our own environmental management system based on ISO14001 standards. This system is described in the policies and downloads section on the

Pearson corporate website. During 2016, we secured accreditation against ISO50001, the energy management standard for our UK businesses.

We have also embraced LEED, the green buildings standard in the United States. We currently have six buildings certified under the LEED standard which together account for over 740,000 square feet and we have set up a team of certified LEED assessors within the company. Last year, our offices in Hoboken became the latest to secure LEED certification achieving a Gold Standard. We are currently working on securing a further LEED certification for a building In Maryland.

4. Climate footprint: 2016

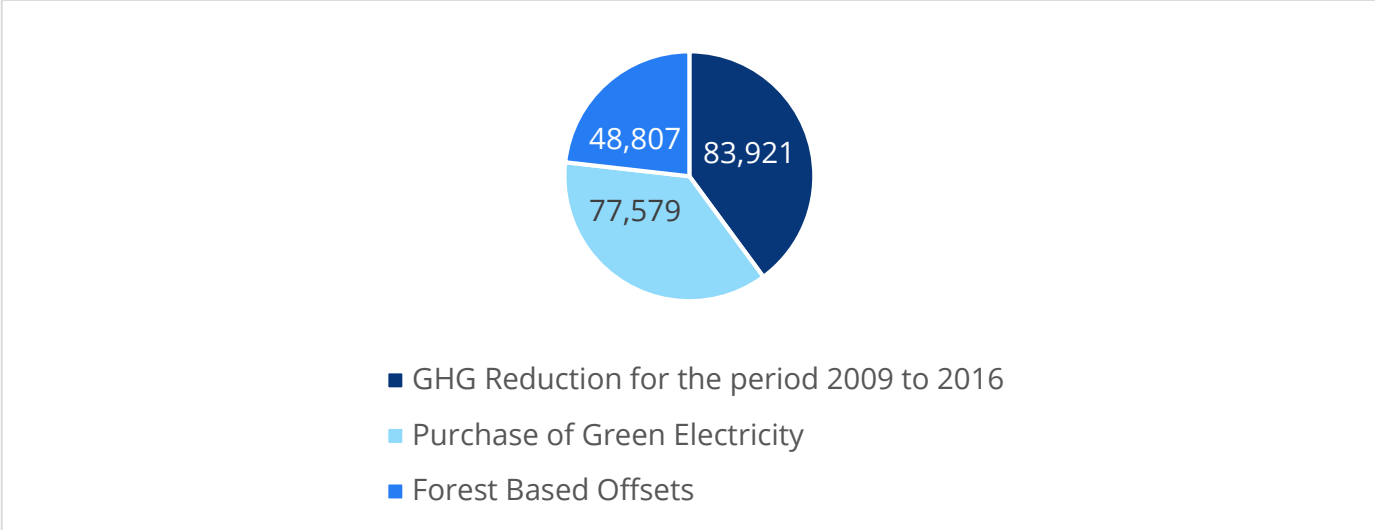
Our climate footprint as at the end of 2015 was 126,385 metric tonnes of carbon dioxide equivalent (CO2e); an absolute reduction of 13.7% over 2015 and 40% less than 2009, our baseline year. This means we are on track to meet our target of reducing our carbon footprint by 50% by 2020 compare to our baseline year.

We are pleased with this performance as our overriding goal from adopting our climate neutral commitment is to reduce our climate footprint where possible. Our climate footprint reduction was driven by a continued focus on reducing energy use, the distance we travel on business as well as wider business transformation.

Our climate footprint reduction performance for the period 2013 to 2016 for our three largest countries and the rest of the world is as follows:

