SPECIAL REPORT –

# GHG MANAGEMENT & REPORTING

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# FOREWORD

Reducing emissions of greenhouse gases (GHGs) is essential if we are to minimise the risk of dangerous climate change. The first three national carbon budgets set an emissions reduction pathway up to 2020; it is critical that these are achieved if the longer term 2050 target is to be met. To be successful, all companies across all sectors of the economy will need to be engaged.

Various policy mechanisms are being deployed to stimulate action. Pricing mechanisms, trading schemes and regulation are all being used to set the economy on a low carbon trajectory. Nevertheless, the majority of companies in the UK are not taking action to lower their carbon footprint and reduce their GHG emissions. The reality for many is that carbon and GHG emissions are a low or non-existent priority; the subject doesn't feature as an issue in their business – even though reducing energy consumption is good for the bottom line and improves environmental performance. There is a significant challenge – to overcome the barriers that prevent these companies from minimising their impact and maximising the opportunity.

This report sets out environment and sustainability practitioner views on carbon and GHG management and reporting. It sets out the drivers and barriers that help or hinder the business case, and the value that can be gained from GHG management and reporting. It also shows the range of activities that are being used to achieve emissions reductions, based on IEMA's GHG management hierarchy.

Making carbon and GHG reduction a strategic business issue requires consistent reporting and accountability. Overwhelmingly, the profession believes that GHG reporting should become a mandatory requirement for companies. Not only would this help to stimulate internal action to reduce emissions, it would also help companies demonstrate business responsibility on the pressing environmental issue of our time. Government needs to take action now to ensure that the UK is able to meet and exceed its carbon budgets.

**Martin Baxter**
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The production of this report has been made possible due to the valued input of IEMA members. Through their informed, enthusiastic and extensive response to the IEMA GHG Practitioner survey in April 2010 and participation in a series of regional workshops, members have helped IEMA to establish some key findings that will prove essential to policy formation and practical application.

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- David Nancarrow, Sustainability Director, Atkins Limited
- Colin Parry, Environmental Risk Manager, Diageo
- David Robinson, Greenhouse Gas Scheme Manager, Complete Integrated Certification Services Ltd (CICS)

The report has been written and edited by Nick Blyth at IEMA, with important contributions from Martin Baxter, Edward Barlow, Katrina Pierce and Richard Harada

# EXECUTIVE SUMMARY

The long-term challenge of climate change requires action to reduce emissions of greenhouse gases (GHGs) in all organisations, across all sectors of the economy. Environment and sustainability professionals have a crucial role to play in helping to make the transition to a low carbon economy, by developing the business case for carbon management, delivering emissions reductions through a variety of methods, engaging stakeholders and the workforce and reporting on success.

As an active and growing membership body, the Institute of Environmental Management and Assessment (IEMA) can make a distinctive 'practitioner focused' contribution to this challenge and to the current debates on climate change, related policy and the challenge it poses for organisations.

This report is focused on the state of carbon and GHG management as a practitioner activity, considering issues, trends and future potential direction. It will be informative to practitioners wanting to review their own practice, views and experience across a broader group of peers, and to policy makers developing an understanding of drivers and barriers to GHG management and reporting.

This report is derived from a comprehensive survey of IEMA members completed by 1,674 practitioners in April 2010 into the state of GHG management and reporting within the environment and sustainability profession, supplemented with a series of workshops attended by 200 practitioners to further test and examine key issues. As such, it represents a substantial body of evidence on which to inform future decisions and policy.

## GHG MANAGEMENT AND REPORTING – ENGAGEMENT AND AMBITION

IEMA members show a high level of activity and engagement on climate change within their organisations, with two-thirds of respondents citing this as a leading or important part of their work. Practitioners are working across a broad range of activities, including GHG management and reporting, carbon strategy development, and product/ service carbon reductions. For practitioners who are actively engaged in this work area, over half (57%) indicate their organisations are publicly reporting on carbon/ GHG footprints.

Over the last 10 years there has been an increase in GHG reporting across organisations of all sizes and in the main economic sectors, with the rate of growth increasing over this period. Larger organisations are more likely to report on their GHG emissions and are more likely to be able to demonstrate quantified emissions reductions, when compared with small and medium sized enterprises.

IEMA Members indicate a high level of ambition within their organisations on addressing climate change. 85% of organisations have ambitions beyond achieving legal compliance, with the majority seeking to build a positive reputation as a low carbon leader, become a low carbon leader in their field, or make transformational change to their business model. This level of ambition is critical if the UK is to meet its national carbon budgets, and needs to become more widespread and mainstream across the whole of the economy.

## DRIVERS AND BARRIERS

Developing an understanding of drivers that encourage organisations to take action on GHG emissions, and barriers that prevent or hinder action, is critical for environment and sustainability practitioners, seeking to secure progress within organisations and across supply chains. It is also important for policy professionals in identifying the methods and policy levers that will catalyse greater participation and engagement.

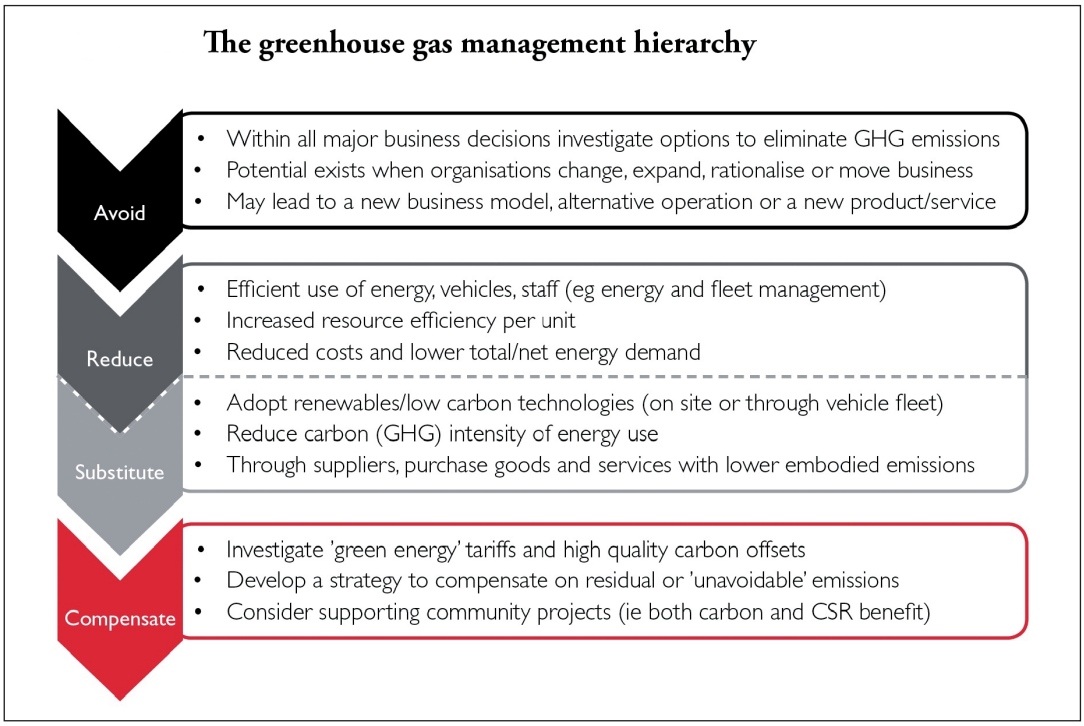
For those already engaged in GHG management and reporting, the strongest drivers were cutting costs and financial efficiency, organisational values and legal compliance. For those whose organisation is not yet active, new legal requirements are by far the greatest driver that would result in action. Although a number of drivers combine to support the case for action on GHG reductions, a single business driver will usually act as a tipping point. The CRC Energy Efficiency Scheme is a significant driver, with almost half of active participants' organisations falling within the scheme's requirements.

A wider range of barriers were identified as preventing or limiting progress on GHG management, with the most significant being other competing priorities in the organisation that are business critical or legally required. Other important barriers included lack of access to capital and funding for low carbon investments, and internal pressures to generate returns on investment over short time periods, perhaps reflecting the difficulty in some organisations and sectors in building a strong business case when energy costs appear low in relation to overall business turnover.

## FRAMEWORK FOR GHG REDUCTION

Practitioners use a wide range of methods in taking action on carbon and GHG emissions. Energy management and reductions on site, improvements to buildings and premises, staff engagement and awareness campaigns were the most widely used. The measures used and practitioner response levels, closely align with the IEMA GHG Management Hierarchy, a policy and organisational planning framework to guide carbon and GHG strategies through avoidance, reduction, substitution and compensation.

Organisations will often have multiple opportunities for action which span the GHG Management Hierarchy at any one time. There is a pressing need to support greater activity at the top of the hierarchy, where avoidance measures are a challenge. Compensatory action at the bottom of the hierarchy, such as carbon offsetting, need not be held back as action is required on all fronts. However, such compensation should generally not be taken in isolation from or in place of other measures in the GHG management hierarchy. Avoidance and reductions at source need increased focus if businesses and organisations are to significantly contribute toward the UK's challenging carbon budget targets. It is also these measures that are essential in any business climate change strategy seeking to achieve genuine financial savings for the organisation.




## THE VALUE OF GHG REPORTING

GHG reporting is viewed by IEMA members as an important enabling tool that helps to build, embed and sustain a strategic organisational approach to carbon and GHG management. Reporting is identified as having a significant role to play in overcoming barriers, including building commitment and support from the board and senior management, unlocking funds and securing investments in low carbon measures and initiatives, and securing the engagement of suppliers.

There is a clear correlation between organisational ambition in relation to GHG emission reductions, and public reporting of performance; public reporters are more likely to be seeking to make transformational change or become a low carbon leader in their field. Public reporters are also more likely to have achieved a GHG reduction over the last two years. It is unclear which way these relationships correlate: are good performers and more ambitious companies more likely to report; or does reporting enable better performance and raise organisational ambition? We are strongly of the view that this is a synergistic and mutually supportive relationship and that over a period of time, robust accounting and transparent reporting will help ensure that organisational approaches are relevant and effective in securing GHG reduction and associated wider business benefits (cost savings, competitiveness, reputation, etc).

## MANDATORY GHG REPORTING

The Climate Change Act 2008 set a requirement for Government to use powers under the Companies Act to make GHG reporting a mandatory requirement for companies or to explain to Parliament why it has not done so. A significant majority of practitioners (over 80%) support GHG reporting becoming a mandatory requirement.

Given the scale of the climate change challenge and the identified value and benefits of GHG reporting, a mandatory GHG reporting requirement should be rapidly introduced for large companies. For other companies, consideration should be given to a phasing in of mandatory reporting and prioritised based on GHG emission footprints. The DEFRA/ DECC reporting guidance for organisations should be used as the basis for a mandatory reporting standard, given that it has rapidly become widely established.

## FURTHER CHALLENGES

Managing and reporting of GHG indirect emissions in supply chains and across product life cycles (Scope 3 emissions) is a significant challenge for practitioners. Only 8% of active practitioners' organisations were addressing all their significant Scope 3 emissions. A greater level of pressure is starting to be seen in supply chains, with 39% of active practitioners facing pressure to manage or report on GHG, and 28% placing pressure on their suppliers. There is scope for this to be increased and for organisations to spread and extend positive GHG management across their supply chains and stakeholder networks (domestic and international).

The purchase of green tariff electricity is confirmed by 25% of respondents, although the way this is accounted for in GHG reporting varies significantly. The majority count green tariff as grid average and therefore many who are reporting outside of statutory schemes are not gaining the full 'GHG value', even though they might be paying a premium. Greater clarity and guidance is needed.

Although 80% of respondents confirm that there is a role for carbon offsetting, only 14% had purchased an offset. Caution is noted, with concern raised that offsetting can divert attention from achieving internal reductions at source, although robust aligned standards and improved guidance would help to provide greater confidence.

Developing a clear business case for GHG management, accounting for emissions, instigating reductions, sustaining action and reporting on progress – all are activities led by environment and sustainability professionals. These practitioners require and use a range of knowledge, skills and tools to ensure maximum effectiveness. They are and will be essential in the transformation required to achieve the diversity of low carbon businesses and organisations that will thrive and make up the future green economy.

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# 1 INTRODUCTION

## 1.1 WHY A SPECIAL REPORT?

As an active and growing membership body, the Institute of Environmental Management and Assessment (IEMA) can make a distinctive 'practitioner focused' contribution to current debates and considerations on climate change and related policy proposals. The nature of IEMA's membership and position as the largest UK membership body representing environment and sustainability professionals means that it is uniquely placed to investigate the practising professional's direct experience, their views on the state of carbon management and reporting and the key issues and challenges for practitioners and the organisations they work for. This report seeks to capture and review those views along with some unique 'market information' from extensive engagement work with members over the first half of 2010.

*IEMA is uniquely placed to investigate the practicing professional's experience and the key issues and challenges they face on carbon (GHG) management and reporting.*

Climate change poses major challenges for both organisations and practitioners; the landscape can be confusing with rapid change, uncertain price signals, extensive guidance and unclear risks and opportunities. This report does not seek to provide further guidance or road maps for practitioners. It is instead focused on the state of carbon and greenhouse gas (GHG) management as a practitioner activity, effectively a baseline overview considering issues, trends and potential future direction. As such this 'initial review' will be informative to both practitioners and policy makers.

## 1.2 CLIMATE CHANGE - CHALLENGE AND CONTEXT

The climate change challenge facing society is now well understood as a growing reality and escalating priority. Urgency is not just a factor of increasing GHG emission levels, to date inextricably linked to economic growth, but is also linked to the duration of GHGs in the atmosphere and time lags within natural cycles. These system factors have already 'built in' a level of future climate change. A further consequence is that for all of us, the scale of change required will continue to increase each year unless and until global GHG emissions peak.

Within the UK, the 2008 Climate Change Act introduced legally binding targets including GHG emission reductions of at least 80% by 2050 and reductions in emissions of at least 34% by 2020. Both these targets are against a 1990 baseline.

Other key provisions of the Act include:

- A carbon budgeting system which caps emissions over a 5-year period. The first three carbon budgets run from 2008-2012, 2013-2017 and 2018-2022;
- The creation of a Committee on Climate Change- an independent, expert body to advise Government on the carbon budgets;
- Powers to introduce a domestic emissions trading scheme (leading to the CRC Energy Efficiency Scheme);
- Reporting at least every 5 years on the risks to the UK of a changing climate and publication of a programme setting out how these impacts will be addressed;
- Issue guidance on organisational GHG emissions reporting, require a review of GHG reporting and set provision for a potential future requirement of mandatory GHG reporting for companies.

