

A final policy report by

OAKDENE HOLLINS

RESEARCH & CONSULTING

UK Assessment of Footprinting Methods

Ref: 20376

This policy report summarises research undertaken on the environmental footprinting methodologies used by UK business sectors. Over 80 companies completed a stakeholder survey covering which and how many methodologies are used, and what are their costs and benefits. The evidence collected will be used to inform Defra policy at UK and European level. Further supporting information can be found in the technical report.

For Defra, March 2015

UK Assessment of Footprinting Methods

Ref: 20376

Science-led
research

Value-driven
consultancy

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Contents amendment record

This report has been amended and issued as follows:

Version	Date	Description	Authors	Editor
1	06/02/15	Draft Policy Report	PW	PV
2	10/02/15	Revised Policy Report	PW	PV
3	25/02/15	Final Policy Report	PW	PV
4	03/03/15	Final Policy Reportv2	PW	PV

Glossary of abbreviations

B2B	business to business
B2C	business to customer
CCA	Climate Change Agreement
CDP	Carbon Disclosure Project
Defra	UK Government Department for Environment, Food and Rural Affairs
EC	European Commission
EPD	Environmental Product Declaration
EU	European Union
EU ETS	EU Emissions Trading System
GHG	greenhouse gas
ILCD	International Reference Life Cycle Data System
ISO	International Standards Organization
ITU	International Telecommunication Union
LCA	lifecycle assessment
OEF	Organisation Environmental Footprint
OEF SR	Organisation Environmental Footprint Sector Rules
PAS	Publicly Available Specification
PCRs	Product Category Rules
PEF	Product Environmental Footprint
PEFCR	Product Environmental Footprint Category Rules
ROC	Renewables Obligation Certificate
SME	small to medium sized enterprise

Acknowledgements

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Industry Stakeholders

We would like to thank the large number of industry stakeholders who have generously participated in this project, by participating in the industry survey or attending the stakeholder workshop (a list of organisations can be found in the technical report).

We would also like to thank the industry association representatives who kindly distributed the survey among their membership.

1 Executive Summary

The European Commission (EC) is trialling a common approach for conducting product and organisational environmental footprints (PEFs and OEFs). This report sets out a UK evidence base for assessing the relevance of these EC initiatives to UK business.

Footprinting is an approach for measuring the environmental performance of a product or organisation. There are many different footprinting methods currently being used: some target particular environmental impacts (e.g. carbon footprinting, water footprinting), whereas others are adapted for particular products and organisations.

A number of environmental footprinting methodologies are used by UK businesses. However, little research has been undertaken on their level of uptake, costs and benefits. This project aims to address this knowledge gap to help inform future UK policy. A survey – in which more than 80 businesses across a range of sectors participated – provides most of the evidence gathered in this study. A project workshop was also held.

The key research questions addressed in this study are:

- Are UK businesses using footprinting methodologies?
- If so, are they using multiple methods?
- Which footprinting methodologies are being used?
- What benefits do companies realise from footprinting?
- What potential benefits would a single methodology offer?

From a policy perspective, one of the key research questions was to investigate the extent to which companies are using more than one footprinting method to assess the environmental performance of their products or organisation, such as to comply with country-specific regulations. The concern here is that the lack of standardisation of methodologies may be imposing an additional burden of cost to UK businesses.

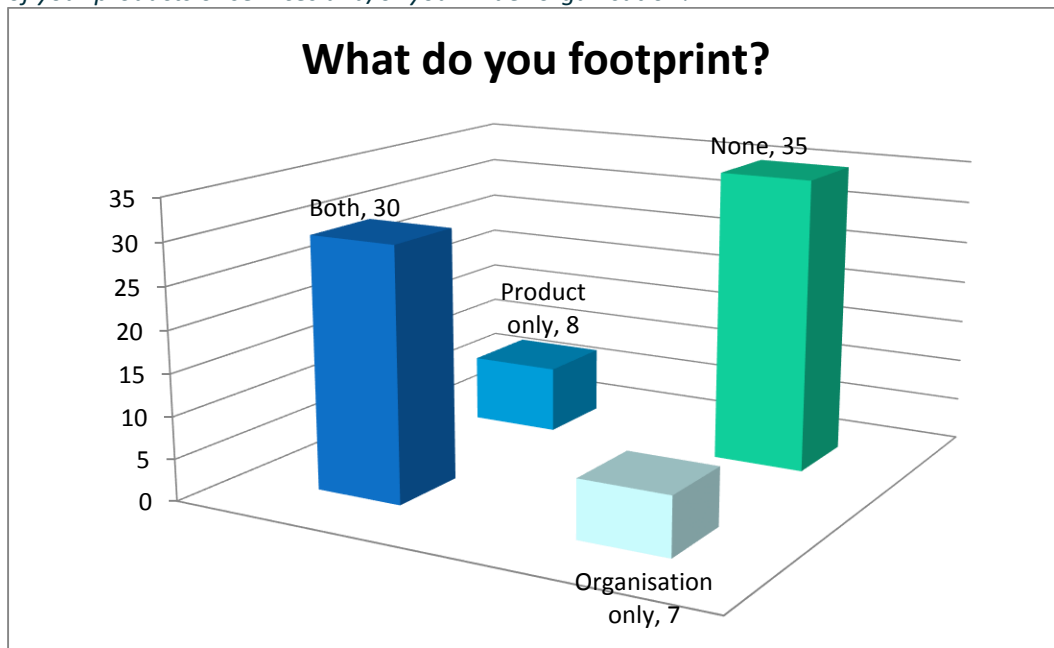
The EC identifies that harmonising methods could deliver cost savings for those businesses using multiple methods, as well as achieving improved opportunities for cross-border trading of green products, greater clarity of consumer choice and improved resource efficiency. This study tested the premise behind these identified cost savings and benefits.

Are UK businesses using footprinting methodologies?

The study has shown that there is a high level of support amongst UK businesses for the usefulness of footprinting methods, especially for identifying environmental hotspots in the supply chain and within the business, and to prioritise action to mitigate these impacts. The survey findings showed that nearly 60 % of those participating in the survey are currently using footprinting methods. Most of these are using footprinting methods to assess the environmental impact of both their products and their organisation (Figure 1).

The results also clearly showed that the larger the business the more likely it is to use a footprinting method – around 30 % of small and medium-sized enterprises currently use footprinting methods, compared to more than half of large enterprises. This is unsurprising given the skills and costs involved in performing footprinting.

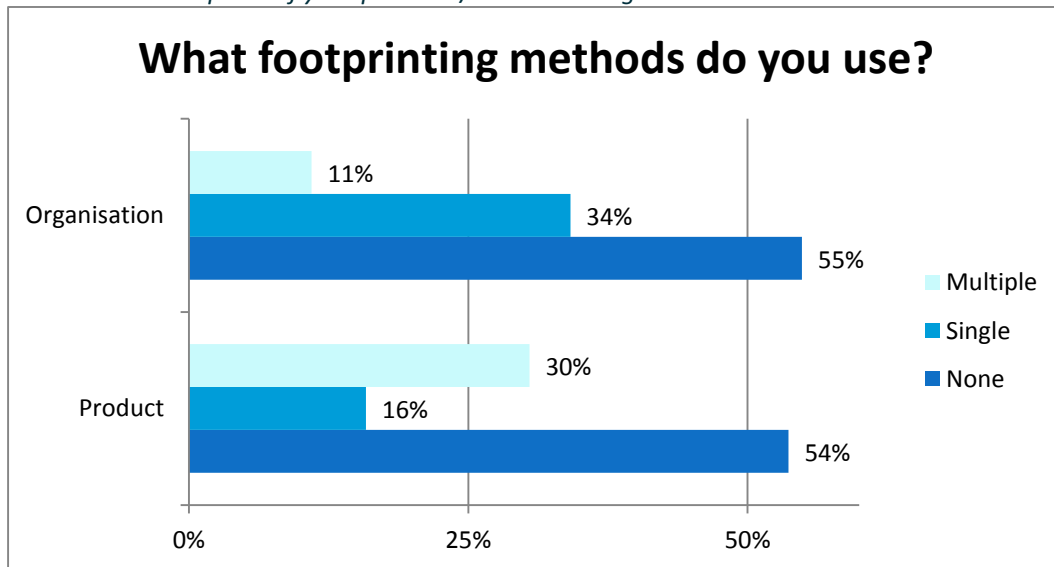
Figure 1: Does your business use footprinting methods to assess the environmental impacts of your products or services and/or your wider organisation?



Are UK businesses using multiple footprinting methods?

The research that found some businesses are applying multiple footprinting methods, particularly to assess the environmental impact of their products. The survey revealed that 30 % of businesses use more than one method for assessing the environmental performance of their products, and around 10 % use more than one method to measure the environmental impact of their organisation (Figure 2). Some companies even reported using more than one footprinting method to assess the environmental impact of a single product.

Figure 2: Does your business use single or multiple footprinting methods to assess the environmental impacts of your products/services or organisation?



Which footprinting methodologies are being used?

The survey found a greater emphasis on carbon footprinting, compared to more holistic environmental footprinting approaches in which other impact categories are considered. Businesses commented that each of the different methodologies had its advantages and disadvantages, and that the choice of method depended upon the question of interest and the company's overall objectives. The methods were often tailored to meet their needs.

What benefits do companies realise from footprinting?

Businesses were also asked about the main costs and benefits of environmental footprinting. Most of the businesses surveyed do not formally quantify the costs and benefits of using footprinting methods. This study therefore indirectly made an assessment:

- Staff: Nearly 90 % of the companies indicated that they have fewer than ten members of staff - or even none - responsible for footprinting within the UK.
- Trade: None of the companies surveyed identified any markets or regions where trade had been affected by not using a relevant footprinting method or label.
- Clarity of choice: The survey provided some evidence that using environmental footprinting provided improved clarity of choice to business-to-business (B2B) customers in particular, but also to business-to-consumer (B2C) customers.
- Resource efficiency: Over 80 % of the companies using footprinting methods felt that this had an impact on their resource efficiency efforts.

The major benefits for environmental footprinting included identifying the environmental hotspots and bringing companies together along supply chains. This allows companies to target their resource efficiency efforts and deliver improvements. Intangible benefits from footprinting include enhanced brand reputation and greater staff retention.

Companies also reported that the cost of undertaking multiple methods was considered to be relatively small compared to that of gathering the necessary data.

What potential benefits would a single methodology offer?

Finally, businesses were asked whether the UK should transition to using only the European Commission's product and organisational environmental footprint methodologies. At the workshop it was clear that there was a range of opinions on this.