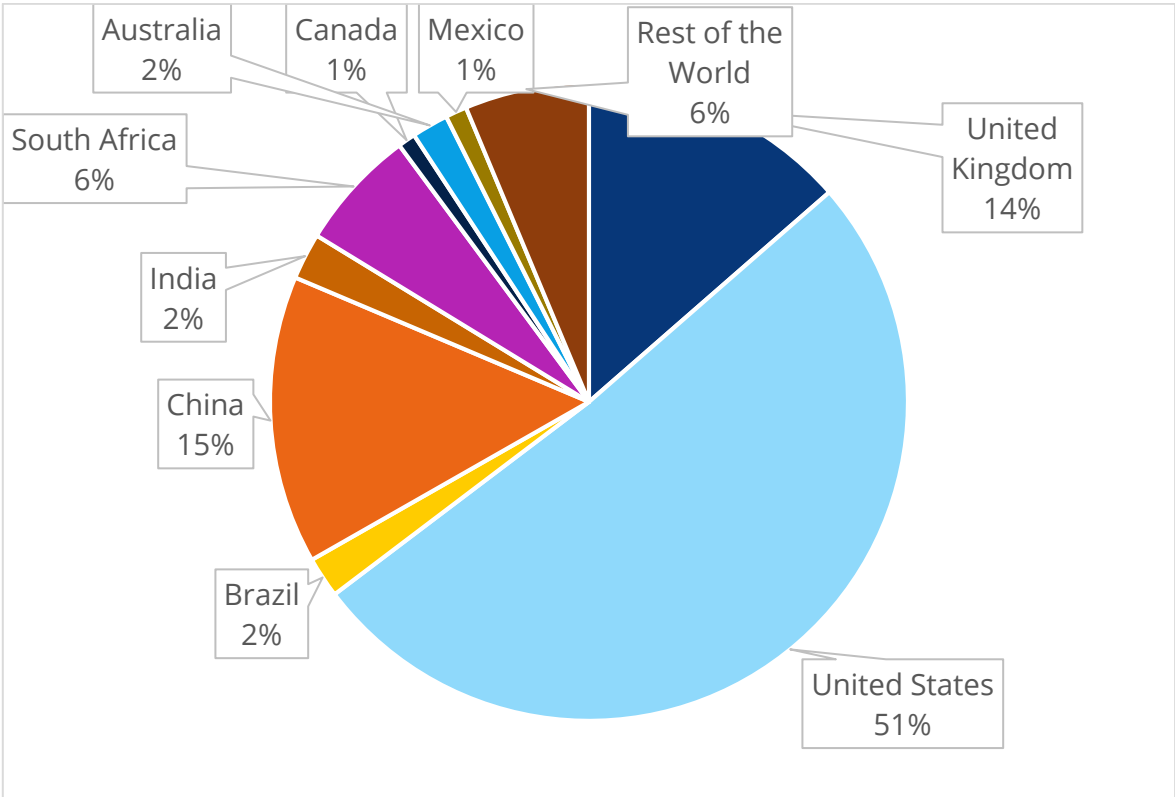
	UK	**US**	**China**	**ROW**	**Global**
2013	35,236	105,994	18,208	29,254	188,692
2014	21,599	94,348	19,960	26,503	162,410
2015	20,251	79,872	17,655	28,715	146,492
2016	17,167	64,590	18,478	26,150	126,385
2013 vs 2016	-51%	-39%	1%	-11%	-33%

We have maintained climate neutrality for the period 2009 through to 2016 by purchasing green electricity and then to offset the remaining unavoidable emissions.



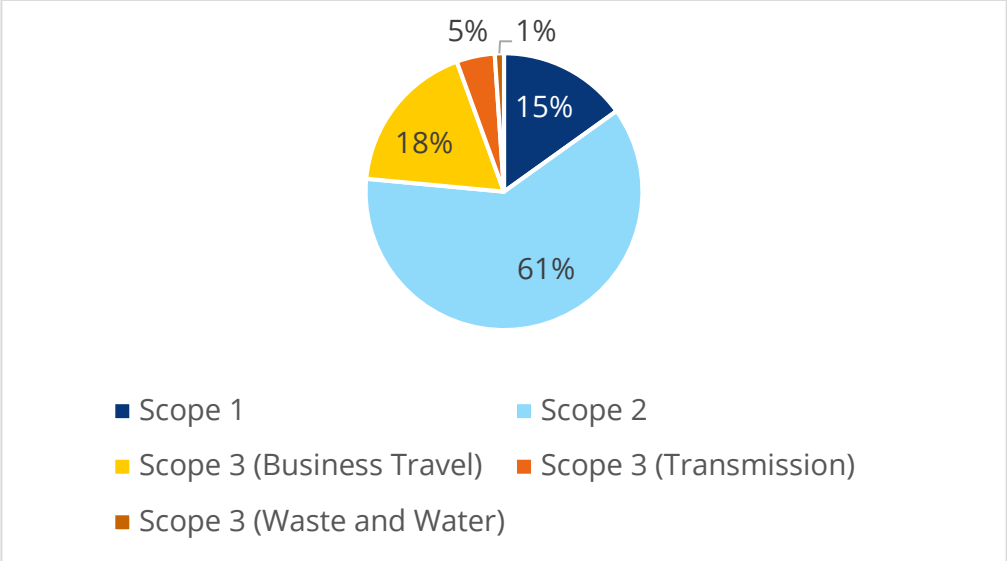
Since we completed our commitment to become climate neutral in 2009, we have reduced our absolute climate footprint by over 80,000 of metric tonnes of carbon dioxide equivalent.

The nine most significant countries for us as sources of emissions in 2016 were the US, the UK, China, South Africa, India, Australia, Brazil, Mexico and Canada which together account for over 94% of our climate footprint.



Our Approach

We measure greenhouse gas emissions (GHG) relevant to our business and express our total as an equivalent in metric tonnes of carbon dioxide, the main greenhouse gas (GHG). This is known as carbon dioxide equivalent (CO2e).



In our annual report, we disclose all of the emission sources required under the Companies Act 2006 (Strategic Report and Directors' Reports) Regulations 2013. These sources fall within our consolidated financial statement. We do not have responsibility for any emission sources that are not included in our consolidated statement.

Assurance

Our climate footprint has been verified by the specialist consultant, Corporate Citizenship. The assurance statement covers the methodology, data collection and accuracy of data reported. This statement is disclosed on our corporate website - www.pearson.com/corporate.

External reporting

In addition to this annual environmental review, we also publicly disclose our carbon management performance to the Carbon Disclosure Project (CDP).