Table 1.1: The UK's first three carbon budgets

| | BUDGET 1 (2008-2012) | BUDGET 2 (2013-2017) | BUDGET 3 (2018-2022) |
|---|---|---|---|
| Budget level ($MtCO_2e$) | 3018 | 2782 | 2544 |
| Percentage reduction below 1990 levels | 22% | 28% | 34% |

*Note - The Committee on Climate Change has said that the UK should aim to limit the use of carbon offsets / credits and to meet its carbon budgets through domestic reductions. The previous Government (2005-2010) aimed to meet the first three carbon budgets without purchase of overseas credits outside the EU ETS, although it did reserve possible credit purchase as a fallback option (ref- HMT, Building a low-carbon economy: implementing the Climate Change Act 2008, April 2009).*

### 1.2.1 What has been achieved in recent years?

The UK Government's Greenhouse Gas Inventory National System[1] provides an independent estimate of the UK's GHG emissions for reporting to the UNFCCC. The 2008 National Inventory Report concluded that, up to 2006, total GHG emissions (as $CO_2e$) had been reduced by 15.1% or 15.6% if reductions from net "Land Use, Land Use Change and Forestry" (LULUCF) were included. This exceeds the UK's 2012 Kyoto reduction target. However, the rate of reduction from 1990 is approximately 1% per year, significantly below the 2-3% rate suggested as required by the Committee on Climate Change and significantly below higher required estimated rates by some other sources (e.g. Tyndall Centre).

The trend is further informed by the recent work of the Committee on Climate Change[2] in their second annual report to Parliament on progress made in reducing emissions and meeting carbon budgets (as required under the 2008 Climate Change Act). They found that $CO_2$ emissions fell by only 0.6 percent annually in the period before the recession relative to 2-3 percent annual cuts required in the period to 2020 to meet current carbon budgets. Overall, UK GHG emissions fell by 1.9 percent in 2008 ($CO_2$ fell 2%) and 8.6 percent in 2009 ($CO_2$ fell 9.7%); the committee is however clear that this reduction was mainly due to the recession and other factors like fuel price rises.

### 1.2.2 Energy security and cost pressures

In addition to legislation, a further leading business driver for all organisations will continue to be the price of energy and carbon, especially in the context of global population growth and development pressures (e.g. International Energy Outlook 2009 projections whereby world consumption is projected to increase by 44 percent from 2006 to 2030). Energy costs have fluctuated in recent years, in part due to increasing demand from developing countries, followed by global recession. Other drivers on global energy prices will be the resumption of economic growth and the "peak oil" phenomenon.

"Peak oil" is the concept of passing maximum global output of liquid hydrocarbon fossil fuels, into diminishing oil reserves with reduced annual output and consequent price pressures. There is uncertainty and varying predictions for the date of peak oil (some suggesting within the next 10 years). Following its peak, and assuming the absence of equivalent alternatives, the price of oil is likely to continuously increase as greater effort is required to recover crude from increasingly marginal and difficult reserves. Energy shortages and, potentially, economic disruption may result. The extent of such pressures will in part depend upon the speed of progress towards a low carbon and, importantly, a less discussed 'low energy' economic model.

Other supply pressures also exist on energy prices such as (in the UK) the planned decommissioning of old nuclear and coal-fired generating capacity, the additional cost of installing carbon capture and storage capacity for new coal-fired power stations and the growing reliance on imports. The transformation to a low carbon economy could itself increase price and supply pressures. Measures like vehicle electrification will require significant new nuclear and low carbon investment (reference Electric Vehicles: Charged with potential – Royal Academy of Engineering, 2010).

[1] www.ghgi.org.uk/
[2] www.theccc.org.uk

Looking ahead, further pressures will also exist such as the global scarcity of rare earth metals, currently essential in the manufacturing of many renewable energy technologies.

In the above context, many practitioners are increasingly questioning recent policy responses and suggest there may now be an unrealistic impression that the main consequence of the low carbon economy will be to substitute (e.g. electric cars for petrol/diesel, and 'environmentally friendlier' building materials for conventional building materials). The recent DECC pathway analysis (July 2010) includes illustrative trajectories towards the 2050 GHG carbon budget target, the first of which does include the assumption of a concerted effort to reduce overall energy demand. It will be interesting to see if this will develop through to a future Government commitment on total energy reduction (breaking with the longstanding relationship between GDP growth and overall energy consumption).

Whilst policy work and debates continue, the range of price risks, pressures and other uncertainties is encouraging forward thinking businesses and organisations to both increase energy efficiency and to consider opportunities for onsite renewables and export of surplus generation.

## 1.3 DEVELOPING AN IEMA FOCUS

Climate change is now a central focus for IEMA, supporting our 15,000 environment and sustainability practitioner members, in their work to address this escalating challenge. IEMA's climate change work covers mitigation and adaptation and integrates across sustainable development, environmental management, environmental assessment and wider practice. Throughout 2009, IEMA undertook work on both mitigation and adaptation including:

- We engaged IEMA members in our response to the Department of Energy and Climate Change's (DECC's) consultation on carbon budgets and followed this through with engagement on their Guidance on Carbon Neutrality. Our strong and robust message that claims around 'carbon neutrality' need to be set within the context of total GHG emissions reductions were reflected by DECC in its final guidance, and this principle was continued in our work with BSI British Standards in relation to the development of PAS2060.

- We worked closely with the Department for Environment, Food and Rural Affairs (Defra) on the development of guidance for the measurement and reporting of greenhouse gas emissions, a requirement under the Climate Change Act 2008. Having provided input at an early stage to the scope of the guidance, Defra engaged in a series of UK-wide IEMA workshops to ensure practitioners were provided an opportunity to understand the guidance and suggest improvements.

- We published our Practitioner on "Mitigating Climate Change: a guide for organisations" in December 2009, timed around the Copenhagen UN climate change summit. The guide reflected members' input to our work with government.

- IEMA further continued to work on climate change adaptation, continuing our relationship with the UK Climate Impacts Programme (UKCIP). Our Practitioner on "Adapting to Climate Change – a guide to its management in organisations" provided practical support to members in helping organisations adapt to a changing climate.

- Our "Special Report: Adapting to Climate Change Survey" demonstrated a high level of interest and engagement on climate change adaptation from those within the environment profession. The report highlighted the extent to which the UK Climate Projections are being used by practitioners in assessing and evaluating risk.

- We provided written evidence to the House of Commons Environmental Audit Committee's inquiry into climate change adaptation, setting out the contribution that the profession makes in ensuring that UK business is adapting well to a changing climate.

In addition to this recent focus, IEMA has produced several practitioner guides to support members addressing specific aspects of the climate change agenda. Relevant recent examples are:

- Mitigating Climate Change: a guide for organisations (2009)
- Adapting to Climate Change: a guide to its management in organisations (2009)
- Change management for sustainable development: a workbook (2006)
- Environmental Data Management: for emissions trading and other purposes (2005)

## 1.4 METHODS AND APPROACH – 'BUILDING THE PICTURE'

This report considers a range of evidence and information collated from work with IEMA members in early 2010. Two key methods have been used to inform this report and to build an initial evidence base:

- Comprehensive survey into the state of GHG management and reporting within the profession incorporating practitioner views and organisational information
- Practitioner workshops to further test and examine the key issues identified and outcomes from the survey and follow up analysis

The results of the survey reflect a high level of activity that exists within the IEMA membership on carbon and GHG management. In this context, outcomes should not be taken as an indication of the level of GHG management and reporting across the UK economy as a whole. However, the results do demonstrate the progress that can be secured by businesses and organisations as a result of employing and investing in environmental and sustainability practitioners.

### 1.4.1 GHG management and reporting survey

The survey of practitioners was conducted over a two week period in late April 2010 by means of an on-line self completion questionnaire. At the close of the survey, 1,674 questionnaires had been fully completed, approximately 16% of those eligible to participate. The survey reflects the views of IEMA members active across all major employment sectors; the five largest being Construction (10.6%), Manufacturing (11.4%), Consultancy (22.5%), Public Administration (8.7%), and Professional Scientific and Technical Services (10%). A breakdown of respondents by sector is below:

Table 1.2: Sectors of employment for 2010 GHG practitioner survey

| | PERCENT | NUMBER |
|---|---|---|
| Agriculture, Fisheries and Forestry | 1.1 | 18 |
| Mining and Quarrying | 1.1 | 18 |
| Manufacturing | 11.4 | 191 |
| Water Supply, sewerage, waste & remediation | 2.0 | 33 |
| Wholesale and Retail Trade | 1.2 | 20 |
| Accommodation and Food Services | 0.1 | 2 |
| Finance and Insurance services | 1.0 | 17 |
| Professional, Scientific and Technical services including consultancy | 10.0 | 168 |
| Public Administration and Defence | 8.7 | 146 |
| Human Health and Social Work services | 1.2 | 20 |
| Construction | 10.6 | 178 |
| Transport and Storage | 3.2 | 54 |
| Information and Communication Real Estate Services | 0.4 | 6 |
| Administrative and Support services | 1.0 | 16 |
| Education | 3.2 | 54 |
| Arts, Entertainment and Recreation | 0.5 | 9 |
| Activities of Extraterritorial organizations | 0.2 | 3 |
| Consultancy | 22.5 | 376 |
| Other, please specify | 20.6 | 345 |
| **Total** | | **1674** |

The survey provides an overview of IEMA member's views and also their organisation's activity (or position) on carbon and GHG management. In total 35 questions (some with sub questions) were used and are set out with summary outcomes in Appendix 1. The survey sought to cater for practitioners actively working in this field, as well as those who are interested but not currently working on GHG management or reporting.

Two thirds (1079) completed the primary question strand **(Strand A)** and are hereafter referred to as **Active GHG Practitioners.**

*Strand A - responding practitioners who are already engaged in carbon (GHG) footprinting or who are employed within organisations that are already calculating carbon (GHG) footprints for the organisation as a whole or for departments/activities (e.g. for products, services, projects, or developments).*

The remaining third (595) followed a separate sub-strand **(Strand B)** of questions for those not yet actively working in this area **(Other Practitioners)**.

*Strand B - responding practitioners not currently engaged in carbon (GHG) footprinting or who are employed within organisation's that are not yet calculating carbon (GHG) footprints.*
**Note - many of these practitioners are however investigating or considering GHG management approaches for their respective organisations(ref chapter 5).*

All respondents (strands A and B) answered questions 1-5 and 27-35. Appendix 1 provides the set of survey questions with outcome data.

### 1.4.2 Practitioner Workshops

In May and June 2010, IEMA ran eight workshop sessions in Glasgow, Bristol, Leeds, Newcastle, Peterborough and London (3 sessions). The sessions were two and a half hours long and each was attended by between 20-30 delegates.

In total, 201 environmental practitioners participated from a range of relevant backgrounds and organisational levels (e.g. energy managers, climate change officers, environmental and sustainability managers, sustainability and CSR officers, heads of function and directors, auditors, verifiers, consultants and many more). The commonality was that participants were either already engaged in the process of GHG management/reporting inside organisations or were in roles very likely to be active in the near future (e.g. in response to the Carbon Reduction Commitment (CRC) Energy Efficiency Scheme, Carbon Disclosure Project (CDP) or other current initiatives).

IEMA used the workshop sessions to help validate and further understand outcomes from the GHG practitioner survey including:

- The nature of organisational action on GHGs
- The role, value and effectiveness of GHG reporting
- Key issues, challenges and views on the potential implementation of mandatory reporting

Through the workshops, IEMA members were provided with the opportunity to:

- Learn about carbon/GHG approaches from experienced colleagues and peers
- Discuss early findings from IEMA's 2010 GHG practitioner survey
- Debate and identify key issues, challenges and barriers for the profession
- Improve and develop both their own and IEMA's understanding on the effectiveness of GHG management and reporting

Outcomes from the workshops were collated and compiled into a summary document (Appendix 2). This summary was circulated to all workshop participants as a draft document for comment.

### 1.4.3 Peer review

As a final stage, the review and outcomes presented in this special report were circulated for peer review by a number of active and leading GHG practitioners in August 2010.

## 1.5 SOME NOTES ON LANGUAGE AND TERMS

For clarity the following terms are used throughout this report and a full list of acronyms and abbreviations is also provided in Appendix 3:

**GHG's and Carbon -** This report uses GHG's (greenhouse gases) as a key reference throughout to take account of other gases additional to carbon dioxide such as hydrofluorocarbons (commonly used as refrigerant gases). Carbon is used in places, for example occasionally as a term in workshop discussions and outputs. However, throughout the report GHGs and Carbon are generally used synonymously and in line with carbon dioxide equivalant ($CO_2e$).

**Carbon dioxide equivalent -** $CO_2e$ is a universal unit of measurement used in accounting and reporting of GHG inventories or footprints. It relates the global warming potential of any greenhouse gas, relative to the global warming potential of one unit of carbon dioxide. $CO_2e$ is calculated by multiplying the emissions of each of the main six greenhouse gases by its 100 year global warming potential (GWP).

**GHG Management and reporting** – The phrase 'management and reporting' is used as a deliberate reference and with regard to the important interconnect between each activity (reporting in most instances being an essential component of management). It is important to note that good quality **GHG accounting** is also fundamental to management and reporting, in effect a pre-requisite to both.

**Internal and external (non public and public) reporting** – This report considers GHG reporting as a valuable activity within wider GHG management. In places a distinction is drawn between public and non public reporting.

**GHG Footprinting** – A carbon or GHG footprint is a calculated quantification of the total greenhouse gas emissions of the subject or entity (e.g. the organisation).

**Scopes 1, 2 and 3** – The Greenhouse Gas Protocol (www.ghgprotocol.org), along with other guidance and standards, draws a distinction between direct and indirect emissions. Direct GHG emissions are those from sources that are owned or controlled by the reporting entity. Indirect GHG emissions are those that are a consequence of the activities of the reporting entity, but occur at sources owned or controlled by another entity. The Protocol further categorises these direct and indirect emissions into three broad scopes:

- Scope 1: All direct GHG emissions
- Scope 2: Indirect GHG emissions from consumption of purchased electricity, heat or steam
- Scope 3: Other indirect emissions, such as the extraction and production of purchased materials and fuels, transport-related activities in vehicles not owned or controlled by the reporting entity, out sourced activities, waste disposal, etc

# 2 GHG MANAGEMENT – STATUS REPORT

## 2.1 BACKGROUND

This chapter draws on the evidence and outcomes from IEMA members regarding the current state of GHG management and reporting. It provides an overview of the activity and considers trends and directions for GHG management and reporting.

## 2.2 ACTIVITY LEVELS

The level of activity on GHG management across IEMA's membership is now extensive as demonstrated through the overall response figures on the April (GHG) Practitioner survey. 1,674 practitioners responded to the survey and this itself indicates a strong interest in the topic (i.e. 16% of those emailed). This is a high response rate for any such 'cold survey' and clearly indicative of a very high level of activity and interest from the audience in this developing area.