Businesses thought that – while a having single footprinting methodology was conceptually attractive – in practice, implementation might be quite challenging to realise. Many of the companies surveyed were not in favour, and those companies that did support having a single methodology wanted to make the transition on a voluntary basis. The greatest benefits from the single methodology, currently proposed by the EC, might be providing free secondary data, which could help reduce the cost of footprinting and increase uptake.

From a UK policy perspective, Defra is encouraged to remain actively involved as a stakeholder in the European pilots, to keep using its influence at EC level, and to ensure that footprinting initiatives remain voluntary. Defra could also have a role in bringing together specific sectors to develop harmonised industry-relevant guidelines (e.g. the Sustainable Clothing Action Plan) and to ensure the accurate communication and interpretation of the results of footprinting, e.g. along the lines of the Green Claims Guidance.

2 Conclusions and Recommendations

Take-up of footprinting

A survey – in which more than 80 businesses participated – provides most of the evidence presented in this study. The scope of this research extends to the UK business sectors that fall within Defra’s sustainability policy remit. The survey results showed that the majority of companies participating in the survey (nearly 60 %) currently use footprinting methods.

The survey results also clearly showed that the larger the business the more likely it is to use a footprinting method; around 30 % of small and medium-sized enterprises currently use footprinting methods, compared to more than half of large enterprises. This is not surprising given the skills and costs involved in conducting footprinting.

The research found that some businesses use multiple footprinting methods, particularly to assess the environmental impact of their products (30 %). Some companies even use multiple footprinting methods to assess the environmental impact of the same product (13 %) or of their organisation (11 %). Companies noted that the objectives and purpose of the different methodologies vary, leading to multiple methods being used.

The take-up of environmental footprinting methods was identified to be highest in the chemicals, electronics and utilities sectors, with over 80 % of the companies in these sectors using footprinting methods. This is in contrast to the less than 50 % of businesses in the food and drink, textiles and services sectors that currently use footprinting methods.

The survey also found a much greater business interest in carbon footprinting methods, notably UK PAS 2050 and GHG Protocol. Fewer companies seem to be using more holistic environmental footprinting approaches in which several impact categories are considered.

Other research in the literature finds comparable estimates for the take-up of footprinting-type initiatives. However, we note that there may be differences in how industry, government and academics define footprinting.

Costs and benefits

In most sectors footprinting is conducted on a voluntary basis, although many companies do not formally quantify the costs and benefits of using footprinting methods. This is in part due to the many intangible benefits offered, such as brand reputation and staff retention.

Companies reported that the major cost associated with environmental footprinting was in gathering the necessary data. This includes staff time and data licence costs. In contrast, the cost of undertaking multiple methods was considered to be relatively small, as this often involves re-analysing the data in a slightly different way. Companies supplying intermediate goods to multiple industries (with differing footprinting requirements) appear to have more to gain from harmonised methods than those supplying finished products.

The major benefits of footprinting were identified as highlighting the environmental hotspots and bringing companies together along supply chains. This allowed companies to target their resource efficiency efforts and deliver improvements. Over 80 % of the companies using footprinting methods felt that this had an impact on their resource efficiency efforts.

Strikingly, with the exception of a few anecdotal examples, none of the companies surveyed identified any markets or regions where trade had been affected by not using a relevant footprinting method or label. This finding was somewhat surprising, although the prospect of fragmented EU member state requirements seems to be receding, and international companies have always had to deal with some differing consumer preferences in the EU.

Policy implications

The companies surveyed recognised, in principle, some of the benefits that might arise from having harmonised footprinting methods, although they also recognised the challenges in achieving this. Some sectors are already undertaking this work: for example, the Sustainable Clothing Action Plan (SCAP), the Sustainability Consortium, and ITU Telecommunication Standardization.

The study finds limited evidence for the benefits promoted by the EC, such as encouraging cross-border trade and delivering savings to businesses currently applying multiple methods. In addition, companies were sceptical about the added value of a single EC method, and whether this would lead to any further resource efficiency savings to those already achieved.

Some key benefits that might be achievable from harmonisation include:

- Expanding the coverage of environmental footprinting to more companies by bringing sectors together; this will lead to additional resource efficiency savings being realised.
- Improving consumer choice, especially for business-to-business customers, by allowing better comparability of products and organisations, with agreed category rules.
- Reducing the cost of footprinting (thereby boosting the demand from businesses), through providing access to free secondary lifecycle data and harmonising differing reporting requirements, e.g. regulatory and public procurement.

Recommendations

From a UK policy perspective, the companies encouraged Defra to remain actively involved as a stakeholder in the European pilots (UK has active membership of the EU footprinting pilots' Steering Committee and the Technical Advisory Board through WRAP). In particular, companies encouraged Defra to keep using its influence at EC level to ensure that footprinting remains a voluntary initiative for business rather than becoming mandatory.

Two other possible policymaking roles were identified:

- Helping to bring specific sectors and trade bodies together to develop harmonised industry-relevant guidelines and reporting for environmental footprinting. (A notable example of this happening is SCAP.)
- Helping to ensure the accurate communication and interpretation of the results of footprinting. This links in with existing work on Defra's Green Claims Guidance and the Multi-stakeholder Dialogue on Environmental Claims (MDEC).

Research limitations

We recognise that the survey may be slightly skewed by the sample of the participants. In particular, the target sectors are primarily end-user sectors, and the survey focussed entirely on businesses rather than on consumer or environmental groups. It is also thought that those companies most interested in footprinting were those more likely to participate. There was also notably more emphasis placed on footprinting products than organisations.

3 Introduction

Footprinting is an approach for measuring the environmental performance of a product or organisation. There are many different footprinting methods currently being used; some target particular environmental impacts (e.g. carbon footprinting, water footprinting), whereas others are adapted for particular products and organisations.

The European Commission (EC) is currently trialling a methodology for the lifecycle assessment of product and organisational environmental footprints (PEFs and OEFs). The EC intends these methodologies to replace and harmonise the numerous approaches currently being used across Europe.¹ There are also UN/global efforts which seek to harmonise the approaches used for environmental hotspot analysis.²

A number of environmental footprinting methodologies are used in the UK, and businesses also subscribe to numerous UK- and European-level labelling systems. Little research has been undertaken regarding the potential costs and benefits to UK industry of a single, European-level methodology. This project aims to address this knowledge gap; its outputs are expected to help inform future UK policy initiatives.

Aims and objectives

The aims and objectives of this research are to investigate the environmental footprinting methodologies being used by a range of important business sectors.

Key research questions in this study include:

- Are UK businesses using footprinting methodologies?
- What benefits do companies realise from footprinting?
- Which footprinting methodologies are being used?
- Are UK businesses using multiple footprinting methods?
- What potential benefits would a single methodology offer?

Among the costs and benefits considered in the study are:

- costs/savings to business on applying multiple footprinting methodologies
- improved opportunities for cross border trading of green products
- clarity of consumer choice
- improved resource efficiency.

These were the main benefits that the EC expects will come from harmonised methodologies, as identified by its 2012 impact assessment.³

¹ European Commission Communication (2013), Building the Single Market for Green Products Facilitating better information on the environmental performance of products and organisations – COM/2013/0196 final

² UNEP/SETAC Life Cycle Initiative – Flagship Project 3a (Phase 1) (Dec 2014), Hotspots Analysis: mapping of existing methodologies, tools and guidance and initial recommendations for the development of global guidance

³ European Commission (2012), Impact Assessment accompanying Communication “Building the Single Market for Green Products: Facilitating better and credible information on environmental performance of products and organisations”

Policy and Research Context

Environmental footprinting involves measuring the absolute environmental impact(s) of an organisation or a product (good or service) in a specified application over its full lifecycle.

These impacts include carbon footprinting; however, environmental footprinting may involve measuring a wider range of environmental impacts. Life cycle assessment (LCA) is the main process that underpins environment footprinting. It provides a comprehensive evaluation of the environmental impacts associated with a product/service. All phases of a product's life are considered, including manufacturing, use and disposal, i.e. cradle-to-grave.

Over the last few years, many initiatives aiming at measuring environmental performance of *products and organisations*, and based on a lifecycle approach, have been launched by international public and private bodies. The list below is not exhaustive:

Table 1: List of major footprinting methods

Product Footprinting Methods	Organisational Footprinting Methods
ISO 14044 (Global)	ISO 14064 (Global)
ISO 14046 (Global)	Global Reporting Initiative (Global)
ISO 14067 (Global)	CDP Water Disclosure Project (Global)
International Reference Lifecycle Data System (Global)	International Reference Lifecycle Data System (Global)
GHG Protocol (Global)	GHG Protocol (Global)
PAS 2050 (UK)	Defra Guidance (UK)
BPX 30-323 (France):	Bilan Carbone (France)

The development of so many initiatives shows that there is, at different levels, a growing interest and demand for more guidance for the environmental assessment of products and organisations, and that this growing interest is being serviced. However, the development of multiple, uncoordinated initiatives at different geographical and sectoral levels could bring heterogeneity to the field of lifecycle-based environmental assessment, creating confusion, cost or simply inaction for economic operators, NGOs, and other stakeholders.

These concerns have led the EC to plan to introduce common Europe-wide methodologies for assessing the environmental impacts of products and organisations. The EC document *Building the single market for green products* covers the landscape of existing lifecycle methodologies, the way in which those methodologies are used, an evaluation of policy options, and an analysis of benefits and impacts of a single European-level method. A key concern is the need and growing expectation to provide consumers with information on the environmental credentials of products. From a business perspective, the EC comments that a company wishing to market its product as 'green' in several Member State markets might find it needs to apply several methods to prove the product's green credentials.

There are 27 European footprinting pilots ongoing: 25 for products (11 for food and drink products) and 2 for organisations, across two waves. These pilots involve nearly 800 individual stakeholders (10 % SMEs, 30 % large companies and nearly 20 % sector associations). Their purpose is to 'level the playing field' for companies by having the same calculation rules, verification process for footprinting and similar requirements and communication. After the pilots are complete, the EC will evaluate their results in 2017, and consider future policy proposals.