5. Reduction

Our main motivation for adopting our commitment to become climate neutral is to reduce our carbon footprint. And, the commitment has worked. Over the last 7 years, we have reduced our global climate footprint by 40% driven by a stellar performance in the US where we have reduced our footprint by over a half (51%).

Prior to adopting the commitment, we reduced our absolute footprint annually by around 2% per annum, but in the last 7 years, our average annual rate of reduction was 6%.

We have adopted two flagship targets relating to energy use in our buildings and a second covering wider Greenhouse Gas emissions combining both buildings and travel.

2020 Sustainability Plan Targets	Baseline Year	2015	2016	% 2016 vs. baseline year
To reduce our Greenhouse Gas emissions by 50% by the end of 2020 using 2009 as the base year.	210,306 MT CO2e	146,493 MT CO2e	126,385 MT CO2e (down 13.7% on 2015)	-40%
To reduce energy use in our buildings on an absolute basis by 50% by the end of 2020 using 2013 as the base year.	285,590 MWh	215,177 MWh	201,041 MWh (down 7% on 2015)	-30%

Factors behind this performance include:

- Our accelerating investment in digital content and the related switch away from physical related infrastructure such as distribution centres is reducing our directly controlled footprint.

- New technology which is enabling more flexible and greater home working as well as reducing the need for business travel.

- The Green Fund as a mechanism to stimulate investment and innovation. Our portfolio of renewable energy generation projects across Pearson buildings is an example of what has been delivered.

- Continuing efficiencies implemented by the operations teams as well as strategies such as limiting business travel.

Case study: LUCID: Energy Monitoring System

We first introduced the LUCID energy monitoring system (EMS) in 2012 and it is now installed in buildings representing 16% of the total US buildings footprint. The Lucid EMS system provides "real time" data on electricity, water and gas consumption allowing facility managers to actively review their use more closely and work with local utilities to reduce usage and avoid additional peak usage charges.

In its first 3 years, utility costs were reduced by 12%, the payback period on the $76k invested was just two months and the project delivered $945K savings over three years. Nearly 8 million kwh of energy is now avoided annually at participating sites.

Renewable electricity: purchase

Our journey to purchase 100% renewable electricity started in 2008 and was completed in 2012. Our most significant focus area for us is our largest market, the United States. Pearson has consistently ranked in the top 50 largest purchasers of electricity from renewable sources in the United States and has twice received a Green Power Leadership Award from the US Environmental Protection Agency most recently in 2014.

RE100

During COP21 in Paris, Pearson announced that we had signed up to RE100, joining the then 50 companies helping build the market for renewable electricity. Our CFO explained our reason for joining as:

'This is the last generation that can take meaningful action against climate change. One practical step that business can take is through the purchase of electricity from renewable sources. Pearson has acted and we already purchase 100% of our electricity globally in this way. We are now pleased to join RE100 as by adding our voice alongside other businesses, we can help shift this important market.

Coram Williams, Chief financial officer

For more information on Pearson's commitment, visit http://there100.org/pearson.

Renewable electricity: generation

Our commitment extends to generating electricity from renewable sources at our sites. Our first renewable electricity project went live in December 2009. Over its lifetime the new solar panels on our building at Old Tappan in New Jersey is expected to produce electricity equivalent to 4,325 metric tonnes of C02e. To date, the Old Tappan solar panel project is generating 9% more than projected.

During 2011 we installed a wind turbine in Owatonna, Minnesota and completed a second solar panel installation project at our Cranbury Distribution Center in New Jersey. The Cranbury project was among the largest company owned single roof projects in the world. 2013 saw a further 260 kW of capacity installed at our buildings in Austin, Texas.

We have implemented two solar panel installation projects in South Africa. In 2016, one of these was sold as part of a wider initiative to reduce In-house distribution centre capacity. We have invested in excess of $10 million in renewable energy generation delivering the following capacity:

KW	2010	2011	2012	2013	2014	2015	2016
Solar							
Old Tappan	210	210	210	210	210	210	210
Cranbury		2000	2000	2000	2000	2000	2000
Austin				260	260	260	260
South Africa					100	105	5
Wind							
Owatonna		95	95	95	95	95	95
Total	210	2305	2305	2565	2665	2670	2570

Travelling on business

For essential travel, we've been encouraging our people to avoid flights wherever possible and we continue to lower the emissions relating to our car fleet.

- We have invested over $200k in upgraded video conferencing facilities in key buildings and introduced new virtual meeting technologies across the company.
- Globally, we aim to replace our fleet with hybrid and lower emission vehicles where possible. The number of hybrids in our global fleet increased from 33 in 2009 to 410 in 2016 (375 in 2015) and our aim continues to be to grow the number of hybrids in the fleet.

6. Offset

Whatever emissions we are not able to reduce or avoid are offset through a range of forest based projects. Through our efforts to reduce energy use and business travel, we reduced our climate footprint as at the end of 2016 by 13.7% compared to 2015. Our footprint for 2016 was 126,385 metric tonnes of carbon dioxide (CO2e). We avoided a further 77,579 metric tonnes through our global commitment to purchase electricity from renewable sources.