Further to this overall response, 1094 respondents (2/3rds) indicated they were leading on GHG work or that it formed either an important element or a part of their work.

Of the remaining third of respondents (580), 364 indicated that GHG management forms a minor or very minor part of their work. It is clear from analysis that a large number of these practitioners are either just commencing work on GHG management or are in roles or positions where they are likely to become active in the near future. Overall, in relation to the full survey response, only 13% are not undertaking any work on carbon or GHG management and reporting.

With regard to organisations, 80% of respondents indicated their organisation to be engaged in some level of GHG management and 65% indicated that their organisation is engaged in GHG footprinting/ quantification. From those 'other practitioners' not engaged in GHG management (the 595) only 50 indicated that their organisation had made a decision not to footprint or report on GHG emissions.

## 2.3 TYPES OF ACTIVITY

The largest single work area for individual practitioners was 'GHG management and reporting for the organisation'. The five most active work areas were identified as follows (largest first):

- 74% - GHG management and reporting for an organisation
- 64% - Related strategy development for organisations
- 55% - GHG work on products or services
- 53% - GHG assessment of plans, programmes, developments or projects (e.g. within sustainability appraisal, SEA, EIA, BREEAM, etc)
- 31% - GHG verification work

Less frequent work areas were new product or service developments (23%), research (22%) and carbon offsetting (6%). The full response is set out in Q3 Appendix 1. The pattern of work is diverse with practitioners undertaking multiple activities. The trend is one of clear growth with new specialist and 'niche' areas developing and mirroring the anticipated growth of the 'green' low carbon economy.

The typical GHG 'work situations' for survey responders was primarily as organisational employees (three quarters) with 47% as employees of businesses or other organisations, 20% employed in consultancy, 3% in regulators, 3% with verification/certification companies and 2% in academic organisations (Q2 appendix 1). The remainder were either not working on GHG management (13%) or were in a number of specific situations such as individual consultancy / sole traders (7%).

## 2.4 GHG REPORTING – 'VIEW FROM THE FRONT'

The survey outcomes have clearly evidenced the wide extent and high activity levels that now exist on GHG management and reporting across the IEMA membership. Table 2.1 below shows how organisations report on Carbon/GHG footprints, based on responses from active practitioners. All work areas are significantly active but the relative dominance of reporting for organisations is clear with a 'combined' reporting value of 87% (as opposed to products and services at 40%). The increased prominence of 'public' reporting at the organisational level is also notable, in contrast to the other stated activities where there generally appears to be a greater emphasis on 'internal' reporting.

Table 2.1: How organisations report on carbon / GHG emission footprints

| | NEITHER / N/A | INTERNAL REPORTS ONLY | INTERNAL & PUBLICLY AVAILABLE |
|---|---|---|---|
| For the organisation as a whole | 12.6 % | 30.1 % | 57.3 % |
| For products or services | 59.7 % | 24.8 % | 15.5 % |
| For projects or development proposals | 47.8 % | 35.8 % | 16.4 % |

*Each part of this question was answered by 1079 participants. The survey indicates a particularly high level of activity on public GHG reporting for organisations within the responding sample.*

Figure 2.1 (below) shows the recent increase of GHG reporting across different scales of businesses and organisations. To assist comparability between the time periods (2002 – 2010) the data for each has been 'annualised' so that shaded bars show the average % annual take up in reporting within each sub period. The shaded bars are therefore comparable and show a picture of escalating growth over the decade (i.e. in nearly all cases there are increasingly higher levels of annual growth over the full period). The un-shaded data sets are total % figures and although informative they cannot be annualised.

For major corporates/multinationals, GHG reporting continues to grow, although the rate of that growth appears to hold level in 2009-10. It is also clear that this group (scale of organisation) made an earlier start to reporting with around 18% of responders indicating that their organisation was reporting by 2001.

Over half of the SME respondents indicate that they do not report publicly. However, the identified recent increases in growth for SMEs are encouraging.

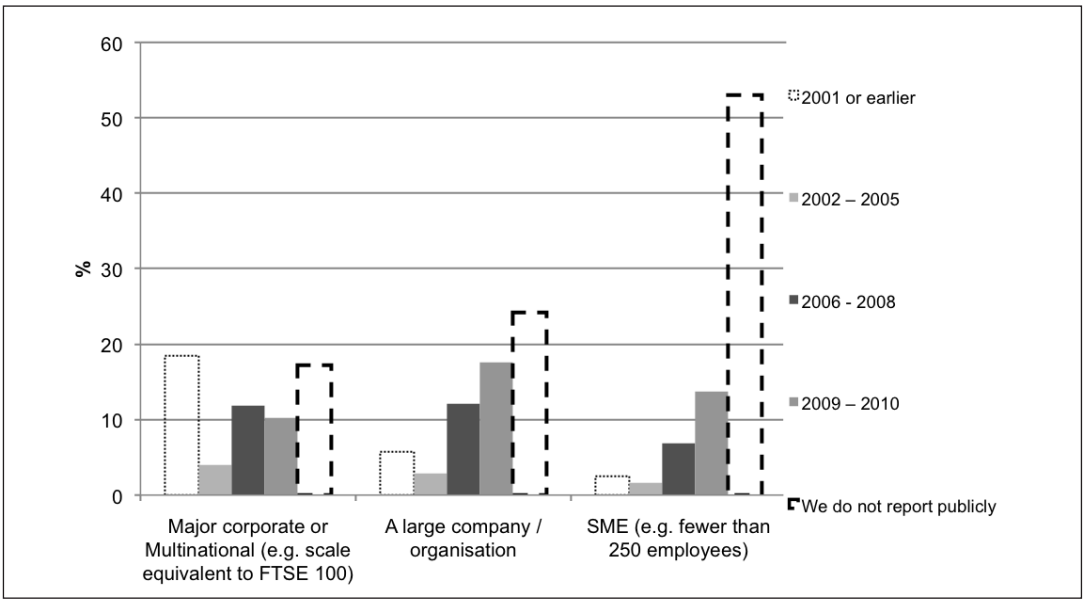



Figure 2.1: Commencement of public GHG reporting by size of organisation

The data has also been analysed by the largest responding sectors of manufacturing, construction, public administration & defence and consultancy (the latter combined with professional scientific and technical). This data is presented in Figure 2.2 along with a 'norm' value for the full sample of active practitioners.

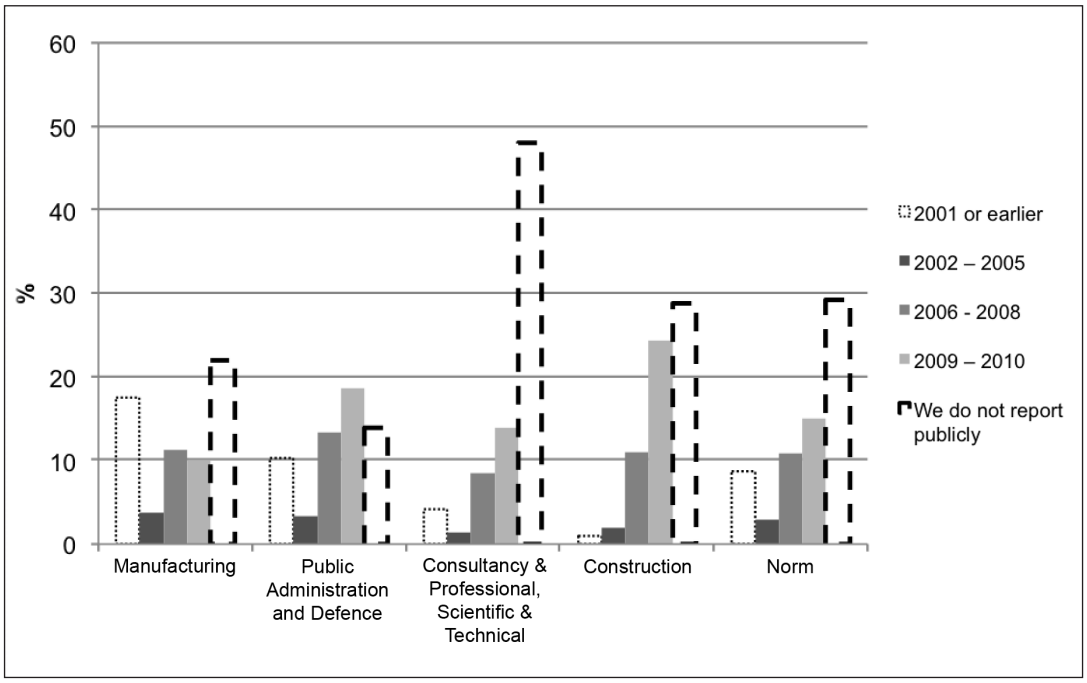



Figure 2.2: Commencement of public GHG reporting by sector

*The data used in both figures 2.1 and 2.2 is from active practitioner's responses to the question "When did your organisation start reporting publicly on carbon / GHG footprints". Although the time periods are not equal, the data used has been 'annualised' to assist comparability over the period from 2002. In this context the 3 shaded bars are comparable indicating the average annual growth within each sub period.*

The following observations can be made:

- Manufacturing held the largest percentage publicly reporting on GHG's at the start of the period in 2001
- As with Major corporates, public reporting continues to grow in 2010 for manufacturing although the rate of growth appears to now be levelling off (around 10% annual growth)
- Public Administration also exceeded the survey norm (this sector made an earlier start and shows growth either in line with or above the norm for each period)
- Construction was initially behind the survey norm but has caught up and annual growth is now significantly ahead in latest period (2009 – 2010)
- The level of reporting by consultancy and professional services is relatively low, although from this low base the rate of reporting is now increasing

Review of the data by both leading sectors and company size shows some interesting differences that can be explored and explained. Pressures such as local Agenda 21, Local Area Agreements (LAAs) and national indicators for Local Authorities, Sustainable Development In Government (SDIG)[3] metrics for central government/public sector, or the importance of IPPC, EU ETS and Climate Change Agreements in manufacturing may all contribute in explaining the earlier start of public reporting in these sectors. In these cases, it is interesting to note the relationship with sector specific drivers that either are or approach a mandatory requirement [4].

[3] Previously known as SOGE (Sustainability on the Government Estate) targets.
[4] Further review and commentary on drivers is outlined in chapter 3.

## 2.5 ACHIEVED REDUCTIONS

Practitioners active on GHG management were questioned on their organisation's GHG reductions and increases. A total of 405 respondents were able to answer at least one part of this question (i.e. provided either a reported reduction or reported increase in at least one of the periods). The response totals are shown in Table 2.2.

Table 2.2: Response levels for publicly reported GHG reductions or increases

| SUB QUESTIONS OF GHG SURVEY - QUESTION 16 | RESPONSES |
|---|---|
| Over the last 2 years our organisation's total GHG emissions increased by... | 123 |
| Over the last 2 years our organisation's total GHG emissions reduced by... | 254 |
| Over the last 2 years our organisation's relative GHG emissions reduced by. | 98 |
| Over the preceding 2 years our organisation's total GHG increased by... | 51 |
| Over the preceding 2 years our organisation's total GHG reduced by... | 64 |
| Over the preceding 2 years our organisation's relative GHG reduced by... | 41 |

- Four times as many respondents indicated a total reduction in the period 2008-2010 than in the period 2006-2008.
- Over the same period, there was an improvement in the proportion of respondents able to report an emissions reduction relative to those whose total GHG footprint increased. The ratio was 1·25:1 in the earlier period but improved to 2:1 in the most recent 2 year period.
- These apparent 'improvements' are likely to be significantly influenced by the economic recession. The Committee on Climate Change has recently investigated the effects of the recession and indicated that UK greenhouse gas emissions fell by 1.9 percent in 2008 and 8.6 percent in 2009 (mainly due to the recession and other factors, like fuel price rises).

Figure 2.3 shows the distribution of responses to achieved and publicly reported total % GHG reductions in the most recent period. It presents the percentage of respondents for each respective level of achieved GHG reduction by organisations.

As an example, 3% of the respondents indicated an organisational total GHG reduction of 12% over the period. This data is presented with trend line to help indicate the spread of achievement.

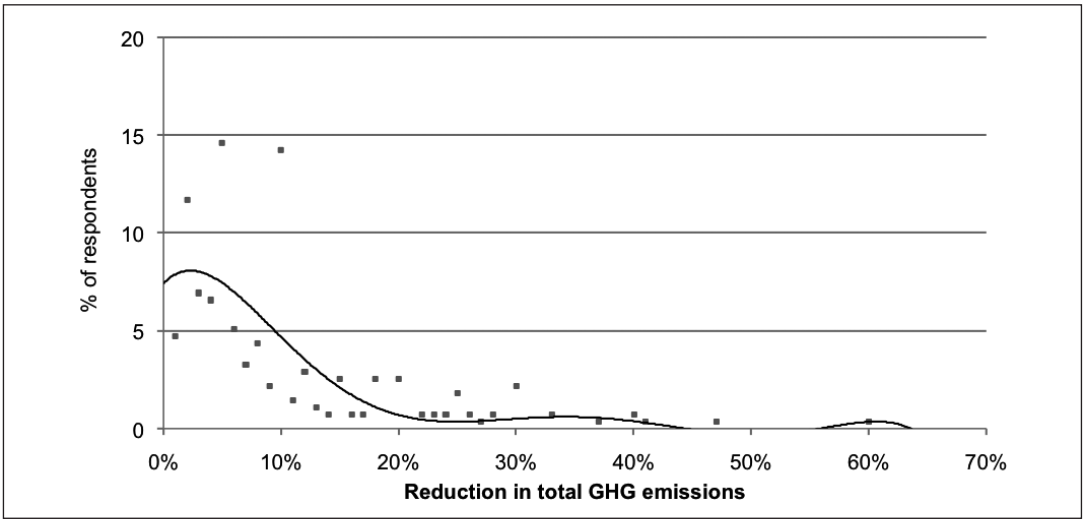



Figure 2.3: Achieved and reported GHG reductions over a 2 year period

Fig 2.4 below shows the level of response from organisations on reported emission reductions and is presented for different scales of business. A clear relationship exists between the ability to state an achieved reported reduction and the scale/size of the organisation. This is clearly reflective of the earlier start in GHG reporting made by larger organisations (Fig 2.1) and the difficulties and barriers that have for many years constrained and limited progress within smaller businesses and organisations. It is also clear that reporting is at this time dominated by the quantification of gross or total organisational GHG footprints, rather than relative or intensity based measures such as a per unit quantification related to financial turnover or production. This situation may change in coming years if there is further adoption of new guidance for organisations (Defra / DECC 2009) and also if take up is extended on PAS 2050 – BSI publicly available specification for goods and services.