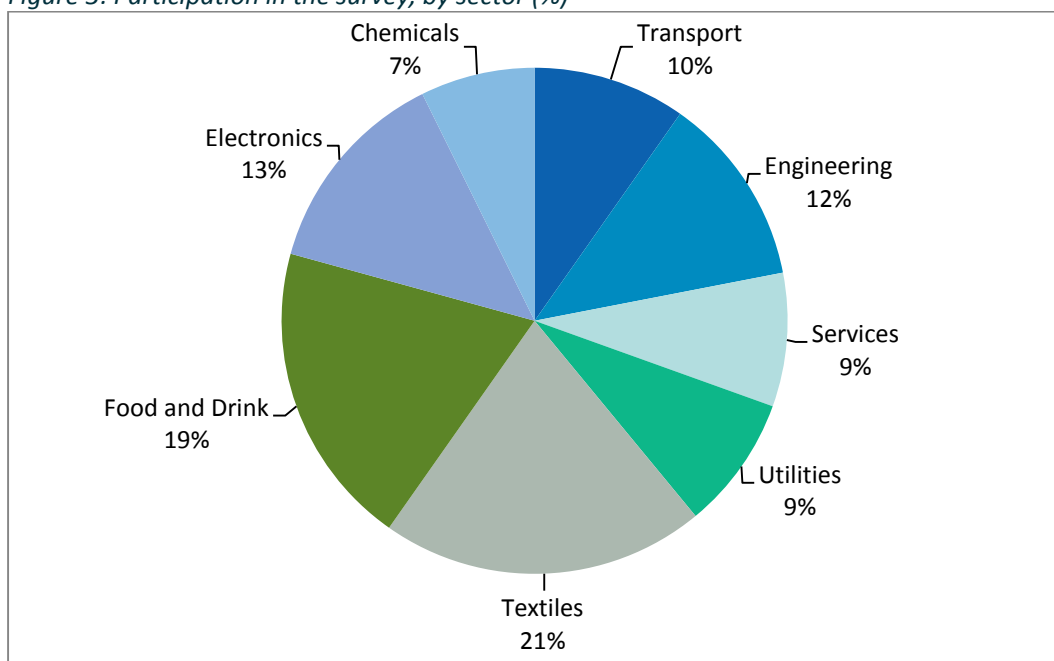
Research Methodology

The project was conducted over a one-year period (January to December 2014). The project began with an exploratory stage, including a literature review and structured interviews with business representatives from the target sectors. One study from Pure Strategies, *The Path to Product Sustainability*, identified that over 60 % of multinational companies conduct ‘Sustainability product assessments’, although the study noted that LCA was not the only option for product sustainability, or even the primary approach.

Following the exploratory stage of the project, the main priority was to widen participation in the survey to a greater number of UK businesses in order to get a more robust sample size to reflect the overall UK situation (pilot and full surveys). The survey was primarily distributed through the help of trade associations. 82 businesses with UK-operations across a range of sectors participated during the course of the survey periods.

The three most actively participating sectors were: textiles, food and drink, and electronics. These three sectors represented more than half of the survey participants. The other five sectors had around 40 participants, split relatively evenly between them (Figure 3).

Figure 3: Participation in the survey, by sector (%)



In terms of the company size, approximately one third of the companies had fewer than 250 employees, and can thereby be classified as SMEs, whereas around 40 % of the sample had more than 1,000 employees. Around one quarter of the survey participants stated that they were exclusively UK-based, and half of the companies surveyed had fewer than 10 sites. Further information on the survey details can be found in the technical report.

The project culminated with a stakeholder workshop held in November 2014, at which the draft study findings were presented to 30 participating businesses. Table discussion groups discussed the key findings to gain further insights to the research. A separate afternoon workshop to a wider audience gave participants an update of EC and UK footprinting policy.

4 Footprinting – Level of Uptake

This section summarises the level of uptake for environmental footprinting by UK businesses, based on the results of the survey undertaken.

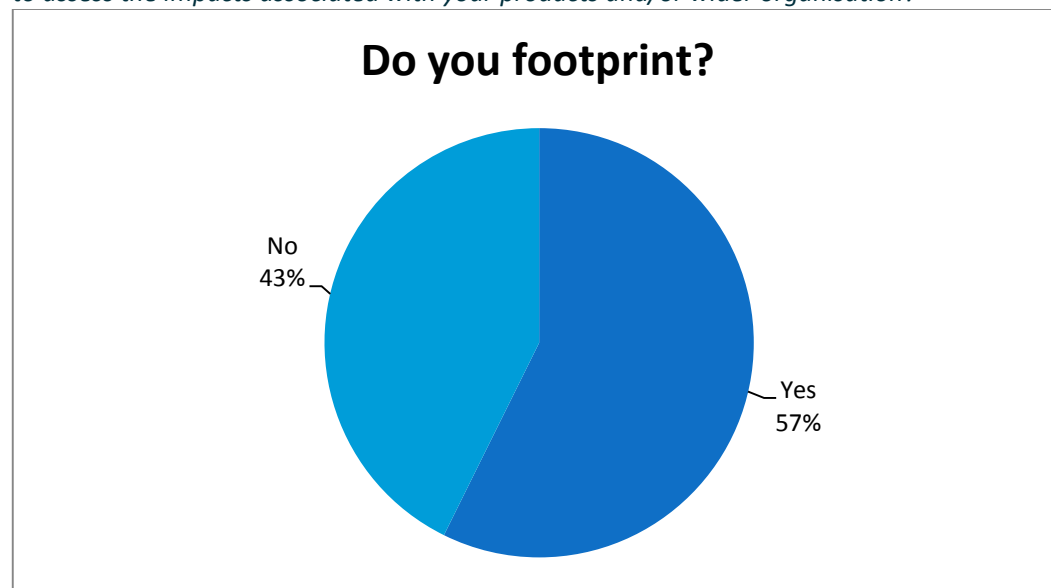
The results are structured around the following main research questions:

- Are UK businesses using footprinting methodologies?
- Why do businesses use footprinting methods?
- Are UK businesses using multiple footprinting methods?
- Which footprinting methodologies are being used?

4.1 Are UK businesses using footprinting methodologies?

The basic research question was to determine the overall level of uptake of environmental footprinting methodologies by UK businesses. The majority of companies stated that they do use footprinting methodologies within their business (57%). However, 43% of the surveyed businesses do not currently use environmental footprinting methods.

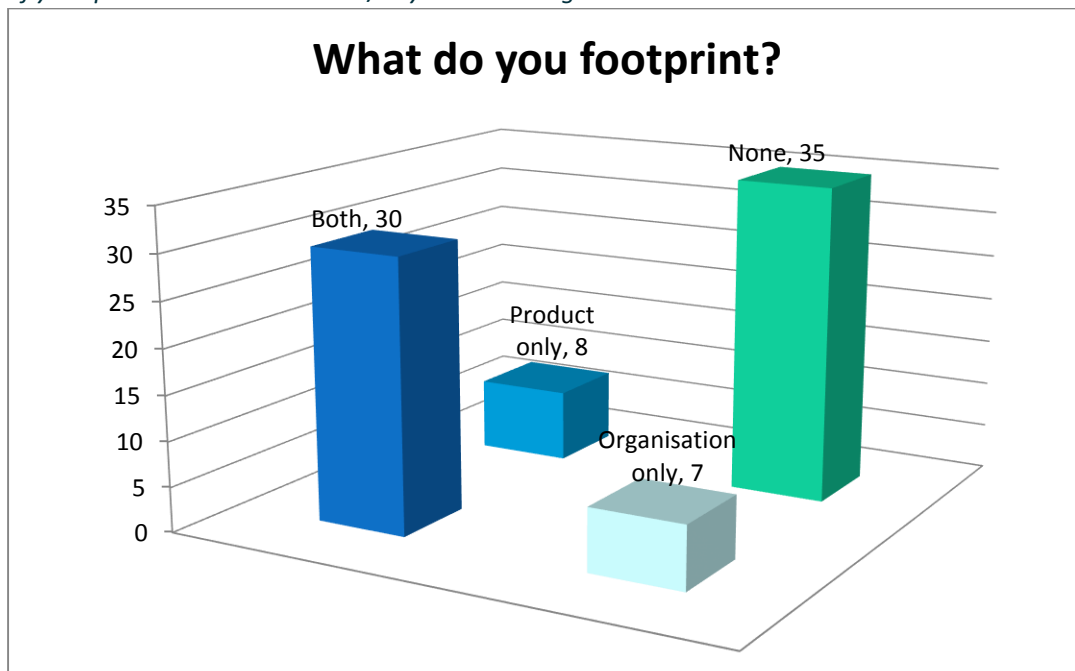
Figure 4: Does your business currently use one or more environmental footprinting methods to assess the impacts associated with your products and/or wider organisation?



Of the companies that use environmental footprinting, two thirds do so for both product and organisational footprinting (Figure 5); just over one sixth of the companies footprint their products only, and just under one sixth footprint their organisation only.

In terms of sector uptake, some differences were noted. Over 80% of the companies in the chemicals, electronics and utilities sectors use footprinting methods. This is in contrast to the less than 50% of businesses in the food and drink, textiles and services sectors that currently use footprinting methods. (See the green box on p11 for more information).

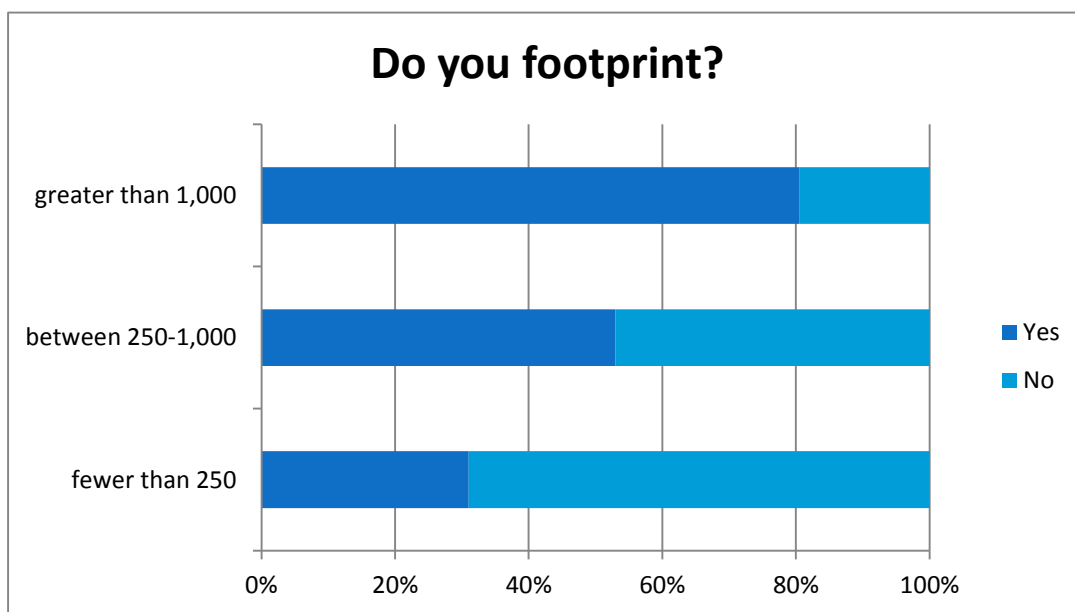
Figure 5: Does your business use footprinting methods to assess the environmental impacts of your products or services and/or your wider organisation?