This left Pearson 48,807 metric tonnes to offset for 2016 to maintain our climate neutral status. We did this through partnerships such as with the Children's Tropical Forests UK, the Algoma Highlands Conservancy in Canada, the Woodland Trust in the UK and a new partnership in China.

- In the UK, we support Woodland Carbon offered by the Woodland Trust. Woodland Carbon was the first scheme to meet the UK's voluntary standard for woodland creation projects which sequester carbon. Our funding created over 20 hectares of new native woodland in Heartwood Forest in St Albans.

- In North America, our offset partner is Algoma Highlands Conservancy. The Algoma Highlands area in Ontario, Canada covers approaching 50,000 acres and our support is the anchor funding for the project. A wide variety of plants and wildlife species are being protected including rare plants and animals that are iconic to the Canadian wilderness - moose, bear, timber wolves, otters, woodpeckers and loons.

- In China, we have participated in the Jiangxi Province Le'an County Forest Farm Carbon Sink Project. This project conserves the forest from commercial logging. The tree species involved in the project are Chinese Fir and Slash Pine.

- The Children's Tropical Forests UK is our primary offset partner. For 2016, we have once again agreed to purchase and protect rainforest in Colombia adding to our commitment to protect rainforest in both Colombia and Costa Rica in previous years of the Pearson climate neutral commitment.

Since 2009, our climate neutral program has seen us protect over 1,450 hectares of forest.

7. Water, Waste and Packaging

Water

Our offices do not use water beyond basic needs - we set targets to reduce usage and it forms part of our climate footprint. We declare water usage data in our section on data.

Unsold product

We sell a variety of products. Most are paper-based in the form of books. Less than 1% of our sales are products such as CDs and DVDs. We are committed to recycling as much of our unsold product as possible. Sometimes this happens through industry-wide agreements whilst other initiatives are specific to Pearson.

Avoiding unsold product is a key business objective. Improvements in stock control and sales forecasting contribute significantly to reducing the amount of unsold product and to lower cost. Responsible disposal of unsold product is a significant environmental responsibility for us.

2010	2011	2012	2013	2014	2015	2016	%age change 2016 vs. 2015
98.5%	98.6%	98.7%	98.9%	98.9%	98.6%	98.6%	No change

Our target is to maintain our reuse/recycle rate for all unsold books in excess of 95%. This has been achieved since we set the target in 2003 and remains a target.

Packaging

We use a variety of packaging materials in the distribution of our products worldwide: cardboard, plastic, shrink-wrap and foamfill (a void filler). A particular objective for us has been to reduce the use of plastic and foamfill in favour of packaging based on natural materials. Our use of plastic has reduced by over 85% over the last seven years and foamfill use is over 50% less than 2004.

8. Supply Chain

Pearson is changing. Today, digital services and direct delivery together account for considerably over half our revenue and as they grow in importance so having a technology-related supply chain is reshaping our broad environmental footprint.

Nevertheless, it is our traditional paper-based products which continue to be the source of our most significant environmental impact. Pearson is a purchaser of paper for books, we have contracts with printers around the world as well as with distributors and shippers to bring our products to market.

Managing the environmental impacts arising from our supply chain was first identified as a priority for Pearson over a decade ago and has continued ever since. Including environmental responsibility as a contract requirement defines the nature of the relationship that we seek to build with our suppliers. In our contracts, we outline the standards of performance that we expect from our suppliers as well as the commitments we make as a responsible purchaser. The

standards we set our suppliers reflect the standards that we set for ourselves. Pearson introduced specific environmental clauses for inclusion in key contracts agreed from 2002 onwards.

These clauses were reviewed following supplier feedback and the introduction by Pearson of a Code of Business Conduct. We now have a companion Business Partner Code which sets out the expectations we have of suppliers on environmental responsibility.

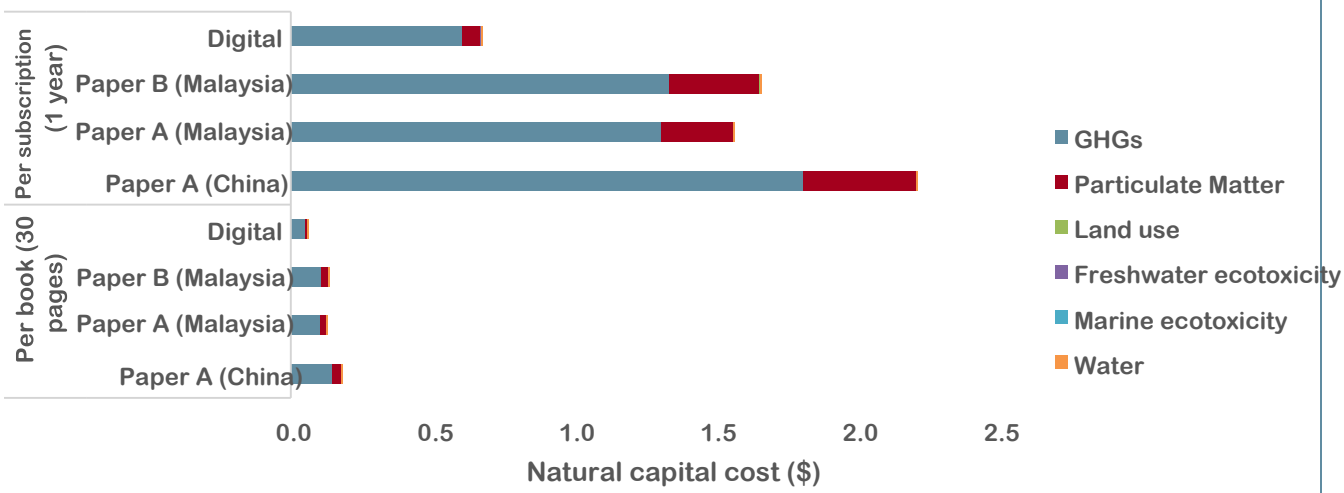
In line with our commitment to climate neutrality, we started the process of measuring and assessing product carbon footprints. Our first product footprint completed last year covered the Financial Times and FT.com. We followed that footprint