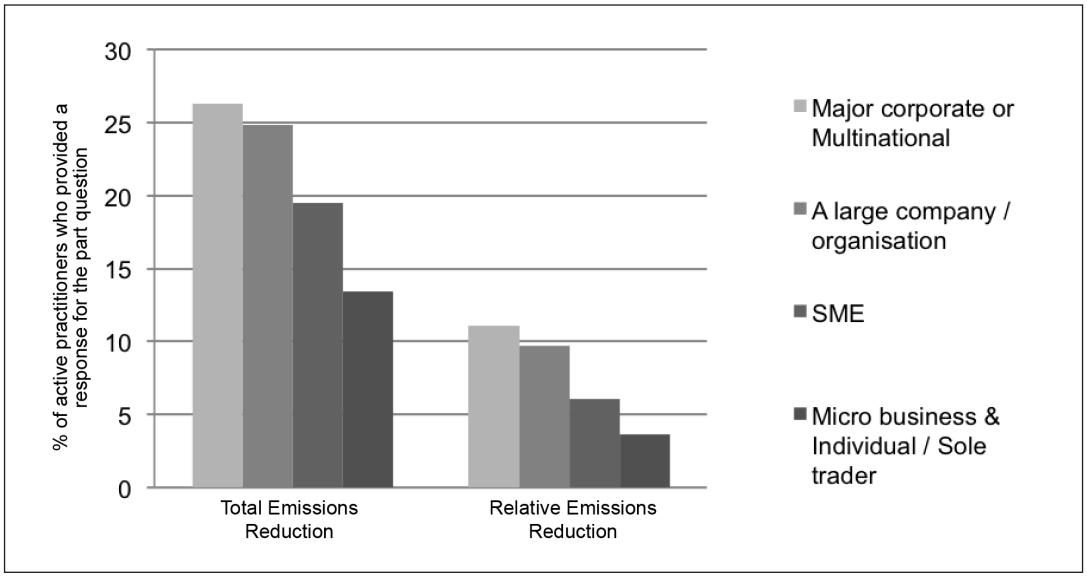



Figure 2.4: Ability to report reductions by scale of organisation.

## 2.6 WHERE AND HOW DO ORGANISATIONS REPORT?

Practitioners and their organisations are using a number of opportunities to publicly communicate their data on organisational GHG footprints. The most frequently cited are:

| | |
|---|---|
| 50% | Company report (annual or business review) |
| 34% | Corporate Social Responsibility / Corporate Responsibility report |
| 34% | Environmental report (e.g. for EMAS, ISO14001 or other EMS) |
| 27% | Sustainability report |
| 25% | Topic specific report (climate change, carbon etc) |
| 23% | Specific web site entry |
| 20% | Within wider scheme (e.g. Carbon Disclosure Project) |

**Further information is at Question 15 in Appendix 1*

The spread of public reporting methods is a reflection of the wider reporting landscape and the range of methods used by organisations for stakeholder communications. The frequency of use will in part reflect organisational decisions on where to locate carbon and GHG reporting in terms of its natural or nearest home and its contribution to the business. The connections to wider company and (non-financial) reporting are clear as are certain supportive drivers for GHG management such as the internal Environmental Management System (EMS), an existing approach concerning corporate reputation (e.g. through Corporate Social Responsibility) or a sustainability report potentially linking economic activity to environmental and social impacts (e.g. via an intensity measure of emissions relative to a unit of product or service).

## 2.7 GUIDANCE AND STANDARDS

The use of guidance, standards and schemes to support organisational (and other) GHG management and reporting activities is outlined in Table 2.3.

Table 2.3: The use of standards, schemes and guidance to inform GHG footprinting and reporting

| GUIDANCE / STANDARD | NOT USED / N/A | LIMITED USE | LEAD SOURCE | TOTAL USE (LTD+ LEAD) |
|---|---|---|---|---|
| Defra/DECC Guidance (2009) | 29.2 % | 37.2 % | 33.6 % | 70.8% |
| Regulated schemes (e.g. CRC, EU ETS) | 39.8 % | 29.8 % | 30.4 % | 60.2% |
| Carbon Trust Standard – organisations | 44.1 % | 38.8 % | 17.1 % | 55.9% |
| GHG Protocol (corporate standard - organisations) | 49.5 % | 29.6 % | 20.9 % | 50.5% |
| ISO 14064 (part 1 – organisations) | 69.9 % | 23.3 % | 6.9 % | 30.2% |
| CDP - Carbon Disclosure standards | 72.8 % | 20.3 % | 7.0 % | 27.3% |
| GHG Protocol (project accounting) | 73.1 % | 21.4 % | 5.5 % | 26.9% |
| PAS 2050 | 75.7 % | 20.1 % | 4.2 % | 24.3% |
| ISO 14040 | 75.7 % | 20.3 % | 4.0 % | 24.3% |
| ISO 14064 (part 2 - projects) | 77.3 % | 19.2 % | 3.5 % | 22.7% |
| EN 16001 | 82.1 % | 15.2 % | 2.7 % | 17.9% |

The range of standards and guidance do in combination seek to address different specific situations. Many are organisational standards, whereas PAS2050 is specific to goods and services. In addition to footprinting based schemes, guidance and standards are also being developed for accounting on the value and financial liability of carbon. At the time of survey other CRC approved standards such as BSI's emission reduction scheme or the Achilles CEMARS had not been approved by Environment Agency.

Practitioner concern exists over the number of standards and importantly over consistency issues between standards and schemes. An example frequently cited is the difference between the CRC (focusing on carbon dioxide) relative to the wider 2009 Defra/DECC reporting guidance which covers all of the six main Kyoto GHGs. At this stage this is a necessary difference but it at least illustrates the inconsistencies between some schemes apparent to practitioners and importantly to the Board and wider decision makers. Further examples include differences in approach that sometimes exists on scope 3 emissions, recent confusion over the reporting of green tariff electricity, differences between countries, issues over baselines and reporting periods, some confusion on default and conversion factors and the confusion that can exist between different (yet relevant) standards and schemes such as those relating to carbon offsetting. Although many of these points are readily addressed through revised and improved guidance, the practitioner experience is generally one that favours closer alignment in schemes with potentially a role for default guidance.

The IEMA workshops and survey both confirmed a wide uptake in the use of the 2009 Defra/DECC "Guidance on how to measure and report your greenhouse gas emissions". The adoption and use of this new guidance (based on the GHG protocol) is notable at the top of the above standards and guidance 'league table'. The guidance is widely used and provides a potential basis for future roll out of mandatory GHG reporting (itself identified as an opportunity to provide greater clarity and consistency in approach for organisational standards).

It should be recognised that the spread of standards and guidance is not necessarily problematic and a clear niche exists for many such as PAS2050 as a separate and specific approach on goods and services (although some practitioner concern does exist on its associated cost and complexities and this may explain it's relatively low take up within table 2.3 above).

Practitioners have also indicated a desire for greater use of existing (broader) schemes and standards, such as ISO 14001, and potentially a need for new guidance to help practitioners use and apply an existing environmental management system (EMS) as a basis for GHG management.

## 2.8 FUTURE AMBITION

In Chapter 1 the scale of the climate change challenge was outlined with reference to the UK's carbon budgets, the wider need and pressure for international agreement on global emissions and wider drivers and pressures concerning energy supply and prices. In this context, a further aspect of the IEMA (GHG) practitioner survey concerned member's views on how ambitious they believed their own organisations to be. Responses are set out in full in Figure 2.5 below.

A high level of organisational ambition is notable with 85% having ambitions beyond legal compliance and the majority wanting to build a positive or leading reputation as a low carbon business or organisation. Further review of these outcomes are outlined in Chapter 5.

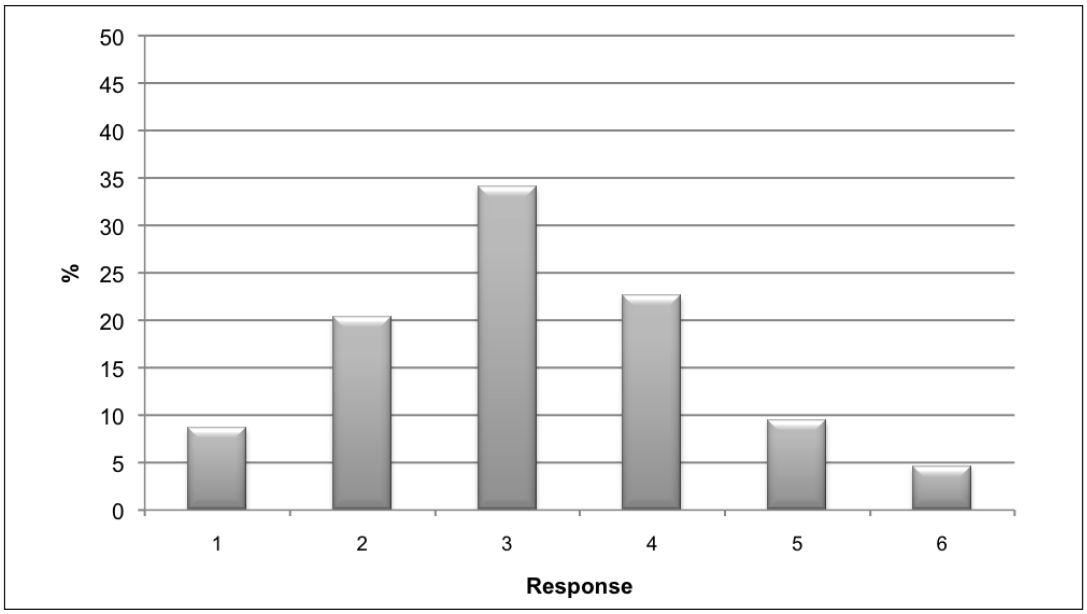



Figure 2.5: Levels of 'corporate ambition' for organisations employing IEMA practitioners

1. We aim to make transformational changes that will radically alter our business model and make us a low or zero carbon leader in our field
2. We aim to improve existing operations and supply chains, achieve substantial carbon (GHG) reductions and become a low carbon leader in our field
3. We aim to achieve significant carbon (GHG) reductions and build a positive reputation as a low carbon responsible business/ organisation
4. We aim to be ahead of legal requirements, stakeholder expectations and the requirements of our leading clients
5. We aim to be legally compliant
6. We have no specific ambition in this area

## 2.9 CHAPTER CONCLUSIONS

- There is a high level of activity and engagement within IEMA's membership on carbon and GHG management and reporting.
- IEMA members are active across a range of GHG and carbon management work, with the leading activity area being organisational GHG management and reporting. Other activities are strategy work for organisations, work on products and services and work regarding the assessment of plans, programmes, developments or projects.
- IEMA members indicate a high level of organisational GHG activity and also a high level of corporate GHG ambition, within the organisations where they are employed.
- Increasing growth in GHG reporting is evident over the last 10 years across all sectors and scales of business, with a clear relationship existing between organisational scale and achieved levels of activity.
- The very largest companies, multinationals and major corporates, along with organisations in the manufacturing sector appear to have made the earliest start on GHG management and reporting.
- Initially slower to start groups such as SMEs and the consultancy sector are now demonstrating progress in GHG management and reporting, from an initially low base.
- The extent of reported total GHG reductions relative to reported total GHG increases, has significantly improved in recent years although the degree to which the recession will have contributed to this is unclear.
- A relationship exists between the ability to state an achieved reported reduction and the scale/size of organisations with larger businesses and organisations being more able to report and provide quantified reductions.
- IEMA members identify a need for aligned standards and for improved clarity and consistency in approach.
- The 2009 Defra/DECC "Guidance on how to measure and report your greenhouse gas emissions" is being widely used by practitioners and provides a potential basis for future roll out of mandatory GHG reporting, which will also aid consistency in reporting.

# 3 DRIVERS AND BARRIERS

Although it is clear from Chapter 2 that GHG management and reporting is a recent and fast growing activity within organisations, organisational progress is variable, with a number of internal and external factors in play that can encourage and hinder the process. This chapter summarises IEMA's findings in relation to both the 'drivers for action' and 'barriers to progress'. It also considers the dynamics and complex situations that can exist between such factors. For clarity the following definitions are used:

*Drivers – internal or external pressures (factors) that encourage the organisation to take action*
*Barriers – internal or external factors that block or hinder action by the organisation*

For environmental and sustainability practitioners, a clear understanding and awareness of the organisation's drivers and barriers is essential. This awareness can help to ensure that a developing carbon strategy is suitably 'connected' to the organisation's mainstream business objectives. In this context, practitioners need to be aware of the significant drivers and barriers both within their own organisation and also externally in terms of trends, pressures and opportunities for the organisation.

It should be noted that not all supportive or contributing factors will constitute drivers. For example, processes of carbon and GHG footprinting and the separate reporting process of the organisation are both acknowledged as significant supportive elements, or management tools, within an effective strategy. However, the relevant drivers would be the pressures that led to these developments initially, for example a mandatory requirement for carbon reporting, or a client/supply chain requirement for a specific carbon footprint.

It is equally essential that policy makers have a sound appreciation of not just leading drivers and barriers, but also the experience and views of practitioners for identifying which pressures and factors are most instrumental in leading to positive change.

## 3.1 DRIVERS FOR ACTION BY ORGANISATIONS

The IEMA April 2010 GHG practitioner survey asked separate questions concerning key organisational drivers to each main strand of respondents as shown below:

| | |
|---|---|
| Strand A - 1079 survey respondents - Active Practitioners<br>Responding practitioners who are already engaged in carbon/GHG footprinting or who are employed within organisation's that are already calculating carbon/ GHG footprints for the organisation as a whole or for departments / activities (e.g. for products, services, projects, or developments) | What are your organisation's main drivers for undertaking energy or carbon/GHG management? |
| Strand B - 595 survey respondents – Other Practitioners<br>Responding practitioners not currently engaged in carbon/GHG footprinting or who are employed within organisation's that are not yet calculating carbon/GHG footprints<br>*Note - many of these practitioners are investigating or considering GHG management approaches for their respective organisations | What potential drivers could most directly influence your organisation to address carbon/GHG management? |

For active practitioners (strand A) when considering the 'strongest' drivers of greatest influence, the foremost were:

1. Cutting costs and financial efficiency (47.5%)
2. The values of the organisation (45.3%)
3. Complying with legislation (45.2%)
4. Promoting the corporate reputation or brand (41.5%)

These drivers are then followed by a 'supporting cast' of pressure for improvement from an existing EMS (32.8%), requirements of key clients, sales or marketing related drivers, etc.

For other practitioners (strand B) the foremost of their 'strongest' identified drivers which would most directly influence their organisation to act on GHG management, were:

1. New legal requirements (53.3%)
2. Cutting costs (42.4%)
3. Key client requirements (38.2%)

These are followed by reputation of company (22.5%), pressure for improvement from an existing EMS, values of the organisation and sales or marketing related drivers (full outcomes are given in Q8 Appendix 1).