Note: Two companies said they do footprint, but not products or organisations, so have been excluded above

As for differences between company sizes, there is a clear trend that larger companies are much more likely to use footprinting methodologies (Figure 6). 80 % of companies with more than 1,000 employees reported using footprinting methodologies, compared to around 50 % of companies with between 250 and 1,000 employees and 30 % of SMEs (fewer than 250 employees).

Figure 6: Does your business currently use one or more environmental footprinting methods to assess impacts associated with your products and/or wider organisation? – Company size



What are the major differences between sectors?

It is clear, from both the survey results and the discussions at the stakeholder workshop, that there are some significant differences between sectors in terms of their current practices in environmental footprinting. (One must be a little careful not to over-interpret these sector results, given the small sample sizes.)

Different levels of uptake for footprinting

As the survey results showed, there appear to be significantly higher levels of uptake for environmental footprinting in some sectors than in others.

Notably, over 80 % of the companies in the chemicals, electronics and utilities sectors use footprinting methods. This is in contrast to the less than 50 % of businesses in the food and drink, textiles and services sectors that currently use footprinting methods.

Some of these differences appear to be partly driven by company size. For example, the food and drink and textiles sectors had a greater proportion of SMEs within the survey sample. Given the cost of environmental footprinting and the knowledge/skills required, it is not surprising that SMEs are slightly less active in environmental footprinting.

Similarly, for bio-based products such as food and drink and some textiles products, variability according to the season and sourcing strategies makes the benchmarking of products more tricky, which helps explain the more limited uptake for these sectors. The type of energy mix in the source country and fibre choice can greatly influence the results.

The workshop discussions also revealed that there are different drivers for each sector for environmental footprinting. For example, some sectors have a specific legal obligation to undertake environmental footprinting, such as energy-using products, energy generation and the automotive sectors. Most other sectors seem to be using footprinting methods on a voluntary basis, because of the benefits that they provide to their business.

Different methodologies used

It is also clear that there are some significant differences in the methods used between sectors. GHG Protocol and UK PAS 2050 are fairly widely applied across sectors. Some sectors have already collaborated to develop harmonised methodologies.

Specialist product footprinting methods seem to be more commonly used in the transport, utilities, textiles and electronics sectors:

- For utilities sector, regulatory drivers are important. Energy generation companies are often required to use multiple methods associated with EU ETS, CCAs, ROCs etc.
- For the textiles sector, impacts such as social conditions and eco-toxicity can be important factors to include within the environmental footprinting methodology. Specialist methods include SCAP, Sustainability Consortium and the Higg Index.
- For the electronics sector, measurement of energy use is a key consideration, and there is already a high uptake of the ITU-t I. 1410 standard. Emerging issues for this sector include conflict minerals and materials traceability.
- For the transport sector, it seems that companies often greatly adapt environmental footprinting methodologies to meet their own internal purposes.

4.2 Why do businesses use footprinting methods?

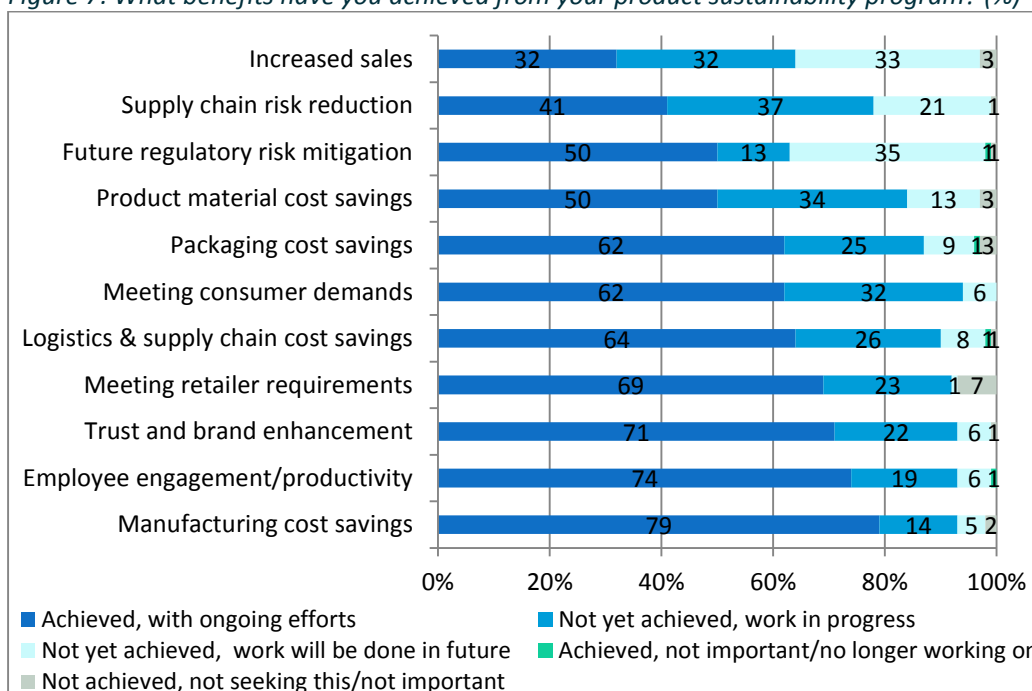
With nearly 60 % of companies using environmental footprinting methods, it is useful to briefly explore companies’ main motivations for this. The study has shown that there are various different drivers for footprinting. Some of these were regulatory (e.g. energy-using products, energy generation and automotive sector) but, in most cases, companies’ environmental footprinting initiatives are voluntary.

The most commonly given reason for footprinting is to gain a better understanding of the environmental hotspots. This can often involve enhancing collaboration across a supply chain. Once the major hotspots have been identified, companies are able to put in place internal targets and continuous improvement plans to mitigate the hotspots, and to realise reductions in the environmental impacts of their products and/or organisation. Usually these resource efficiency benefits are also cost-saving for the business e.g. reductions in energy use or materials consumption. But sometimes footprinting highlights trade-offs between different environmental impacts, e.g. water versus carbon.

However, many intangible benefits from environmental footprinting were also reported. A few companies report that their customers – especially business-to-business customers – request footprinting information. But for most companies footprinting helps to contribute towards building their brand images and reputation. This helps improve customer loyalty, and mitigate against the risk of losing future sales and increased marketing costs. Another key benefit from such corporate sustainability activities is company prestige, which helps improve staff recruitment and retention, and to protect intellectual property rights.

Many of these benefits were also identified in the Pure Strategies Report (see Figure 7), although that report looked at the benefits of a company’s wider products sustainability programme, rather than specifically environmental footprinting.

Figure 7: What benefits have you achieved from your product sustainability program? (%)

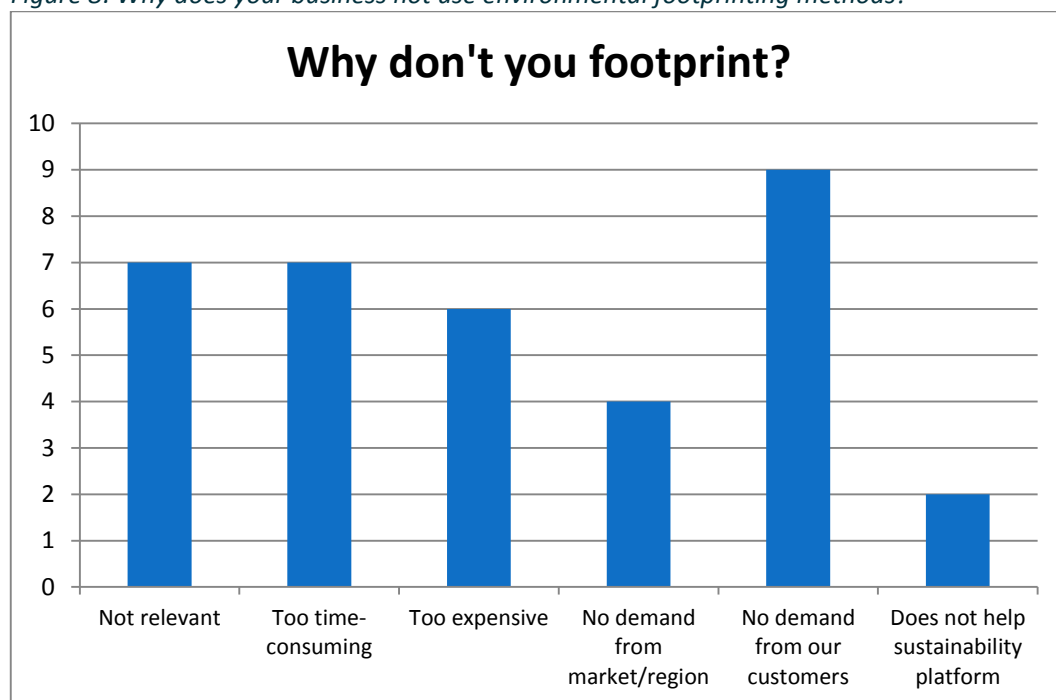


Source: Pure Strategies (2014), The Path to Product Sustainability

For those businesses that stated they do not currently use environmental footprinting methodologies, the most commonly identified reason was a lack of demand from customers – half of the businesses surveyed with this question selected this option.

Other common reasons listed for businesses not footprinting were that it was not relevant, too time-consuming or too expensive (Figure 8). A few companies stated that there was no demand from their market/region or that it does not help with their sustainability platform, i.e. in supporting the information included within the company’s external communications such as relating to sustainability/corporate social responsibility.

Figure 8: Why does your business not use environmental footprinting methods?



A few of the businesses provided additional explanatory comments. Specific comments included some perceived barriers: variability of production (e.g. small batches, weekly production runs, and natural feedstocks), large number of different products manufactured, and less relevant for trading and service functions. Other businesses stated that they had a lack of resources in terms of knowledge and key skills and a perception that the methodologies could be unwieldy and too time-consuming to use.

Finally, a few businesses stated that, although it has never been identified as a priority to spend time doing footprinting, they noted that they are seeing a change in this, with some B2B customers putting pressure on them to make it become more of a priority. Other businesses mentioned that they use their own internal measurement systems.