Bug Club

Bug Club is a whole school reading programme for primary schools. It comprises books and an online reading world designed to help build a love of books and confident young readers. As Bug Club combines digital and print components, it was a perfect case study for a life cycle analysis. Trucost, the specialist environmental consultancy carried out the analysis. As far as we are aware, this is a first lifecycle analysis of a learning programme.

The scope of the analysis covered Greenhouse Gas emissions, air and water pollution, freshwater consumption and land use change. The analysis used life cycle assessment to assess resource use and potential environmental impacts from raw material use / device manufacture, production, distribution and reading. It

The analysis reviewed the impact of different papers and printers used for the physical product as well as the impact of digital readers accessing books through desktop, tablets or smartphones. The results were expressed in terms of a natural capital cost.



This report highlighted supply chain water risk as an area for further study.

Paper

Paper was traditionally the single most material environmental issue for Pearson reflecting our average purchase of some 300,000 metric tonnes each year –approximately 6.5 million trees.

As part of the wider shift to digital at Pearson, the materiality of paper purchase has massively reduced and both 2015 and 2016 saw a significant acceleration of that trend. We purchased 43,000 metric tonnes of paper in 2016 for our core and growth markets.

Key factors behind this reduction alongside the shift to digital are the transfer of paper purchasing responsibility in North America to LSC Communications, the sale of the FT Group and the establishment of Penguin Random House.

Nevertheless, paper remains an important environmental issues reflecting global concern about deforestation and illegal logging – something that has been made easier to identify by developments in fibre testing which allows easy analysis of book papers by tree species. This focus is driven by the loss of natural forest cover as one of the biggest global sources of greenhouse gases accounting for 20% of global emissions or 10 times the emissions relating to air travel.

As well as reduced paper purchase, we achieved some key milestones in 2016:

- Pearson in the UK retained Chain-of-Custody accreditation by the Forest Stewardship Council (FSC). This means that Pearson product can carry the FSC logo.
- Core and Growth has over the last 2 years more than doubled the volume of paper purchased carrying the highest sustainability rating (FSC or equivalent certified).

Printing

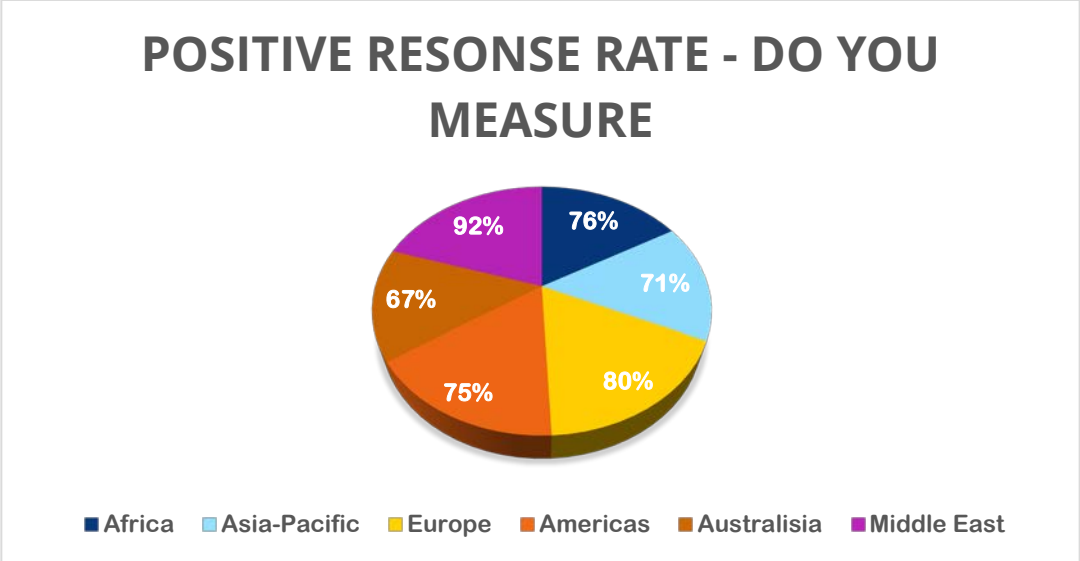
Following the disposal of a small printing press as part of the Financial Times sale in November 2015, Pearson no longer directly prints product. As such, we do not consider emissions to water as an issue for our own company reporting.