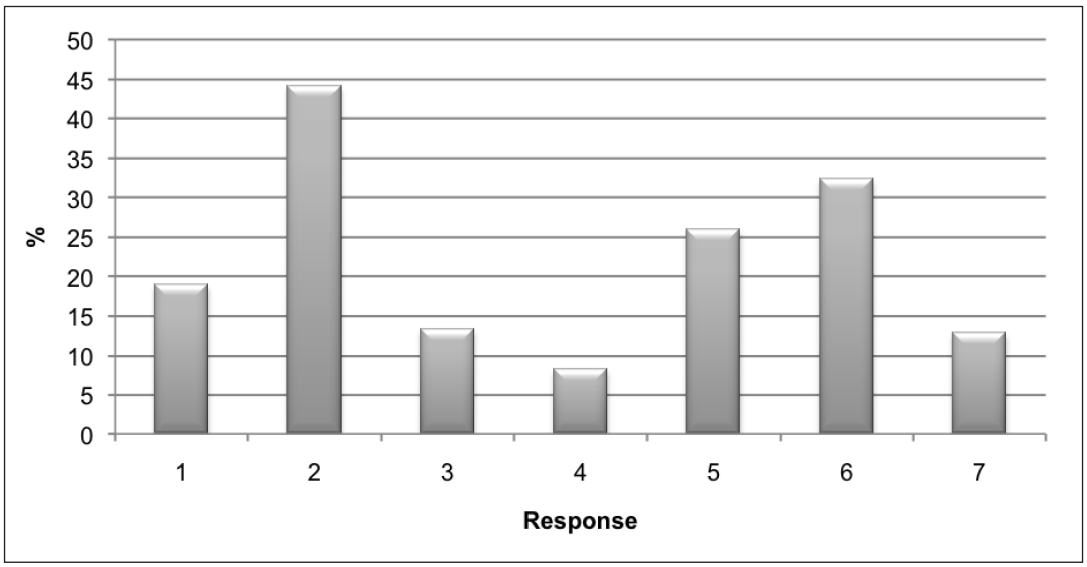
Legislation is a key driver for all, however for those not yet managing and reporting it is clearly the most significant by a margin of 11%. This is likely to be reflective of practitioners' wider experience concerning the importance of mandatory or forced requirements as an agent of change. Examples include the Producer Responsibility Obligations (Packaging Waste) Regulations 2007 that have led to improvements in environmental performance following earlier years of marginal improvements in packaging recovery for recycling. The Landfill Directive is a further example in transforming waste practice. The Energy Efficiency CRC is set to deliver similar transformational change with a predicted contribution to UK carbon budgets of at least 4.4 million tonnes of $CO_2$ per year by 2020.

Wider organisational values and corporate reputation are more prominent as drivers within the group of active practitioners. Workshop and peer discussions indicate that this reflects changes and developments within the organisation (increased maturity) as management and reporting become embedded business practice. In summary, regular reporting helps enable these wider business benefits to be recognised, valued and attributed to the organisation's carbon (GHG) strategy.

Within the practitioner workshops (Appendix 2) a number of further consensus points were reached concerning drivers:

- There will be some important differences between individual organisations (e.g. in smaller businesses a supply chain requirement can be critical, for a major corporate the reputational concern could be paramount).
- For some situations where significant progress is being achieved, there may be a 'critical mass' of inter-connected drivers at play. In this context, the organisation may be both complying with legislation, reducing its annual costs and also winning new work (with the strategic approach on carbon reduction making a business critical contribution).
- Although this dynamic situation can arise (i.e. with multiple drivers) practitioner discussions tend to confirm that in securing an initial organisational commitment, a single business critical driver is usually required to 'tip the balance'.
- New legislation or mandatory requirements are recognised as the foremost significant driver and with most potential impact to generate widespread progress.

Figure 3.1 confirms the importance of compliance schemes and presents outcomes from the following survey question " Please indicate any compliance schemes that require your organisation to manage or report on GHG emissions (in the case of CRC will your organisation be required to comply?)" The CRC is a clear driver with nearly half of all respondents covered by the scheme.




| LEGISLATION / COMPLIANCE SCHEME | PERCENT | VALUE |
|---|---|---|
| 1. EU Emissions Trading Scheme (EU ETS) | 18.9% | 204 |
| 2. CRC Energy Efficiency Scheme | 44.1% | 476 |
| 3. Sector level Climate Change Agreements in relation to CCL | 13.3% | 143 |
| 4. Individual (underlying) agreements in relation to Climate Change Levy | 8.2% | 89 |
| 5. Display Energy Certificates (as required for public building) | 25.9% | 279 |
| 6. None | 32.3% | 348 |
| 7. Other, please specify | 12.8% | 138 |

Figure 3.1: Importance of legislation in GHG management

* *1079 participants responded to this question and were able to supply more than one answer*

## 3.2 BARRIERS TO PROGRESS IN ORGANISATIONS

In addition to business critical drivers, the GHG practitioner survey also sought to understand the range of barriers that limit progress. It asked two separate questions concerning key organisational barriers and directed to each main sub group of the survey as shown below:

| | |
|---|---|
| Strand A - 1079 Active Practitioners | What barriers do you face in your work to achieve carbon and GHG reduction? |
| Strand B - 595 Other Practitioners | What barriers do you face in your organisation in getting carbon and GHG reduction on the agenda? |

The table below indicates the response rates from 'active practitioners ' to the question - What barriers do you face in your work to achieve carbon and GHG reductions?

Table 3.1: Barriers faced by practitioners active in GHG management and reporting

| | NOT A BARRIER | LIMITS PROGRESS | SIGNIFICANT BARRIER | TOTAL – LIMITING |
|---|---|---|---|---|
| Other competing (higher) priorities across the organisation that are business critical or legally required | 17 % | 44 % | 39 % | 83 % |
| Lack of access to investment funds / capital | 25 % | 50 % | 25 % | 75 % |
| Limitations of internal processes (such as a need to provide return on investments over an annual or other short time period) | 26 % | 51 % | 22 % | 74 % |
| Perceived scale and complexity of the job | 36 % | 49 % | 15 % | 64 % |
| Departments, business units or branch plants lack enthusiasm and are not engaged | 37 % | 49 % | 14 % | 63 % |
| General lack of awareness across staff and the organization | 40 % | 47 % | 13 % | 60 % |
| Difficulties working with suppliers (difficult to engage) | 46 % | 44 % | 10 % | 54 % |
| Confusion over guidance and schemes (too many or too complicated) | 49 % | 38 % | 12 % | 51 % |
| Lack of higher level skills and knowledge to help me personally drive the strategy forward | 53 % | 36 % | 10 % | 47 % |
| Lack of board level or senior management support | 58 % | 31 % | 11 % | 42 % |
| Lack of sufficient or accessible written guidance | 64 % | 29 % | 7 % | 35 % |

Table 3.2 indicates the response from 'other practitioners' to the question - "What barriers do you face in your organisation in getting carbon and GHG reduction on the agenda?"

Table 3.2: Barriers faced by other practitioners

| | NOT A BARRIER | CONTRIBUTING FACTOR | SIGNIFICANT BARRIER | COMBINED % (TOTAL) |
|---|---|---|---|---|
| Other competing priorities | 26% | 41% | 33% | 74% |
| General lack of perceived benefit | 39% | 41% | 20% | 61% |
| Lack of specific supply chain pressure | 42% | 43% | 16% | 59% |
| Lack of pressure from other stakeholders | 43% | 41% | 16% | 57% |
| Perceived complexity of job | 44% | 42% | 14% | 56% |
| Lack of board / Senior mgt support | 55% | 32% | 13% | 45% |
| Lack of high levels skills and knowledge | 57% | 31% | 12% | 43% |

Within the workshops, a short group exercise was undertaken on 'barriers to progress' which further helps to consolidate the picture from the survey. Several specific barriers were identified (the top six in bold are those most frequently mentioned):

- **Lack of finance/resources/access to capital**
- **Issues over senior management or board 'buy in'**
- **Competing priorities/ scepticism and apathy**
- **Gaps in skills, awareness and expertise**
- **Perceived complexity/scale of task**
- **Concerns over data quality or access to data**
- Lack of commercial pressure
- Lack of supplier co-operation
- Lack of a strong enough business case
- Culture / behaviour change
- Lengthy pay back periods
- Perception of too many standards
- Need for better guidance
- Specific business complexities (e.g. reporting difficulties from landlord/ tenant arrangements

A wide spread of factors have been identified as barriers to progress by practitioners. It is notable that in the survey the leading barrier is considered to be the internally perceived lower priority of carbon and GHG management, relative to other business critical or legally required activities. As a 'combined barrier' this was identified by 83% by active practitioners and by 74% from other practitioners. It was identified as the leading barrier by both separate sample strands and confirmed as one of the leading barriers by the workshops.

Other important barriers highlighted by active practitioners relate to key financial constraints. These include the relative lack of access to capital and funding for low carbon investments within the organisation, along with the limitations from internal processes such as a requirement to secure returns on investment over short term periods. Such requirements, along with wider business inertia, are recognised as preventing progress and uptake on many low carbon technologies and related energy efficiency measures. In this context, the value and importance of ongoing GHG reporting and accounting is well recognised in helping to support corporate approaches via the 'measure to manage' process and its role in keeping GHG management on the corporate agenda (Note – reporting value is further outlined in chapter 5).

Interestingly, the responses did not rank lack of Board level support as one of the foremost barriers where it achieved a 'combined' response of 42% from active practioners and 45% from other practitioners. Instead, other competing or legally required activities and perceived lack of a genuine business benefit appear to form the critical underlying barriers to progress. Lack of Board level support was, however, frequently identified in the workshops as a significant barrier just behind lack of access to finance, resources and capital.

Generally, the wide range of barriers identified reflects a complex situation, with a spread of factors combining to hinder organisational progress. Wider factors include internal barriers (e.g. skill shortage, lack of awareness, on occasions lack of genuine board level commitment) through to external factors concerning the difficulties of supply chain engagement, along with confusion over available guidance and concerns on the perceived scale of the task. Practitioners need to have a broad and strong commercial awareness of all these factors. A robust business case is required, strongly tied to key organisational drivers, to help counter, address and resolve the barriers in question.

## 3.3 CHAPTER CONCLUSIONS

- Initial business decisions to manage and report on GHGs are usually driven by a single compliance issue such as legislation or another early stage requirement (e.g. a contracted requirement from the supply chain).
- Legislation is recognised as the leading driver for initially engaging organisations in GHG management.
- Drivers such as cost savings, competitiveness, reputation and corporate values all contribute to sustaining and embedding GHG management and reporting.
- These broader drivers and 'business benefits' appear to increase in prominence as the GHG management approach becomes embedded and the organisational approach matures.
- Several specific barriers have been identified that can operate together to hinder progress by organisations.
- The leading barrier is the internally perceived lower priority of carbon and GHG management, relative to other business critical or legally required activities.
- GHG reporting and accounting are recognised as making an essential valuable contribution helping to address ongoing barriers to progress and enabling the realisation of wider, non compliance drivers as genuine business benefits for the organisation.
- The Energy Efficiency CRC is widely recognised by active practitioners as being a major development and a significant driver for potential transformational change.

# 4 REDUCTION IN PRACTICE AND FRAMEWORK FOR ACTION

To address the business drivers and barriers set out in Chapter 3, practitioners need to evaluate the specific business context for their organisation. This can be a lengthy and creative process involving the internal 'winning over' of key decision makers, departments and business units and external partnerships with customers and suppliers.

Once a business case is substantiated and accepted, the scope for action can be extensive and a framework for planning and action is required. The IEMA GHG Management Hierarchy was produced as a planning and conceptual tool to assist practitioners and organisations when developing and implementing strategic approaches on carbon and GHG reduction (first published in IEMA Practitioner volume 14 Mitigating Climate Change: a guide for organisations).

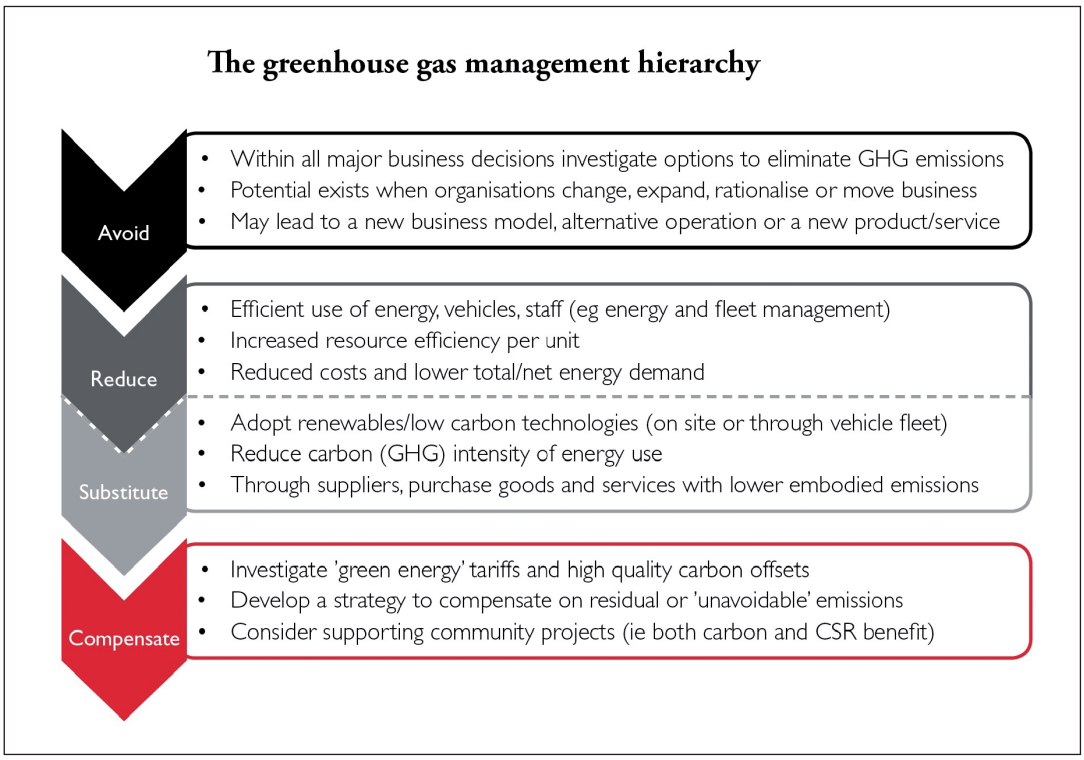



Figure 4.1: The IEMA GHG Management Hierarchy

The degree of direct control that an organisation has over emissions generally reduces as you move down the GHG Management Hierarchy. The hierarchy broadly moves through from direct scope 1 emissions, through scope 2 indirect (e.g. electricity use) and into wider scope 3 emissions (e.g. supply chain). In terms of an organisation's footprint, actual GHG reduction or avoidance is only possible within the first three measures of avoidance, reduction and substitution. Compensation can provide an opportunity for wider additional action such as the funding of a projected GHG reduction elsewhere (e.g. through carbon offsetting).