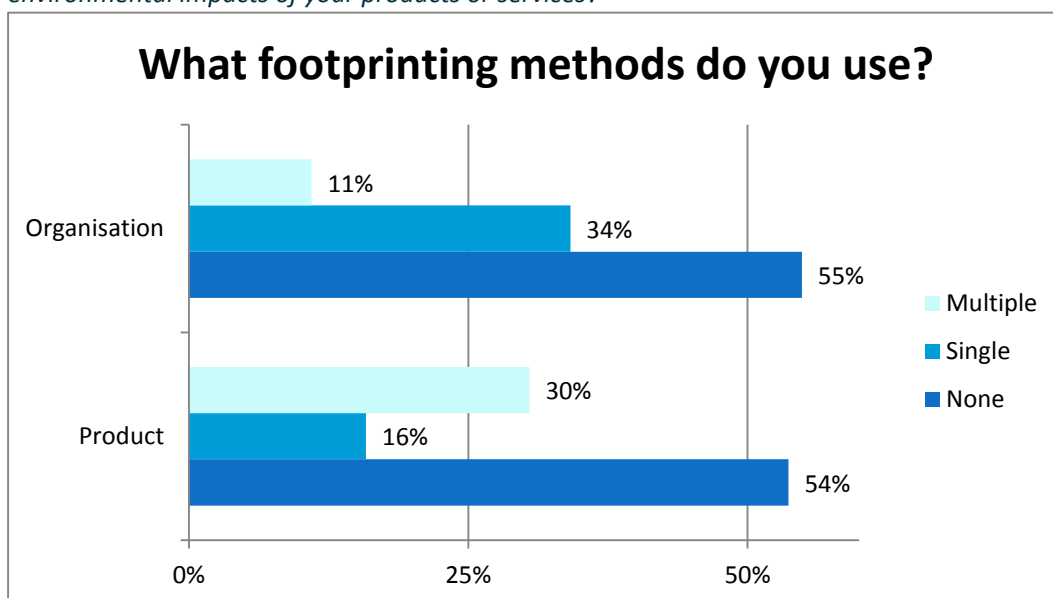
Some of these reasons given above suggest that, if the costs to businesses of conducting environmental footprinting were to be reduced, more UK businesses might start to use footprinting methods. This potentially has some policy implications, as measures to make footprinting simpler or less costly may help to increase uptake, and thereby lead to associated resource efficiency benefits.

4.3 Are UK businesses using multiple footprinting methods?

One of the key research questions was to investigate the extent to which companies are using more than one footprinting method to assess the environmental performance of their products or organisation, such as to comply with country-specific regulations. From a policy perspective, this raises some concern that lack of harmonisation and standardisation of methodologies may be imposing an additional burden of cost to UK businesses.

The research found that some businesses are using multiple footprinting methods. The survey revealed that 30 % of businesses use more than one method for assessing the environmental performance of their products (two thirds of the businesses that conduct product footprinting); while 11 % use more than one method to measure the environmental impact of their organisation (Figure 9).

Figure 9: Does your business use single or multiple footprinting methods to assess the environmental impacts of your products or services?



The largest businesses were shown to be more likely to use multiple product footprinting methodologies – nearly half of the companies that employ more than 1,000 staff use multiple footprinting methodologies whereas only around 10 % of SMEs do. Of the companies that do use product footprinting methodologies, similar proportions use one, two and three or more methodologies (further graphs can be found in the technical report).

Over 80 % of the companies in the chemicals, electronics and utilities sectors use product footprinting methods. This is in contrast to the less than 50 % of businesses in the food and drink, textiles and services sectors (Figure 10). In some instances companies were found to be using three or more product environmental footprinting methods.

Companies were asked whether they use multiple footprinting methodologies for the same product or service. Only 13 % of the companies surveyed stated they do use multiple methods for assessing the environmental impact of an individual product – this represents less than a third of the businesses that do footprint. The larger companies were more likely to use multiple methodologies for a single product.

Figure 10: How many footprinting methods does your business use to assess the environmental impacts of your products or services? – Sector

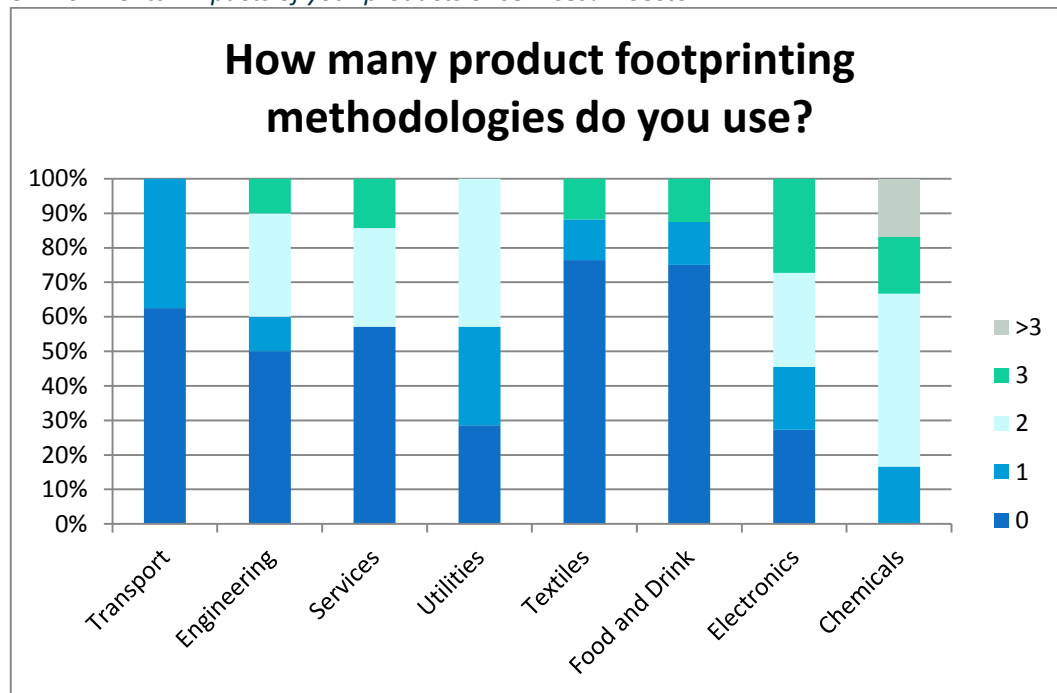
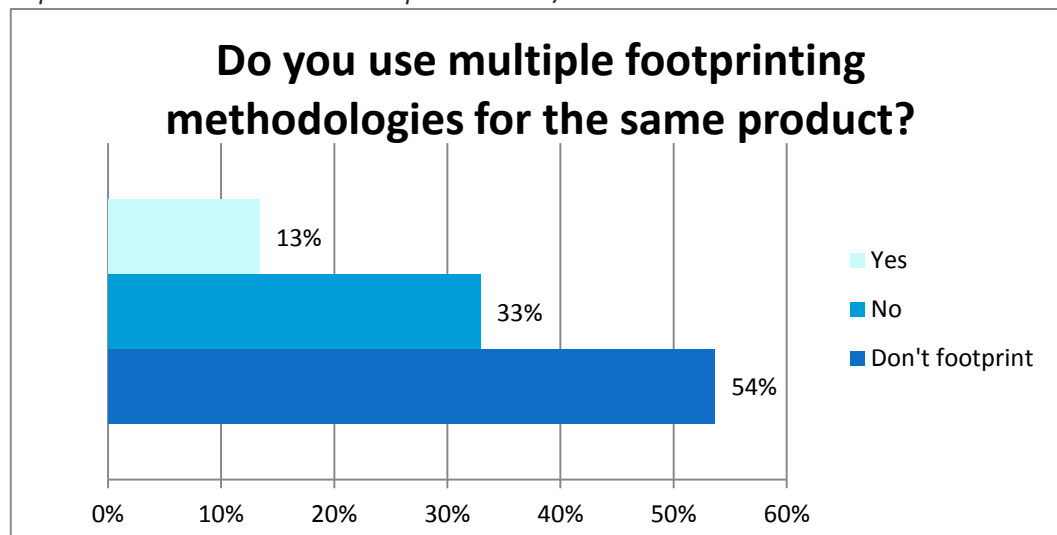


Figure 11: Does your business use multiple footprinting methods to assess the environmental impacts associated with individual products and/or services?



The reasons for using multiple environmental methods were varied. Businesses commented that each of the different methodologies had advantages and disadvantages, and the choice of method depended upon the question of interest, and the company’s overall objectives. The methods were often tailored to meet their own needs. The cost of undertaking multiple methods was considered to be relatively small compared to that of gathering the necessary data. (See the green box on p16 for further discussion.)

Why are companies using multiple environmental footprinting methods?

One of the striking findings of the survey was that 30 % of companies are using multiple methods for product environmental footprinting, with 13 % of companies using multiple methods to assess the environmental impacts of the same product. 11 % of companies use multiple methods to assess the environmental footprint of their organisation.

From a policy perspective, this raises some concern that the lack of harmonisation and standardisation of methodologies may be imposing an additional burden of cost to UK businesses. Another concern is that companies might choose the method which shows them in the best light. Therefore, improving the comparability of the results and reducing the cost to business are key motivations behind the EC's footprinting initiative.

Differing methods for differing objectives

The discussion at the stakeholder workshop revealed that each environmental footprinting methodology had its own advantages and disadvantages. The choice of footprinting method depended on the question of interest, and therefore the company's objectives. The core methods used are the GHG Protocol and UK PAS 2050. However, companies will often adapt these or use other methods or sector-specific guidelines.

Firstly, the choice of methodology and the particular input parameters may in part be driven by the requirements of customers for specific B2B transactions. Again, this will depend upon the outputs required by the end-user, and may mean that the method and findings will need to be tailored to their needs. One company reported that different methodologies were used to meet the different regulatory requirements associated with energy generation, including EU ETS, CCAs, and ROCs etc.

Alternatively, companies may choose to adapt methods to meet their internal needs, such as adjusting which impact categories to report against or to streamline the approach taken. Companies report a hierarchy of impact categories: carbon/energy, water and materials/waste. However, sometimes other impacts – e.g. social or eco-toxicity - might be included, as is the case in the methods being developed by Sustainability Consortium.

Some companies admitted that they may use several methods and present the best result or may follow a method that a competitor is using, in order to compare the results or to see whether it is simpler/more useful. Finally, specific methodologies might be used for particular reasons. For example, to make a robust statement of carbon neutrality/offsets, such as for publicity purposes, ISO 14064 will be an appropriate methodology.

What are the cost implications of multiple methods?