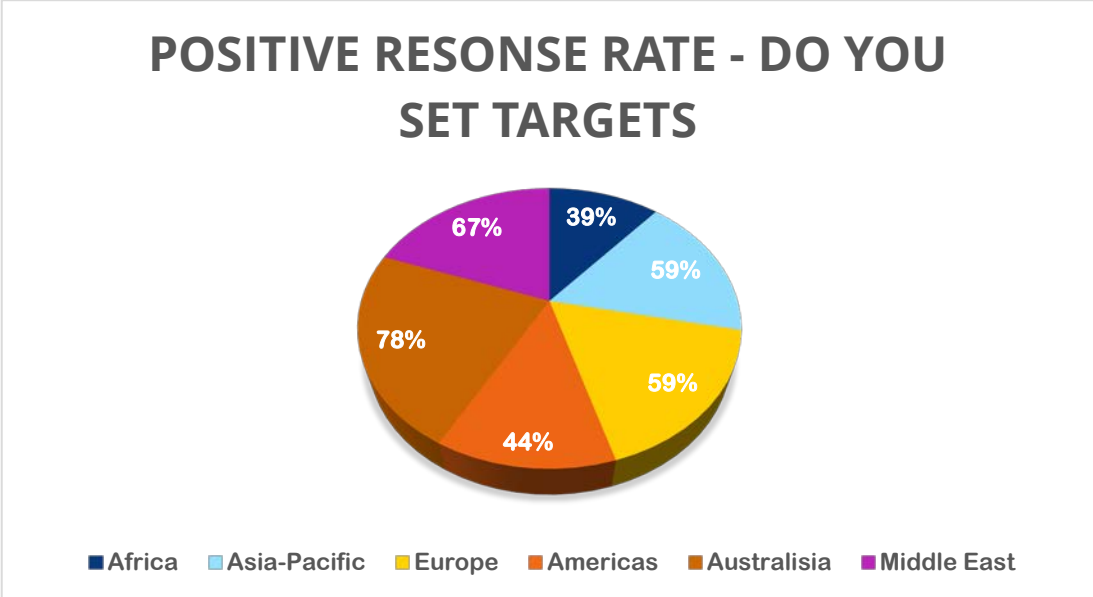
However, emissions to water are an issue facing our third-party printer partners. We see our responsibility as being to exert a positive environmental influence over the practices of our printers.

In 2003, we first set up a central register of key paper suppliers and outsourced printing relationships. This register provides Pearson with a picture of the environmental performance of its printers. The register includes over 90% of our printers by value. We survey our global printers every two years. The survey covers:

- Whether the printer uses a recognised system for environmental management.
- Measurement and reduction policies for water, ink, solvents, alcohol, energy and waste.

The survey was last completed in 2015. The overall results were as follows:





We continue to be concerned that the release of Volatile Organic Compounds (VOCs) which are present in inks and solvents are managed effectively and where possible reduced. We encourage our printers to introduce and operating companies continue to monitor reduction targets for VOCs as part of the work above.

Our production departments continue to use our vendor relationship management system which incorporates both environmental and labour standards data together with commercial data.

During 2016, Pearson people undertook visits to existing and potential printers in the US, the UK, China and Malaysia. These visits provided an opportunity for Pearson to review performance standards in areas including environmental responsibility, health & safety, labour standards and human rights. The findings and issues identified have been discussed with our printers and are being managed as part of our normal commercial relationships.

Distribution

Our books are produced around the world, requiring shipment from the printers to our distribution centres. We outsource road distribution and shipment of our products to third

party carriers. We have worked with suppliers on consolidating shipments to maximise container loads and monitor environmental performance as part of the contractual arrangements. We have an internal reporting process by facility.

9. Engaging employees

Climate change affects us all. It requires leadership and vision to address and we all have a role to play. As most of our people work in offices, test and learning centres or in data centres, Pearson has a relatively small and reducing environmental footprint. However, we can have a much more significant impact through informing, engaging and inspiring the thousands of people who work for us and with us, and the millions who learn with us every day:

- Planet Pearson, our dedicated green space is available to our employees globally. Planet Pearson is a way for Pearson people to share ideas, thoughts and to collaborate wherever they are in the world. The space provides ideas for carbon reduction, links to local green groups and access to performance reports.
- We have around 20 Green Teams in place in Pearson in buildings in the UK and the US along with country-wide teams in Canada, Australia & South Africa.