The GHG Management Hierarchy is a policy guide to help organisations focus on and address their priority direct and indirect effects whenever decisions are being made on approaches to reducing GHG emissions. It is not necessarily intended as a strict sequential hierarchy for every situation. In some cases an organisation may find that greater immediate emissions reductions are possible from substitution rather than reduction. Similarly, measures such as offsetting need not be necessarily held back or delayed. However the GHG Management Hierarchy is a reminder of key principles to work through and address within strategies and wider decision-making and provides guidance to help maintain focus on avoiding and reducing emissions, the more challenging but essential objectives at the top of the hierarchy. In this context the GHG Management Hierarchy has been developed as both a key planning tool and also a framework for action.

**Testing the hierarchy -** To understand practitioner and organisational action on carbon and GHG management, practitioners were questioned on the most widely used methods and actions. Table 4.1 presents the overall response. The wide range of activity reflects the extensive opportunities for action on carbon and GHGs that environment and sustainability practitioners are using and which practitioners need to understand and evaluate. From the responses a 'fit' with the GHG Management Hierarchy is apparent, with substitution measures (blue) and compensatory measures (red) both used less frequently than mainstream reduction and avoidance measures (black).

Table 4.1: Measures being used by Practitioners to 'reduce' GHG emissions

| MEASURE | USED | NUMBER |
|---|---|---|
| Active energy management and reduction on site | 71.2 % | 768 |
| Improvements to your buildings and premises | 69.4 % | 749 |
| Wide staff engagement and awareness campaigns | 63.2 % | 682 |
| Travel plans | 60.0 % | 647 |
| Investing in new plant, equipment and processes | 56.3 % | 607 |
| Team based approaches (e.g. with champions) | 50.4 % | 544 |
| An organisation scale management system (e.g. an EMS) | 47.5 % | 512 |
| Sustainable procurement (efficiencies /low carbon through supply chains) | 46.2 % | 499 |
| Strategic approach to reducing the GHG footprint of products / services | 32.5 % | 351 |
| Substitution (e.g. fuel switching to lower carbon sources) | 30.6 % | 330 |
| Developing on-site renewable energy generation | 30.4 % | 328 |
| Purchasing 'green tariff' energy | 27.4 % | 296 |
| Land management on our sites (e.g. woodland creation) | 13.1 % | 141 |
| Purchasing carbon offsets | 11.3 % | 122 |
| Other, please specify | 4.0 % | 43 |

*NOTE – Within the above table, the colour coded fit to the GHG Management Hierarchy is a simplification and some measures will span across levels (for example sustainable procurement will potentially fit across all levels from avoidance to compensation).*

Figure 4.2 maps actions and measures on to the GHG Management Hierarchy. The vertical axis represents how frequently measures are being used and the hierarchy is spread along the horizontal axis from avoid through to compensate. This mapping exercise utilises outcomes from both the survey and also a specific exercise from the GHG practitioner workshops.

Where an action or measure spreads over from one hierarchy level to another (e.g. from reduction to substitution) this is a direct reflection on the outcomes from the workshop exercise. To provide an example most respondents indicated Combined Heat and Power (CHP) as a reduction measure but for some it was seen primarily as substitution (a fuel switch measure).

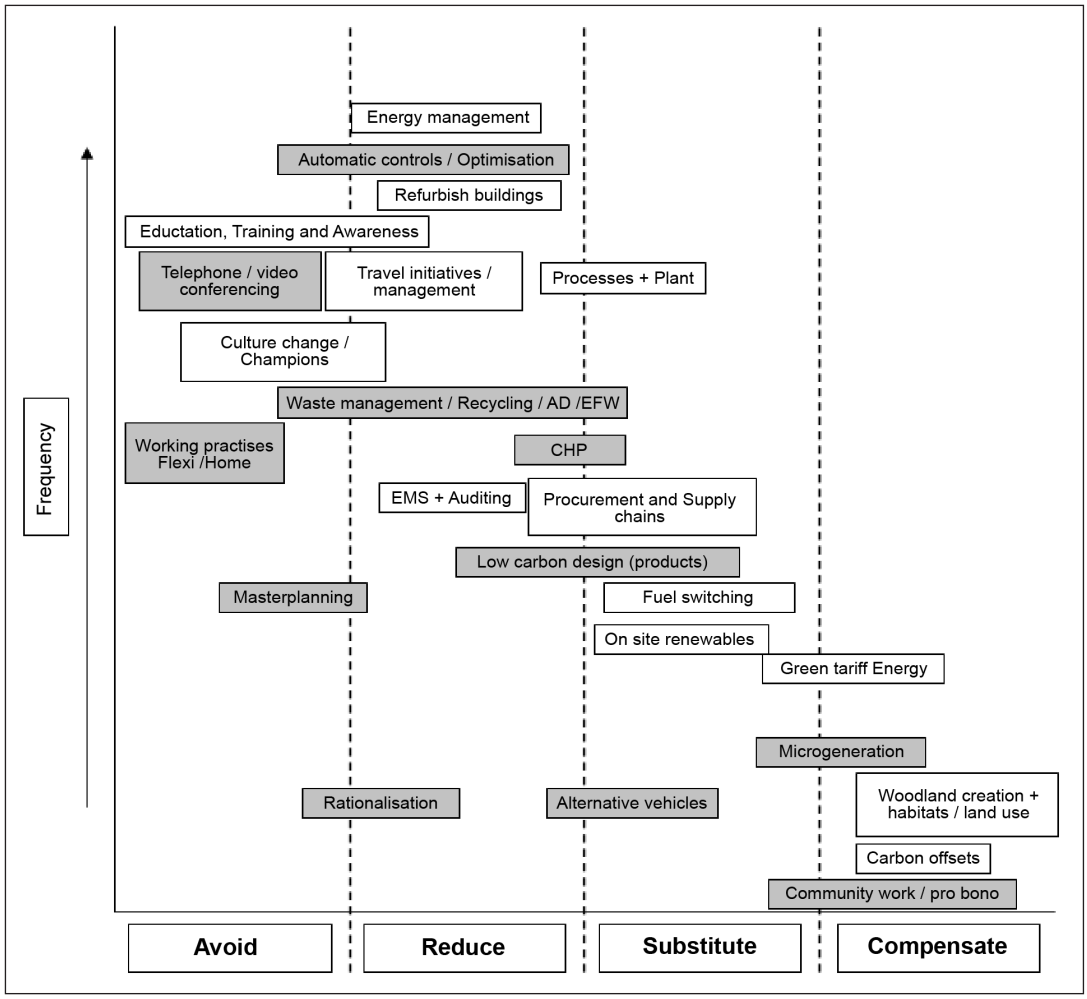



Figure 4.2: The GHG Management Hierarchy in practice

Note of explanation – the clear boxes in the above diagram were measures that were identified both in the workshops and in the GHG practitioner survey. The plotting of their 'frequency of use' on the above planner is therefore based on quantified evidence. The shaded boxes are measures identified via the workshops only and therefore do not have the same level of quantification. These measures have, however, been plotted relative to other known 'shared points' (measures that were identified in both the survey and workshops) and consequently there is reasonable confidence on use levels.

- The diagram provides an evidenced picture of practice against policy with regard to the GHG Management Hierarchy.
- A trend can be observed where there is some increased use of measures towards the top end of the GHG Management Hierarchy (see also table 4.1).
- The trend line drops back at the very top of the hierarchy. This reflects a situation where practitioners and organisations can frequently identify opportunities for reduction and substitution but (as with the waste hierarchy) avoidance at source is often a significant challenge.

This final point illustrates a difficulty and a challenge for practitioners in organisations and also policy makers. The challenge to avoid emissions will be a central one over the coming years and requires increased focus. Reliance upon trading and market mechanisms will not necessarily suffice, especially if such markets do not distinguish or differentiate across the hierarchy (for example by regarding a compensated tonne of carbon as equivalent to a tonne avoided).

The hierarchy has been well received by practitioners and generally recognised as an appropriate planning tool and policy framework. A range of views were provided in particular on carbon offsetting and compensation, with strong comments often made on the need to follow a sequential approach and compensate or offset residual emissions only. The counter position that offsetting enables organisations to extend their reach was also made and an offsetting business case was recognised for some (for example in certain 'customer facing' organisations).

## 4.1 CHAPTER CONCLUSIONS

- GHG practice by members reflects the policy position within the IEMA GHG Management Hierarchy.
- There is a need for priority attention at the top of the GHG Management Hierarchy, where avoidance measures are a challenge.
- The GHG Management Hierarchy should be used as a planning tool and framework for guiding action and climate change strategies.
- Organisations will often have multiple opportunities for action which span the GHG Management Hierarchy at any one time.
- Compensatory action at the bottom of the GHG Management Hierarchy, such as carbon offsetting, should not be taken in isolation of GHG emission management and reduction at source

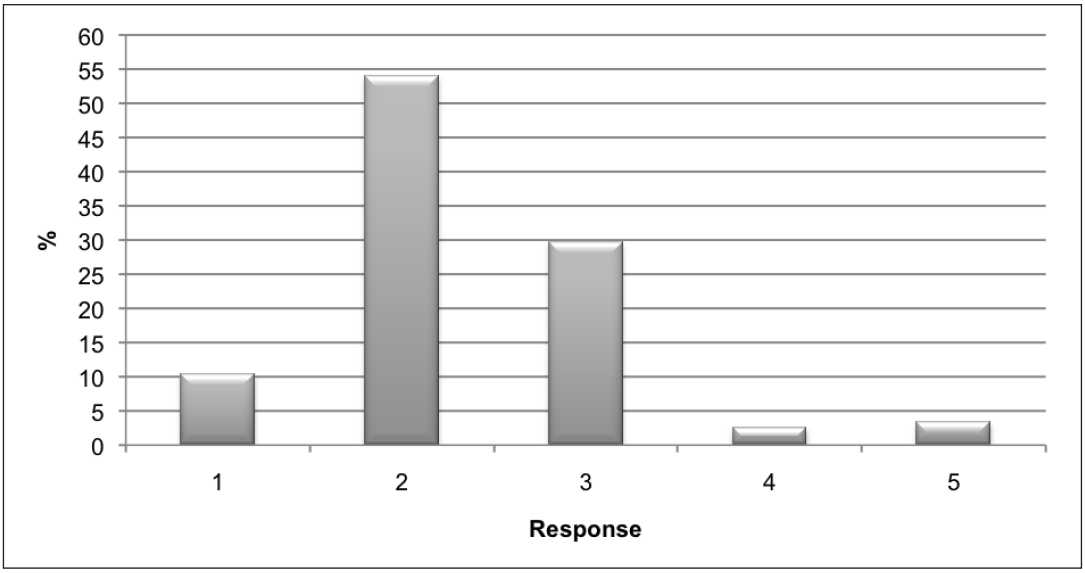
# 5 THE ROLE AND VALUE OF 'REPORTING'

Reporting is viewed by IEMA members as an important enabling tool that can help to build, embed and sustain a strategic organisational approach to carbon / GHG management.

Sometimes reporting is itself viewed as a 'driver' helping to generate pressure for action. This approach will not identify its true value as reporting is not equivalent to the core business drivers (i.e. the kind of pressures that lead companies to both take initial action and to start reporting). Its more unique value lies in its critical role to support the essential wider GHG programme, for example helping to build board support, enabling target setting and providing the visibility to ensure that progress in year 1 does not disappear (continuous improvement over time).

## 5.1 SURVEY INFORMATION ON VALUE OF REPORTING

Fig 5.1 indicates the views of 'active' practitioners and shows that a majority see reporting as being valuable or of greater importance.




| LEGISLATION / COMPLIANCE SCHEME | PERCENT | VALUE |
|---|---|---|
| 1. Carbon / GHG reduction would not be on the organisation's agenda if active reporting was not in place | 10.3% | 111 |
| 2. The process of reporting makes a valuable contribution to keeping carbon/ GHG reduction on the agenda | 54.0% | 583 |
| 3. Reporting plays a small role as one of several measures that encourages the organisation to manage emissions | 29.7% | 321 |
| 4. Reporting makes no contribution | 2.5% | 27 |
| 5. None of the above | 3.4% | 37 |
| **Total** | | **1079** |

Figure 5.1: The views of active practitioners on the value of GHG Reporting

The survey also explored the value of reporting in terms of its ability to enable well known challenges and barriers to GHG management to be addressed. Four response options were possible (no effect, helps, valuable and essential). Full outcomes are given in Table 5.1 below.

Table 5.1: Active practitioner views on the value of reporting in addressing barriers

| | NO EFFECT | HELPS | VALUABLE | ESSENTIAL | ALL LEVELS OF USE |
|---|---|---|---|---|---|
| Building commitment and support from Board and senior management | 8 % | 31 % | 36% | 25 % | 92 % |
| Securing staff engagement | 11 % | 42.2 % | 32.3 % | 14.2 % | 89 % |
| Securing commitment and participation from departments, business units, branch plants, subsidiaries etc. | 13 % | 39 % | 33 % | 15 % | 87 % |
| Engaging with and promoting the strategy to other stakeholders (e.g. shareholders and investors). | 13 % | 36 % | 36 % | 15 % | 87 % |
| Engaging with and promoting the strategy to customers | 15 % | 37 % | 35 % | 13 % | 85 % |
| Unlocking Funds and achieving investments in 'low carbon' measures and initiatives. | 19 % | 42.5 % | 28 % | 10.5 % | 81 % |
| Securing the participation and engagement of suppliers | 24 % | 42 % | 28 % | 6 % | 76 % |

The survey responses within both Figure 5.1 and Table 5.1, indicate a strong value being placed on GHG reporting by active practitioners, with specific value placed on its contribution across a number of recognised challenges/barriers. Particular emphasis is apparent on its value to help build commitment and support from the Board. A range of benefits are clear (Table 5.1) which combine to help establish GHG management and accounting within organisations and contribute to continual improvement, embedding and sustaining the approach into the organisation.

## 5.2 REPORTING AND ACHIEVEMENT – IS THERE A LINK?

The following section sets out some comparisons of selected survey responses (between survey questions) to review and consider any potential relationship between the level and type of reporting and factors such as achieved GHG reduction or level of ambition.

### 5.2.1 Corporate ambition in organisations achieving and reporting GHG reductions

The responses from two survey questions are used within Fig 5.2 below, to consider a potential relationship between organisational ambition on carbon and GHGs, relative to actual performance in terms of reported GHG reductions in the last two years.