Whilst there are some concerns about the cost implications of applying multiple methods, the workshop participants did not feel that this was a major concern. For some small companies it may still be a challenge to decide which method is best to follow, and there was support for greater harmonisation of methodologies within a sector, although it can take some time and collaborative effort to establish these industry norms.

However, there was general agreement that the most significant cost associated with footprinting is getting hold of the right data and conducting the LCA. Once the data has been collected, the cost of re-analysing the data or cutting it in a slightly different way to follow another methodology is actually quite small. Therefore, there is the possibility that a shared or common dataset could provide some significant benefits to organisations undertaking this work, by reducing the overall costs of footprinting.

4.4 Which footprinting methodologies are being used?

The most commonly used product footprinting methodologies were: ISO 14044, the GHG Protocol and UK PAS 2050 (Figure 12). UK PAS 2050 was most popular amongst mid-sized companies. This suggests that most companies are specifically interested in the carbon footprint of their products, rather than measuring other environmental impacts.

A significant proportion of companies, especially SMEs and large companies, selected 'other'. These 'other' methodologies mostly included specialist or sector methods, and bespoke or manual methods, typically adapted from the more established methodologies.

Figure 12: Which of the following footprinting methods does your business currently use to assess the environmental impacts of your products and/or services?

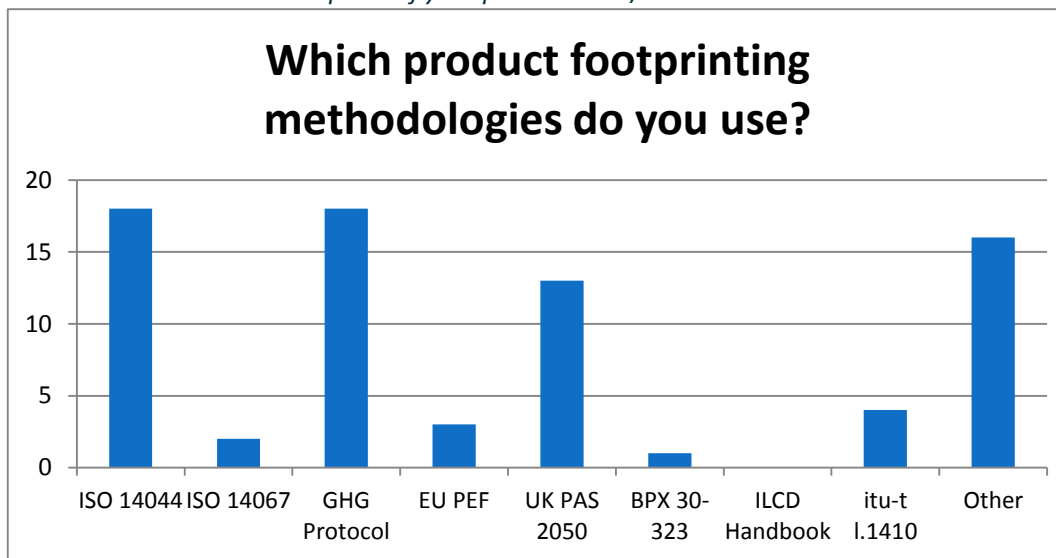
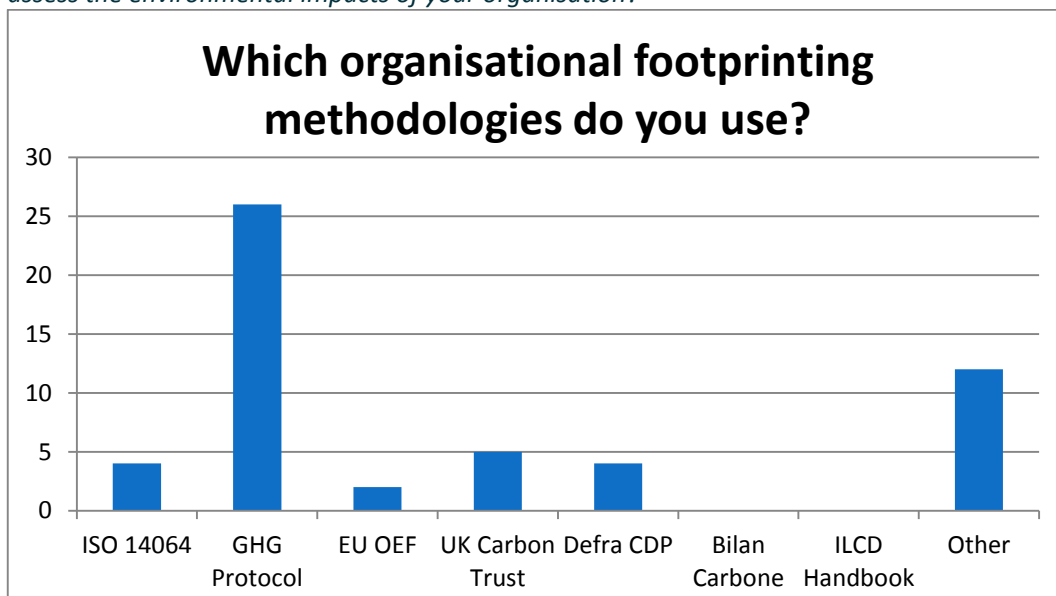


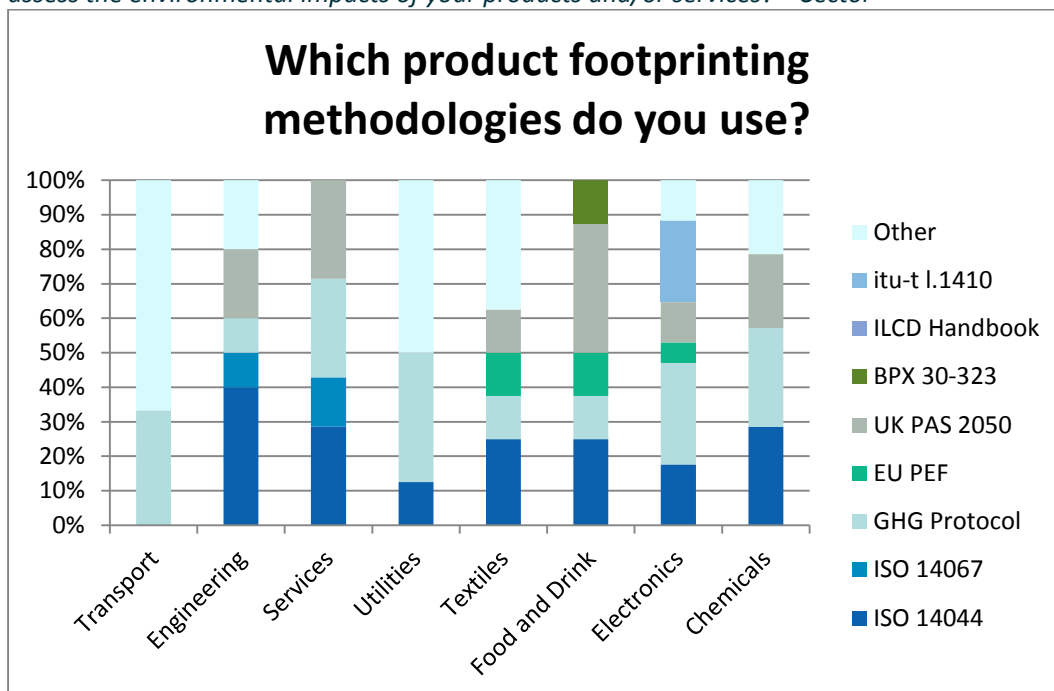
Figure 13: Which of the following footprinting methods does your business currently use to assess the environmental impacts of your organisation?



The survey identified the GHG Protocol as being by far the most popular method for organisational footprinting, with 70 % of businesses conducting organisational footprinting using this method (Figure 13). Relatively few distinctions in methods can be observed between different sizes of companies or sectors.

However some distinctions became apparent in the choice of product footprinting methods across sectors. ISO 14044, GHG Protocol and UK PAS 2050 are fairly widely applied across sectors (Figure 14). Specialist product footprinting methods seem to be more commonly used in the transport, utilities, textiles and electronics sectors.

Figure 14: Which of the following footprinting methods does your business currently use to assess the environmental impacts of your products and/or services? – Sector



Key conclusions

The study has shown that nearly 60 % of UK businesses use environmental footprinting methods to assess the environmental performance of their products and/or organisation. The evidence shows that larger companies are more likely to use footprinting methods than smaller companies, as are companies in the chemicals, electronics and utilities sectors. There are various drivers for footprinting: some are regulatory but most are voluntary, e.g. to gain a better understanding of the environmental hotspots or other intangible benefits.

There are quite a few businesses using multiple product methods (30 %): the cost of undertaking multiple methods was considered to be relatively small compared to that of gathering the necessary data. There is considerable variety in the choice of method for product environmental footprinting, although there is a much greater emphasis on carbon footprinting, rather than on more holistic environmental footprinting approaches.

5 Costs and Benefits of Footprinting

The research found that around two thirds of the companies using environmental footprinting methodologies do not formally quantify the costs and benefits of doing so.

This section therefore qualitatively summarises the costs and benefits associated including:

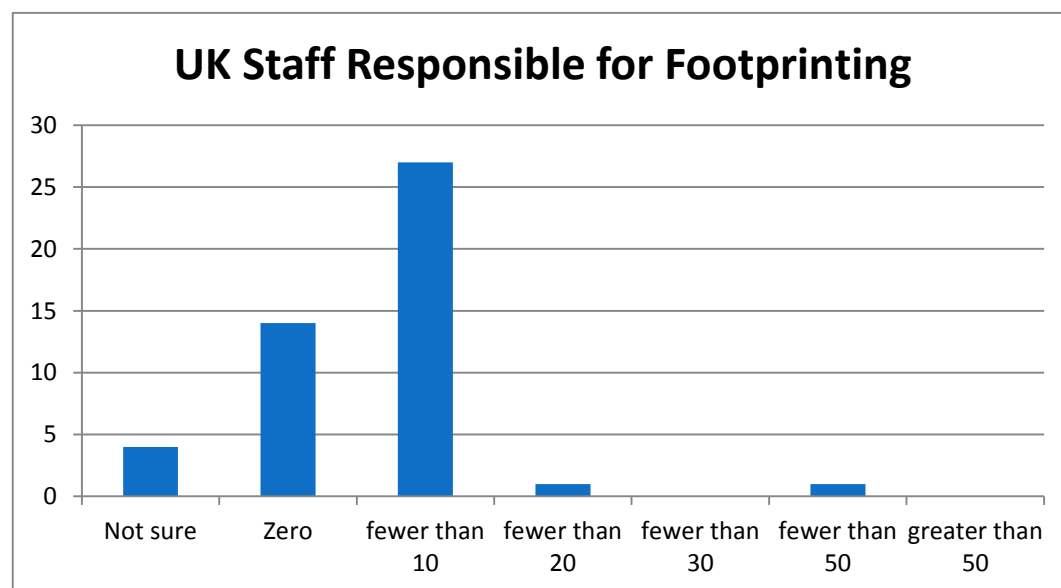
- costs of staff responsible
- cross border trading of green products
- clarity of consumer choice
- improved resource efficiency.