10. Green products - engaging learners

Climate change matters to our businesses. Our operating companies continue to respond to the climate neutral challenge by developing and investing in environmental products and services:

- Pearson is market leader in the Higher Education environmental science textbook market with a 40% market share. We also offer Mastering Environmental Science, a collection of online homework, tutorial, and assessment products. Across the Environmental Science list, around 29,000 students are registered for the product.
- We are also a strategic learning partner for the US Green Buildings council (USGBC) and are working together to create learning materials and courses.
- Over the last 25 years, BTEC qualifications in the UK have offered a vocational pathway into employment or further study. As part of a wider suite of qualifications on sustainability skills, the BTEC Level 3 National in Environmental Sustainability was offered from September 2011. This offers learners aged 16 to 19 interested in sustainability clear progression pathways into employment or into Higher, Specialist and Professional courses. Over 200 learners studied for BTEC qualifications in 2016.

11. Commitments and Targets

Our main environmental commitment is to be a climate neutral company for our directly controlled operations. First achieved in 2009, this means that we commit to reduce or offset our global Greenhouse Gas emissions by 100% each year for our existing operations excluding acquisitions made during the year.

Where it is not possible to reduce our emissions by other means, we purchase carbon credits. We have now continued this commitment into 2016. Pearson adopted a new baseline for data in 2009.

Last year, we introduced new areas of focus for Pearson. Our progress is as follows:

Focus areas	Targets	Progress
Carbon footprinting	Look beyond direct emissions to capture impacts across the digital and physical value chain.	Completion of an online tool to assess the footprint of the physical product from forest to distribution centre. Completion of our first product mapping for Bug Club covering both physical and digital footprint
Low-carbon economy	Continue to invest in energy efficiency and renewable energy in order to remain carbon neutral	Maintained. Pearson remains powered by 100% renewable electricity. Also partnering with Operations on a global energy optimization project that will map the opportunity for further energy savings in our largest 60 buildings.
Suppliers	Investigating whether 100% of data centres are supplied by clean energy	Early days, work underway. Presented on the issue to Global Procurement. Not a priority for 2017.
'Mindprint'	Establish targets, key initiatives and/or partnerships to enable learning and skills development linked to specific sustainability challenges	Conversations are underway with WWF and the US Green Building Council on the development of revenue generation ideas.
Circular economy	Closing the loop on all products and services by 2020 (zero waste to landfill)	Recent changes to the business model in North America HE Courseware is relevant here. We plan to explore whether there is an environment dimension to this commercial move.

In addition, to these broad themes, we have a number of other targets:

Target 2016	Progress	Plans for 2017 and beyond
Review green team strategy In 2017.	Green team numbers fell to under 20 reflecting changes in the organisational structure.	We will now review the green team strategy in 2018 to allow the 2017 programme of cost savings to be completed.
Introduce total carbon footprint reporting.	Achieved. Tool in place - we will report further on this later this year.	Introduce total carbon footprint reporting.
Maintain our position in the indices of social responsibility	Achieved. Pearson improved from Bronze to Silver status in the Dow Jones Sustainability Index and was again named as one of the Global 100 most sustainable corporations in the world.	Maintain our position in the indices of social responsibility

Target 2016	Progress	Plans for 2017 and beyond
To reduce energy use in our buildings on an absolute basis by **50%** by the end of 2020 using 2013 as the base year	On track. We reported a 30% absolute reduction on 2013 levels in 2016.	To reduce energy use in our buildings on an absolute basis by **50%** by the end of 2020 using 2009 as the base year
To reduce our absolute Greenhouse Gas emissions by **50%** by the end of 2020 using 2009 as the base year.	On track. We reported a 40% absolute reduction on 2009 levels in 2016.	To reduce our absolute Greenhouse Gas emissions by **50%** by the end of 2020 using 2009 as the base year.
Maintain passenger km per employee rate at 2015 level.	Achieved. We reduced passenger km per employee rate by 10%	Maintain or reduce passenger km per employee rate based on 2016 levels.
Maintain our reuse/ recycle rate for all unsold books in excess of 95%	Achieved.	Maintain our reuse/ recycle rate for all unsold books in excess of 95%
Using 2014 as our new base year, our stretch target is to reduce absolute water use across the company by 30% per square metre of occupied space by the end of 2018	Achieved. We reduced water use 42% per square metre in 2016 based on our 2014 baseline.	Using 2014 as our new base year, our stretch target is to reduce absolute water use across the company by 60% per square metre of occupied space by the end of 2020
Maintain our commitment to purchase green electricity in 2015	Achieved. Pearson is also a member of RE100.	Maintain our commitment to purchase green electricity in 2016
Target 450 hybrid vehicles in the Pearson fleet in 2016	Not achieved. The number of hybrids fell to 409 vehicles from 448. Our overall fleet size fell by 5%.	Target 450 hybrid vehicles for the Pearson fleet in 2017
Continue our drive for independently verified certification for the papers we use.	Achieved. Pearson in the UK retained FSC Chain of Custody accreditation	Continue our drive for independently verified certification for the papers we use.

Target 2016	Progress	Plans for 2017 and beyond
Develop a global facilities management handbook.	Not achieved. On hold given organisational change.	Add a further building to be certified against Leadership in Energy and Environmental Design (LEED)

12. Data and trends

Pearson has been collecting and reporting on its environmental impact since 2002. In 2007 we adopted a commitment to become climate neutral. We report here on our absolute environmental impact for the entire global business for the period 2009 to 2016.