The primary data relates to practitioner views on how ambitious their organisations are on carbon and GHG management (Q22). The norm/red line shows the response from all practitioners to this question and is itself indicating an encouraging picture of organisational ambition across active practitioners and their organisations. The response/blue line shows the situation for practitioners within organisations where they are achieving and reporting GHG reductions over the last two years.

It is clear that for those able to state a specific GHG reduction in their reports, there is also a generally higher level of organisational ambition with the green response line slightly displaced to the left towards transformational change.

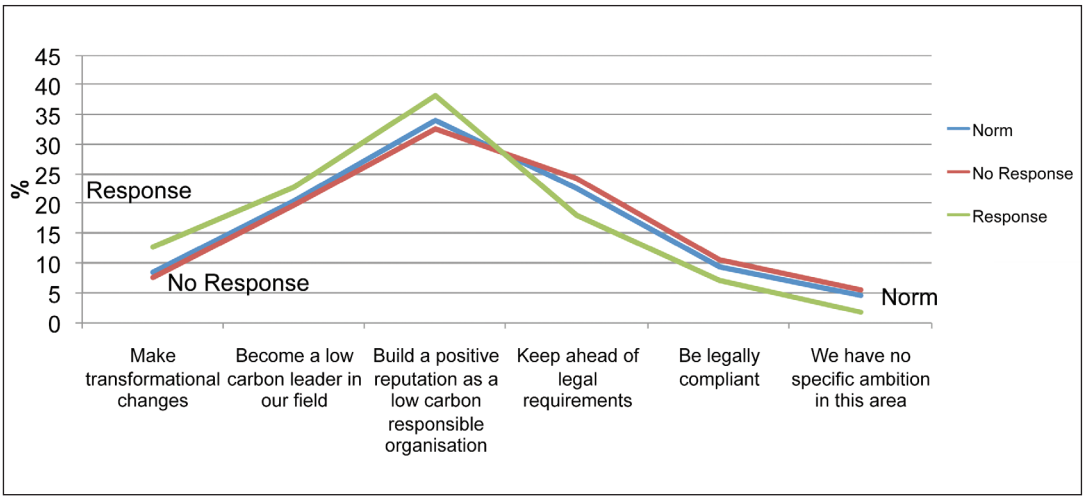



Figure 5.2: Relationship between corporate ambition and GHG reporting

### 5.2.2 Corporate ambition on GHGs relative to the level of GHG reporting in place

The practitioner response regarding corporate ambition for organisations, has been plotted in Figure 5.3 relative to the type or level of GHG reporting that is taking place in those organisations. In this case there is no 'norm' line for comparison and instead the responding practitioners fall into three distinct sub sets:

- Those who are reporting GHG emissions both internally and publicly (blue line)
- Those only reporting GHGs internally (red line)
- Those not reporting or N/A (green line)

A relationship is clear with organisations that are publicly reporting having greater ambition and are more likely to be seeking transformational change.

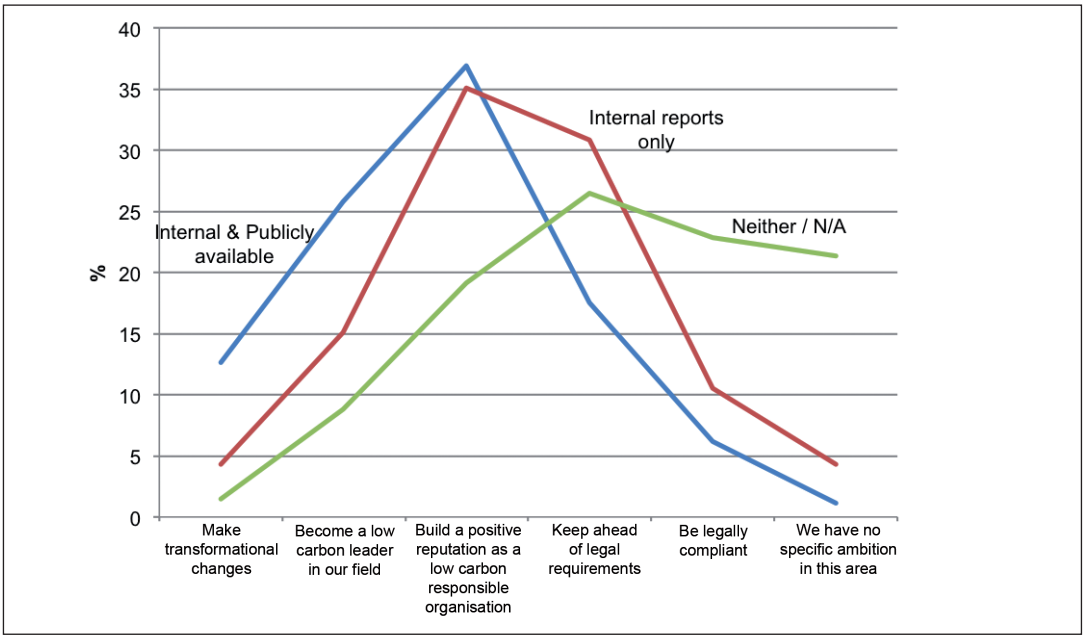



Figure 5.3: Corporate ambition and types of reporting

### 5.2.3 Comparison of achieved GHG reductions with the level of reporting undertaken

Within Figure 5.4, the relationship is considered between the type or level of reporting and the achievement of GHG reductions. A clear relationship is apparent between the 'level' of GHG reporting and the achievement of a GHG reduction within the last two years. It is notable that respondents from organisations that publicly report on their GHG footprints are more likely to have achieved reductions in comparison to those who only report internally.

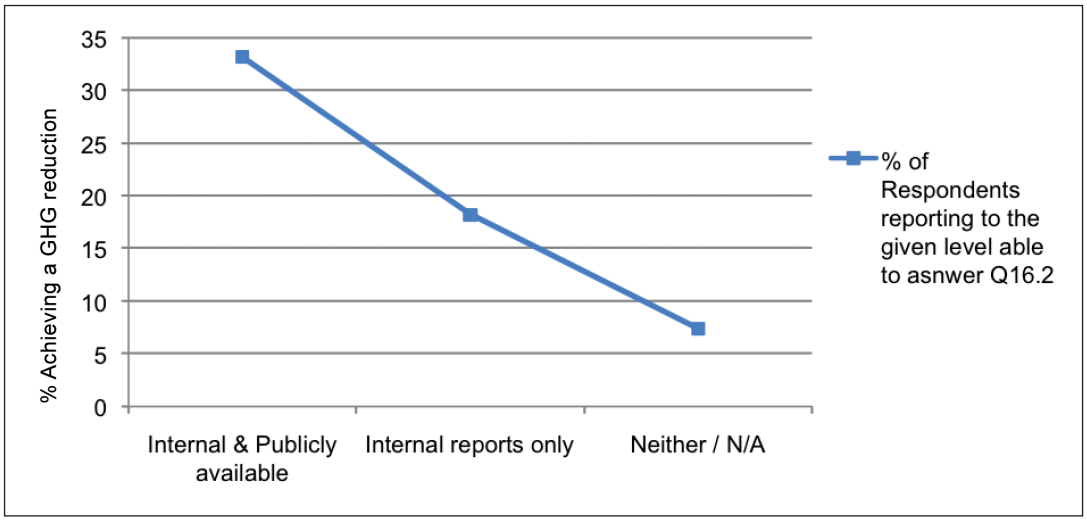



Figure 5.4: Relationship between reporting levels and achievement of reductions

The above review and analysis (Figs 5.2 - 5.4) is informative and helps to demonstrate the relationship between the level of GHG reporting with both the achievement of reductions and also the level of organisational ambition on carbon and GHGs. A causal link can not immediately be concluded but the relationship is a clear one and the practitioner workshops have further helped to build and confirm this picture (section 5.3 below).

## 5.3 GHG WORKSHOPS AND THE VALUE OF REPORTING

Through separate exercises (and in the absence of the above analysis) the sub groups in all workshops helped to confirm the picture set in section 5.2, identifying a number of areas where GHG reporting adds value and makes an important contribution to building and embedding an organisational strategy. The most frequently mentioned points are summarised below:

- Reporting is important to ensure the 'measure to manage' process is communicated to decision makers and stakeholders. It helps to inform and prioritise areas for improvement and also identify the scale of the opportunity / challenge and where action can be focused.
- Reporting provides essential visibility both internally (e.g. staff, departments and the Board) and externally (customers, clients, investors and other stakeholders). It therefore helps to build and sustain the process of carbon and GHG management and to avoid progress being lost.
- Reporting is valuable as it keeps senior staff and the board informed of progress and provides them with good quality data for decision making.
- Reporting provides a mechanism for benchmarking both externally (between organisations) and internally (between business units and over time) provided methodologies are comparable.
- Reporting helps the organisation to improve and build a robust and effective process (helps to identify and address information gaps and contributes to continuous improvement over time).

A number of further 'reporting benefits' were also outlined in workshops that are complementary to survey outcomes and help to further build the picture on value (Fig 5.5).

| FURTHER PRACTITIONER VIEWS ON REPORTING - WORKSHOP SESSIONS |
|---|
| Reporting enables target setting and monitoring of progress |
| It leads to cost and resource savings |
| It leads to GHG reduction and resource efficiency |
| Supports bids for green investment |
| Enables the organisation to address supply chain pressures |
| It is the easiest way to link finance with carbon |
| Reporting helps to engage the finance director & others(as a well understood/accepted 'business language'/process) |
| It helps the organisation to demonstrate commitment |
| It helps to highlight inefficient areas |
| It supports culture change within the organisation |
| It compliments and supports CSR or sustainability processes |
| It demonstrates legal and wider compliance |
| It informs public disclosure |
| It can lead to innovation (consequence of the need to demonstrate progress) |
| It helps to build ownership of the carbon reduction challenge |

Figure 5.5: Workshop outcomes – further views on reporting

The extensive responses from workshops helped to confirm the survey and indicate a range of connected benefits associated with GHG reporting. Carbon or GHG reporting, either on its own or within a wider process, is valued for its contribution in building board support, enabling target setting and helping to ensure that progress in year 1 does not disappear; it supports continuous improvement over time. In these and other ways, reporting is regarded as uniquely important - contributing to building and sustaining GHG management and reduction programmes.

## 5.4 MANDATORY REPORTING

The Climate Change Act 2008 set a requirement for the Government to use powers under the Companies Act to make GHG reporting mandatory for companies or to explain to Parliament why it has not done so, by 6 April 2012. Practitioners were asked a simple and direct question in the GHG survey on whether they as professionals favoured this introduction of mandatory reporting. The response is in Fig 5.6:

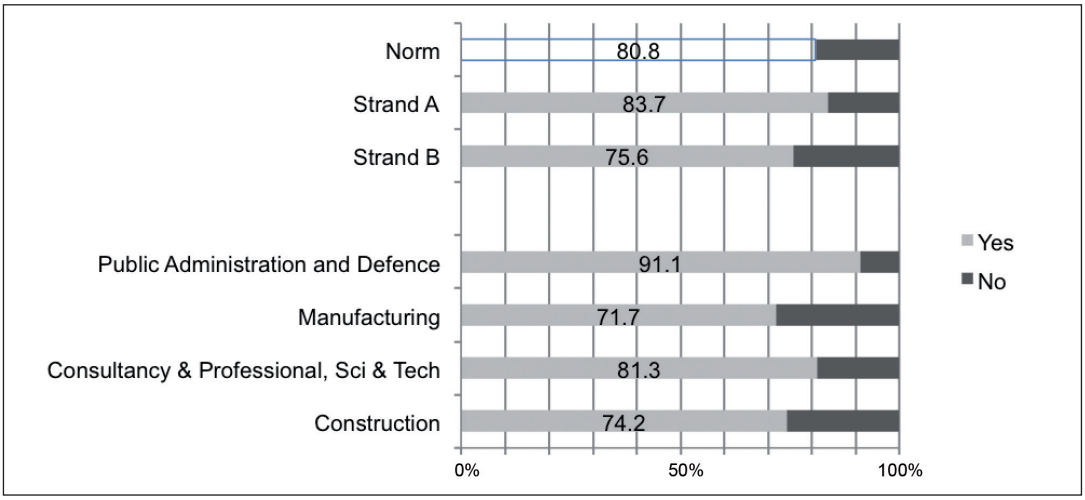



Figure 5.6: Support for mandatory reporting

A significant majority of IEMA members favour the implementation of a mandatory GHG reporting requirement as proposed by the Climate Change Act. Some variation exists by sector and sub group, however it is clear that support is strong averaging at 80.8%.

Support for mandatory reporting was also confirmed in the workshops. In these sessions, practitioners were asked to consider how far or how fast mandatory reporting should be implemented. From a wide range of views, the following recommendations for the introduction of mandatory reporting were made:

- The pace of introduction should be phased or staggered.
- Implementation could be phased with regard to the scope (extent) of reporting as well as to the size of company.
- Although smaller businesses may struggle on certain scope 3 emissions, as a general rule reporting complexity reduces in line with reduced scale of the business. Consequently, if mandatory reporting was initially limited to GHG scopes 1+2 then businesses of reasonable size (SME and above) should be able to respond.
- For larger businesses, significant scope 3 emissions should be included in mandatory GHG reporting (in line with Defra/DECC GHG reporting guidance). As an example, this could include emissions around business travel, water consumption and waste (all of which are quantifiable against default conversion factors).

## 5.5 CHAPTER CONCLUSIONS

Practitioners have indicated and placed a strong value on reporting through the GHG survey and this has been further confirmed and established through separate workshop exercises. Specific value is placed on its contribution across a number of recognised challenges and barriers with a clear emphasis on its value to help build, embed and sustain the GHG management programme.

- Reporting is a valuable tool helping to build, embed and sustain effective approaches to GHG management within organisations.
- Mandatory reporting for companies should be introduced in line with provisions of the Climate change Act 2008.
- Mandatory reporting should be rapidly introduced for larger companies.
- For other companies, consideration should be given to the phasing in of mandatory reporting, prioritised relative to the scale of emission footprints.
- The 2009 Defra/DECC GHG reporting guidance for organisations should be used as the basis for a mandatory reporting standard.