5.1 What are the costs and benefits from footprinting?

Staff costs

On staff costs, nearly 90 % of the surveyed businesses indicated that zero or fewer than 10 employees are responsible for footprinting within the UK (Figure 15). The majority of UK businesses that use environmental footprinting methodologies (60 %) estimated that fewer than 10 staff are responsible for footprinting within the UK.

Figure 15: How many UK staff (by head count) are responsible for applying footprinting methods to assess product and/or organisational environmental impacts?



Some variation was evident by company size. Most large companies (70 %) have fewer than 10 members of staff with responsibility for footprinting within the UK, whereas two thirds of businesses with fewer than 250 staff stated that they have no members of staff responsible for footprinting (i.e. no specialist member of staff focusing on this issue) within the UK.

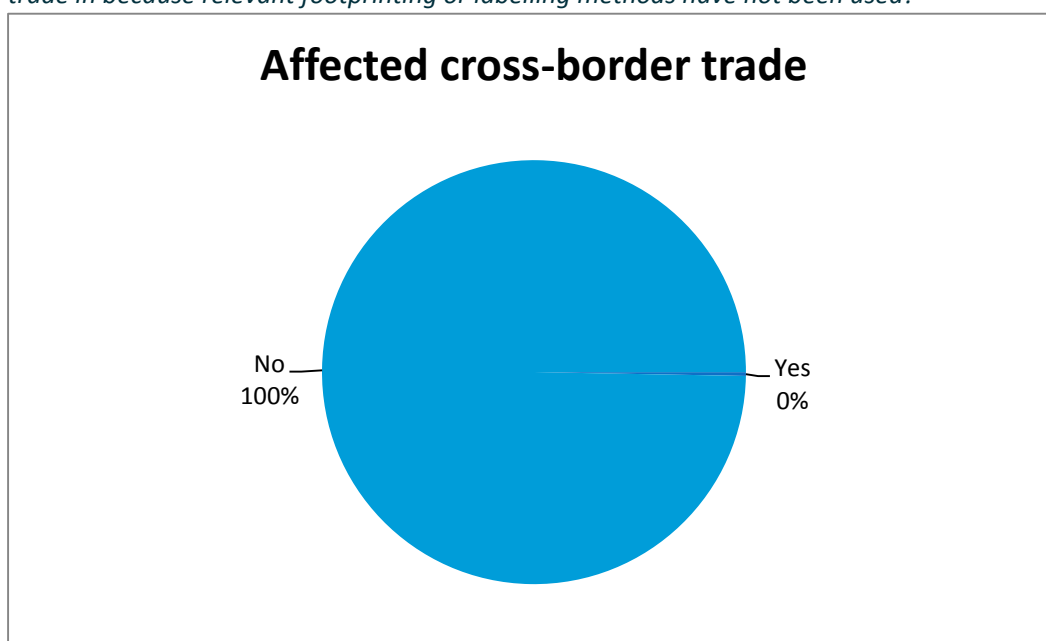
Finally, quite a few companies seem to conduct significant parts of their footprinting activities outside the UK. Nearly 20 % of the businesses surveyed indicated, that globally, they have more than 10 staff responsible for applying footprinting methods.

Cross-border trade

The businesses were asked to identify whether the lack of application of a specific footprinting or labelling method had impacted cross-border trade of their products.

The result was resounding, with not a single business identifying any markets or regions where their trade had been affected because a relevant footprinting or labelling method had not been used (Figure 16). This finding was true for both companies currently using footprinting methodologies and those not currently using footprinting methodologies, although at the workshop a few anecdotal examples were given by companies.

Figure 16: Are there (or have there been) markets and/or regions that your business cannot trade in because relevant footprinting or labelling methods have not been used?



This is a clear finding, and suggests that, at present, the application and choice of footprinting methodologies and labels is not at all a factor affecting cross-border trade. This provides direct evidence that this benefit, noted in the EC Impact Assessment, may not be particularly relevant to UK business at present.

This is also a slightly surprisingly finding to some extent. In theory, those businesses with greater exposure to international trade would have much more to gain from a single environmental footprinting methodology, if there are indeed currently significant additional costs arising relating to difficulties in the cross-border trade of green products. A company's exposure to international trade might even be more important in determining their view on having a single harmonised European footprinting methodology.

However, the prospect of fragmented European requirements seems to be receding recently, and companies have always had to deal with some differing consumer preferences in the EU, such as the greater aversion to hazardous chemicals in Northern Europe. Therefore few companies have identified any cross-border trade issues for green products.

Clarity of choice

80 % of the businesses stated that they had B2B customers, and 60 % had B2C customers. Analysis of the company characteristics revealed that there were no significant differences apparent in customer base between companies applying footprinting methods and those that are not currently footprinting.

However, around 80 % of those companies using footprinting methodologies reported that the methods provided improved clarity of choice to both B2B and B2C customers (Figure 17 and Figure 18). Nearer 60 % of the non-footprinting companies felt that they were providing sufficient clarity of choice to their customers by not footprinting.

Figure 17: Do your footprinting methods provide your B2B customers with improved clarity of choice regarding the environmental impacts of your products and/or wider organisation?

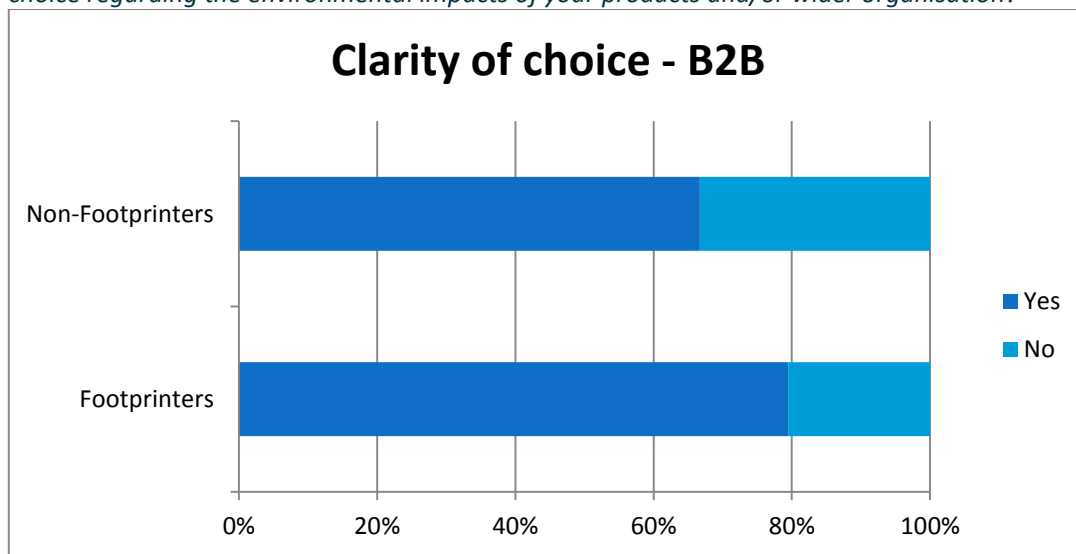
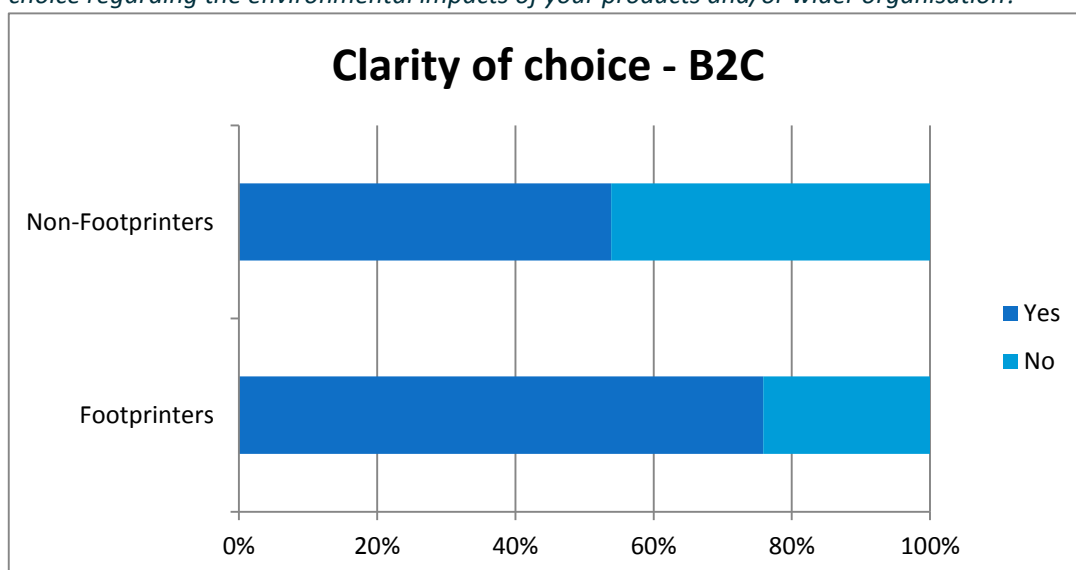


Figure 18: Do your footprinting methods provide your B2C customers with improved clarity of choice regarding the environmental impacts of your products and/or wider organisation?



It also appears that footprinting may have a slightly greater impact in improving the clarity of choice to B2B customers than B2C (Figure 17 and Figure 18). The survey findings support anecdotal evidence that consumers do want to have better comparability of footprinting results, although ultimately footprinting may have more relevance for B2B transactions.