Environmental reporting measures

	Units	2009	2010	2011	2012	2013	2014	2015	2016
Net internal area of reporting offices	m2	1,360,151	1,443,347	1,262,440	1,357,822	1,425,320	1,393,954	1,208,954	858,237
Full-time employees (in scope)	FTE	37,164	35,978	41,520	48,500	42,115	40,876	37,265	32,719

Energy Consumption

Measure	**Units**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
Total Electricity Consumption (including from renewable sources)	MWh / year	258,114	204,438	198,190	218,410	215,460	186,356	162,916	154,910
Total Electricity Consumption (from renewable sources only)	MWh / year	170,229	170,712	166,896	218,410	215,460	186,356	162,916	154,910
Total Gas Consumption	MWh / year	122,153	78,742	72,884	64,462	66,375	57,144	48,760	45,855
Total Fuel Oil Consumption	MWh / year	7,033	6,533	3,517	1,927	3,755	114	3,500	276
Total Energy Consumption	MWh / year	385,836	289,714	269,391	284,800	285,590	243,614	215,176	201,041
Total Energy Consumption/ employee	MWh / employee	10.4	8.1	6.5	5.9	6.8	6.0	5.8	6.1

Business Travel

Measure	Units	2010	2011	2012	2013	2014	2015	2016
Air	Passenger km	219,056,753	242,830,342	255,072,031	235,743,104	193,259,356	207,822,988	163,722,174
Rail	Passenger km	3,833,674	3,924,710	4,711,264	3,682,392	937,647	4,374,643	7,496,013
Road (distance)	Km / year	9,930,039	7,284,921	3,486,138	6,735,312	6,356,549	1,447,092	64,318,474
Road (fuel use)	litres	6,336,425	5,815,052	6,120,706	5,849,850	5,312,226	4,894,843	0
Road (derived energy)	MWh						43,889	45,071

We collect and report business travel air data where there is a centralised agency in the US, the UK, Australia, Brazil, Canada, China (including Hong Kong), India, Indonesia, Japan, Malaysia, Netherlands, Singapore, South Africa, South Korea, Spain, Taiwan and Vietnam which together account for around % of total full-time employees. Three new countries – Brazil, Indonesia and the Netherlands were added to our centralised agency support in 2015.

Greenhouse Gas Emissions

Measure	Units	2009	2010	2011	2012	2013	2014	2015	2016
Direct (Scope 1)	Tonnes CO2e	44,649	35,739	35,806	31,095	30,170	25,027	22,343	19,093
Indirect (Scope 2)	Tonnes CO2e	130,395	122,189	114,730	128,542	115,548	104,715	88,381	77,579
Other (Scope 3)	Tonnes CO2e	4,375	3,523	5,276	2,782	1,381	1,724	1,044	1,359
Electricity transmission (Scope 3)	Tonnes CO2e					10,538	8,204	8,345	5,647
Business Travel (Scope 3)	Tonnes CO2e	30,887	33,913	28,719	32,336	31,055	22,740	26,255	22,708
Total	Tonnes CO2e	210,306	195,364	184,531	194,756	188,692	162,410	146,368	126,385
Total GHG/ FTE	Tonnes CO2e/FTE	5.66	5.43	4.44	4.02	4.48	3.97	3.93	3.86

The method we use to calculate GHG emissions is the GHG Protocol Corporate Accounting and Reporting Standard (revised edition), together with the latest emission factors from recognised public sources including, but not limited to, Defra, the International Energy Agency, the US Energy Information Administration, the US Environmental Protection Agency and the Intergovernmental panel on Climate Change. In line with the GHG Protocol, we report

on all our Scope 1 and 2 emissions and include the optional element for emissions relating to business air and rail travel.

- Scope 1: All fuel used in our buildings and in company vehicles plus refrigerants
- Scope 2: Electricity used in our buildings drawn from grids where we do business
- Scope 3: Emissions relating to air and rail travel, electricity transmission, waste and water

Paper

	Units	2009	2010	2011	2012	2013	2014	2015	2016
Paper used	MT	338,993	338,103	319,557	287,452	194,760	152,181	132,551	43,027

We also prepare a separate **report** on the paper we purchase for use in our books.

Waste

	Units	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
Total Waste to Landfill	MT	5,508	3,834	9,097	7,134	3,273	2,005	1,112	1,249
Total Waste to Landfill/FTE	MT/ FTE	148	107	221	147	73	49	30	38

Water

	Units	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
Total Water Consumption	m3	604,822	528,873	678,256	1,154,106	1,474,077	1,014,268	526,297
Total Water Consumption/FTE	m3 / FTE	17	13	14	26	36	27	16

Legal Compliance

	2009	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
Reported Environmental Prosecutions	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil

13. Useful contacts

If you have any questions on the environmental review, please contact:

Peter Hughes
Director, Sustainability
Pearson plc
80 Strand,
London WC2R 0RL
Email: peter.hughes@pearson.com
Telephone: +44 20 7010 2249