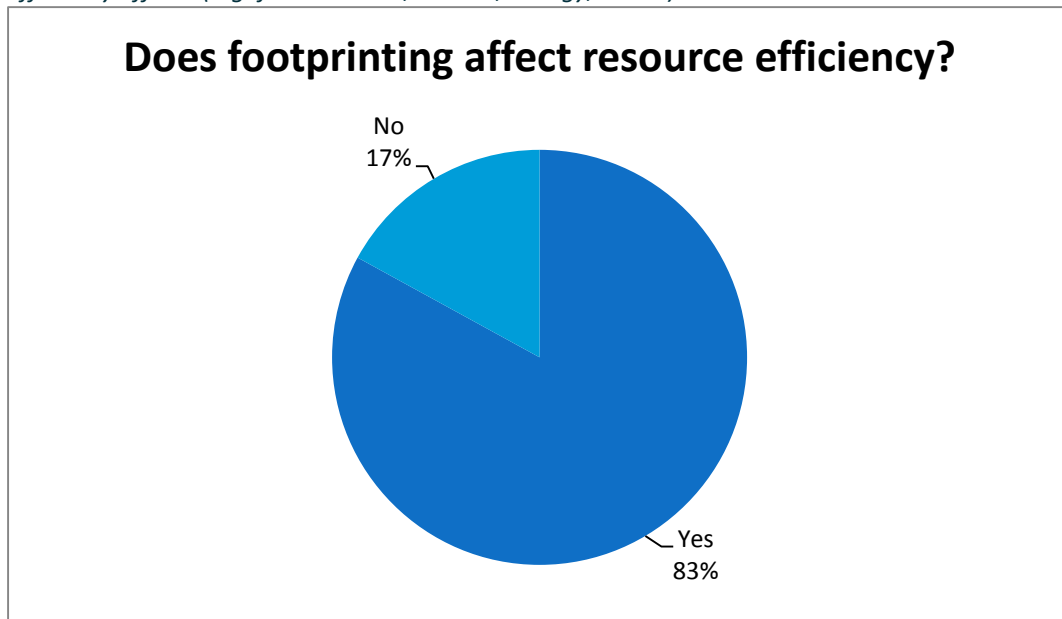
In terms of effects by company size, it is noticeable that the larger companies thought that footprinting had a much bigger impact on clarity of choice for B2B customers than did the small companies. For B2C customers the impact of footprinting on clarity of choice was thought to be the same by both small and large companies alike.

Resource efficiency

The businesses were next asked about whether footprinting has an impact on a business' resource efficiency efforts. Of those businesses currently using footprinting methodologies, over 80 % thought that footprinting did have an impact on resource efficiency (Figure 19).

However, of those businesses not currently using footprinting methods, only 13 % thought that this had an impact on the business' resource efficiency efforts. These findings suggest some split of opinion, between users of environmental footprinting and non-users, regarding its impact on resource efficiency efforts.

Figure 19: Does the use of footprinting methods have any impact on your business' resource efficiency efforts (e.g. for materials, carbon, energy, water)?



Approximately half of businesses do measure the impact of using footprinting methods on resource efficiency. Larger companies were slightly more likely to measure the impact of footprinting methods upon resource efficiency.

What are the costs and benefits for environmental footprinting?

The EC identified four main benefits that could be expected to arise from having a single European environmental footprinting methodology:

- costs/savings to business on applying multiple footprinting methodologies
- improved opportunities for cross border trading of green products
- clarity of consumer choice (both B2C and B2B)
- improved resource efficiency.

Multiple methods

The survey did find evidence that a significant number of companies (30 %) are using multiple (product) footprinting methods. So, in principle, there might be expected to be some cost savings resulting from having harmonised methodologies.

However, the same companies also reported that the most significant costs were not associated with using the different methodologies, but rather in obtaining the data to conduct footprinting. Once the data has been obtained, the companies suggested that cutting the data in a slightly different way adds very little cost. This suggests that the cost savings to business may not be as large as expected by the EC's impact assessment.

Cross-border trade

The study found no evidence whatsoever that not using a specific environmental footprinting methodology has affected cross-border trade. With the exception of just a few anecdotal examples from the stakeholder workshop, none of the companies surveyed had experienced any problems on this issue.

There was some discussion by companies that the prospect of having to follow a mandatory (Grenelle) method to trade in France may have subsided.

Clarity of consumer choice

There is some evidence from this study that footprinting is a useful tool in aiding consumer choice, especially for B2B customers. Therefore, if a harmonised methodology could be agreed by sectors, this could promote better clarity of choice.

An important point is that the methodology must be able to allow effective comparability between products and organisations, and it will clearly be a challenge to fully harmonise the data and methodology used. Some sectors are already working towards this goal.

Improved resource efficiency

The survey and workshop discussions showed real evidence of environmental footprinting leading to resource efficiency benefits. 80 % of the survey participants thought this was a real effect. The reason for this is that footprinting allows companies to identify hotspots of environmental impacts within their supply chain and therefore leads companies to make efforts to mitigate these and set year-on-year improvement plans and targets.

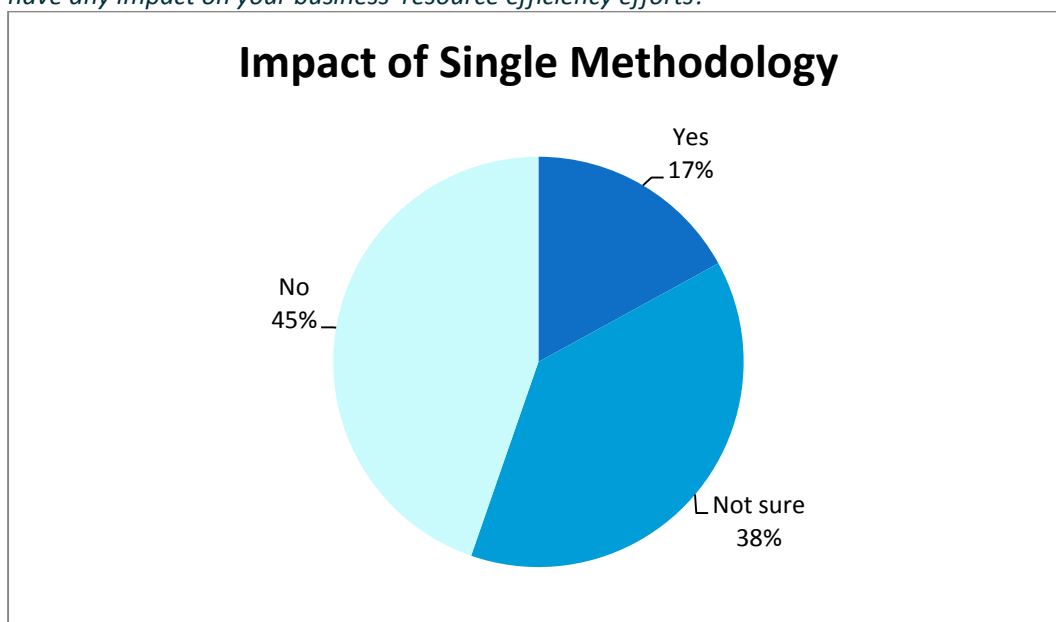
However, the study is inconclusive over whether a harmonised footprinting methodology would lead to additional resource efficiency improvements over-and-above those already offered by companies using one or more footprinting methods. Most companies thought there may not be much additional benefit arising from a single methodology.

5.2 What potential benefits would a single methodology offer?

Finally, businesses were asked whether a single common footprinting method might have any impact on their resource efficiency efforts. Only 17 % thought that it would. 38 % were unsure and 45 % thought that it would not have any impact (Figure 20).

A similar proportion of small versus large companies thought that a single method would have no impact, although a greater proportion of large companies thought that a single footprinting method would have an impact on their resource efficiency efforts.

Figure 20: Would a single common footprinting method (i.e. the EC's PEF/OEF framework) have any impact on your business' resource efficiency efforts?



Businesses were also asked their opinions on the EC PEF/OEF methods. Only 16 % of the surveyed businesses felt that the UK should transition to the EC PEF/OEF methods (and replace all existing footprinting methods), 44 % of the participants were unsure, with 40 % against the transition.

Interestingly, those companies currently footprinting had a much stronger opinion on this question, with more than half of these companies against transitioning to the EC methods. Most of the non-footprinting companies were unsure. It was the largest companies that had the strongest opinions on this question. Half of large companies were against transitioning to the EC methods, with only one quarter in favour. As for the smaller companies, 30 % were against the transition, with 10 % in favour.

The ten businesses in favour of transitioning to EC methods were asked how the transition should be made. The majority of the companies were in favour of voluntary trials (60 %), although a few thought the transition should be permanent. Just 20 % of these businesses thought that the transition should be mandatory.

6 Policy Implications

European policy direction

It is fair to say that there was a range of opinions relating to the European policy direction on environmental footprinting. Quite a number of companies were quite sceptical, but there was a consensus that any European scheme should be voluntary, rather than becoming mandatory. Businesses thought that, while a having single footprinting methodology was conceptually attractive, in practice this could be quite challenging to implement. It would require standardisation not only of the footprinting methodology, but also of the data used and the reporting of the results. It could also stifle future innovation, and there may be some issues relating to confidentiality of data on product performance.

Additionally, due to the differing objectives of companies conducting environmental footprinting, a single method might not fulfil all the possible needs of the users. There was particular concern that the single method would either be too generic to be meaningful or too complex or costly to use. Concern was also raised over what would happen to current methodologies that are already established within an industry. Many felt that there were already adequate tools available, and therefore no need for a new methodology.

On the other hand, other companies understood the benefits of having agreed and harmonised footprinting methodologies within specific sectors. They felt that this would help level the competitive playing field, and allow for greater comparability and collective action to mitigate the identified environmental hotspots, but companies did not identify a necessary role for the EC in this. However, it was evident that the companies participating in the pilots were more supportive of the proposed European policy direction, and companies supplying intermediate goods to multiple industries (with differing requirements) may have more to gain from harmonised methods than those supplying finished products.

Many of these concerns appear to be in the process of being addressed during the pilots, as outlined during the afternoon workshop, e.g. free secondary data (which could help reduce the cost of footprinting and thereby increase its uptake), defining appropriate category rules, making the EC methodology voluntary rather than becoming mandatory etc. Recently, the EC also seems to be more open on testing changes to the methodologies.

UK policy direction

From a UK policy perspective, the companies encouraged Defra to remain actively involved as a stakeholder in the European pilots (UK has active membership of the EU footprinting pilots' Steering Committee and the Technical Advisory Board through WRAP). In particular, companies encouraged Defra to keep using its influence at the EC level to ensure that footprinting initiatives remain voluntary for business rather than becoming mandatory.

Two other possible policymaking roles were identified:

- Helping to bring specific sectors and trade bodies together to develop harmonised industry relevant guidelines and reporting for environmental footprinting. (A notable example of this happening is SCAP).
- Helping to ensure the accurate communication and interpretation of the results of footprinting. This links in with existing work on Defra's Green Claims Guidance and the Multi-stakeholder Dialogue on Environmental Claims).

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