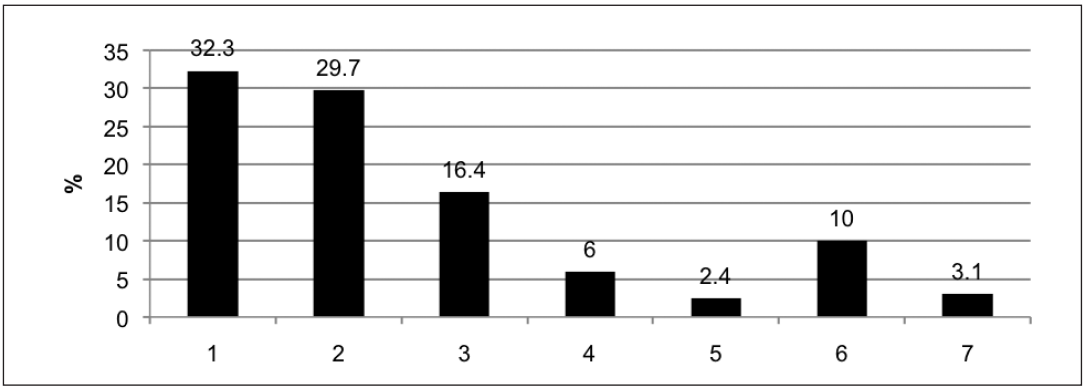
# 6 FURTHER CHALLENGES

## 6.1 BACKGROUND

A number of challenges exist in progressing GHG management and reduction. This chapter concentrates on some of the further challenges faced by environment and sustainability professionals working within or advising organisations. The issues and challenges identified are not necessarily exhaustive but are informed by recent work with IEMA members, in particular GHG workshop sessions, and consequently do reflect key issues facing members at this time.

## 6.2 EXTENDING THE SCOPE OF ACTION

Scope 3 emissions include indirect emissions such as those associated with the organisation's supply chain, purchased materials, employee travel to work, or business travel by non-company owned means. Extending action from directly and indirectly controlled emissions (GHG protocol scopes 1+2) into more 'distant' yet still attributable emissions within Scope 3 can be a challenging area for practitioners in terms of management and engagement, and also in terms of obtaining good quality accounting data. This situation is well demonstrated in Fig 6.1 which presents 'active' practitioner responses in relation to the extent of activity on scope 3 emissions and which shows that only 8% are addressing all significant scope 3 emissions.




| | |
|---|---|
| 1. | We do not measure scope 3 emissions |
| 2. | Our reporting and foot printing only covers some very limited scope 3 emissions (e.g. one or two sources like business travel or employee travel to work) |
| 3. | Our reporting and foot printing addresses a number of scope 3 emissions (e.g. all travel and some key supply chain emissions ) but we are aware there are Other significant scope 3 emissions that are not included |
| 4. | Our reporting and foot printing addresses all significant (or material) scope 3 emissions that we have identified for our organisation |
| 5. | Our reporting and foot printing addresses all of our organisations scope 3 emissions |
| 6. | Unknown |
| 7. | Do not understand the question |

Figure 6.1: Activity on scope 3 emissions

Figure 6.2 presents Scope 3 activity by scale of organisation.

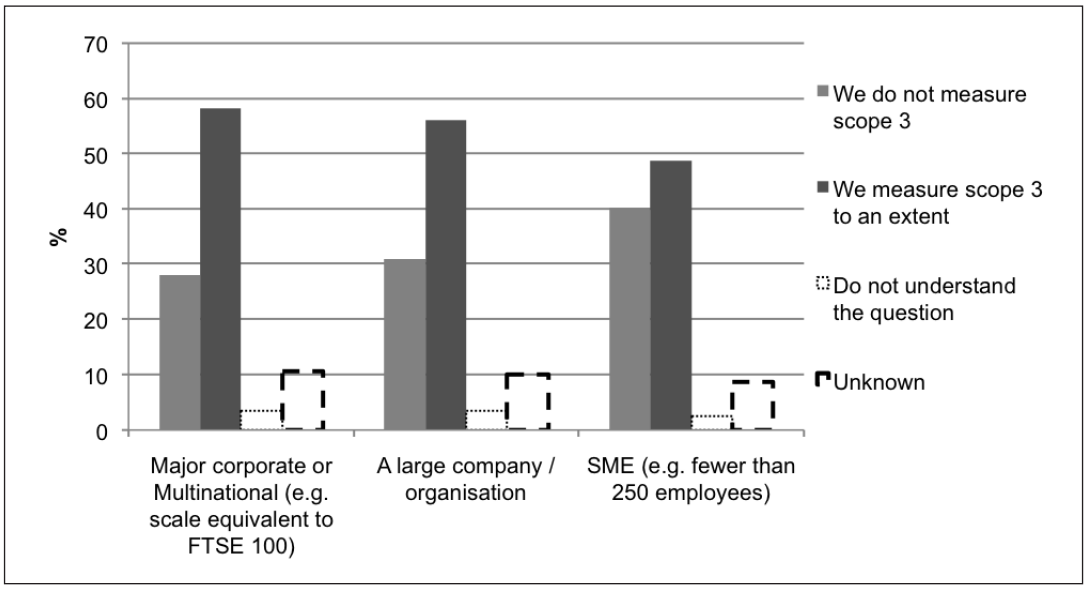



Figure 6.2: Scope 3 emissions measurement and reporting by size

In relation to company or organisational scale, a relationship exists with the level of activity on scope 3 emissions generally increasing in line with scale of the organisation. Although this pattern exists, the level of variation is not great with SMEs generally only 10% less likely to quantify scope 3 emissions than major corporates. This reflects an increased prominence in recent years of supply chain work and is further informed with reference to supply chain engagement. This indicates that from a sample of 1079 active practitioners:

- 39% are facing supply chain pressures to manage or report on GHGs
- 28% are placing similar requirements on their suppliers

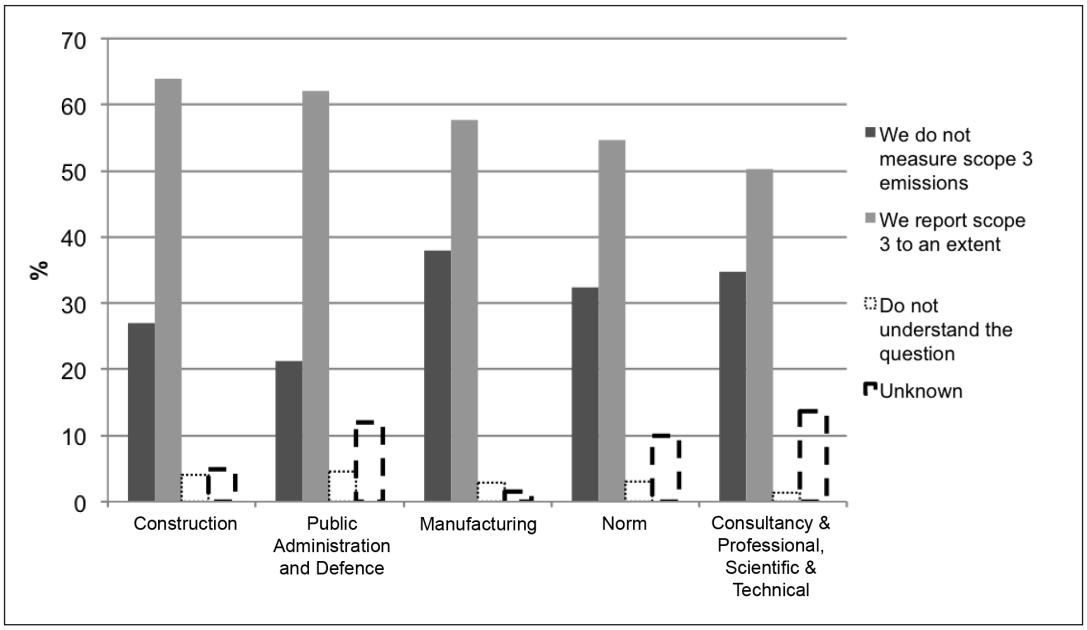



Figure 6.3: Scope 3 emissions reporting by sector

In relation to the sectors above, there are some variations of interest such as the greater levels of scope 3 activity in both the public and construction sectors.

The picture overall, evidenced by the workshop feedback, is one of growing activity within supply chains and increased focus on the challenge of addressing scope 3 emissions. The roll out in recent years of BSI PAS2050 provides a further focus and stimulus to this area. However, its apparent lower take up in contrast to organisational reporting (Table 2.3) may be a concern and reflects feedback on the complexity of product and service footprinting and the challenges that can exist in securing good quality accounting data across the value chain.

## 6.3 BEYOND SCOPE 3

The GHG management hierarchy provides for organisations to engage in compensatory actions beyond their own inventory footprint through measures to 'substitute, reduce and avoid' GHG emissions elsewhere. These include activities such as the purchase of green electricity tariffs, investment in projects such as woodland creation, formalised 'carbon offsetting' through Kyoto Clean Development Mechanism (CDM) or voluntary carbon offset schemes.

### 6.3.1 Green tariffs

Following a number of developments and changes in recent years, the accounting and reporting of green tariff electricity has become a confusing area for practitioners. The IEMA GHG survey explored this and asked how practitioners currently report (outcomes in Table 6.1 and Fig 6.4).

The responses are broken down in Table 6.1 as an indication of green tariff activity by sector. There are some interesting points to note, with public sector and defence significantly ahead in acquiring green tariff electricity (roughly double the uptake relative to manufacturing and construction). This may simply reflect the administrative office based nature of many public sector functions and the attractiveness of green tariffs in such situations – e.g. as an 'easy to adopt' compensatory measure.

Table 6.1: Green tariff electricity – use by sector

| | % KNOWN TO PURCHASE GREEN TARIFF | % KNOWN NOT TO PURCHASE GREEN TARIFF | % UNKNOWN OR DO NOT UNDERSTAND THE QUESTION |
|---|---|---|---|
| Construction | 26.2 | 54.1 | 19.7 |
| Consultancy & Professional, Scientific and Technical | 21.3 | 39.7 | 39.0 |
| Manufacturing | 18.2 | 60.6 | 21.2 |
| Public Administration and Defence | 43.5 | 25.9 | 30.6 |
| Norm | 25.2 | 44.9 | 29.9 |

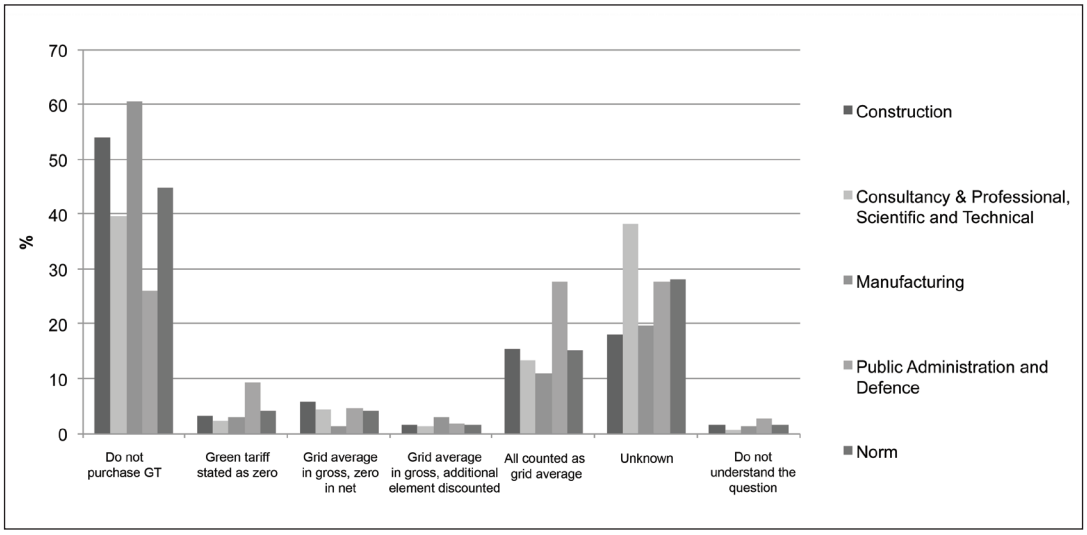
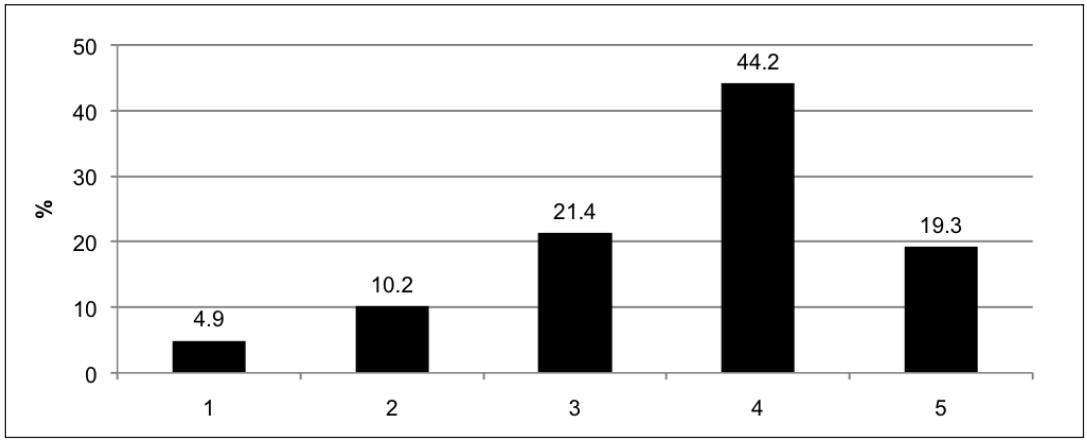



Figure 6.4: Green tariff reporting by sector

Within Fig 6.4 the responses on stated reporting methods demonstrate the confusion that has arisen in recent years on how green tariff electricity should be reported. The current Defra/DECC guidance on how to report green tariff electricity within an organisational report is the option – "Grid average in the gross line with additional elements discounted" i.e. gross emmissions reported as grid average but a net figure also presented where an additional element beyond the supplied electricity can be deducted, for example to reflect any approved additional carbon offset linked to the tariff. It is noticeable that the use of this reporting method is particularly low and that the majority of practitioners are instead reporting it as grid average. There is possibly a need for improved clarity and guidance to resolve this situation whereby organisations are not generally reporting or accounting for the full GHG value of green tariffs (although continued uptake and adoption of the Defra/ DECC 2009 guidance for organisations will help to improve this situation).

### 6.3.2 Carbon Offsetting

The survey indicated a level of caution amongst practitioners in relation to carbon offsetting as a GHG management technique. The workshops further confirmed this picture and if anything indicated a greater level of concern. Figure 6.4 presents the survey outcomes regarding practitioner views on the role of carbon offsets. Collating across responses, a majority (over 80%) recognise there is a role for offsetting. However the picture is generally one of some caution with the notable largest single response (44%) indicating concern over their potential to divert attention from GHG reductions at source.




| | | VALUE |
|---|---|---|
| 1 | If it is cheaper to offset than reduce at source then organisations should prioritise offsetting | 82 |
| 2 | Carbon offsets have a valuable role to play and within a balanced strategy, they can allow the organisation to extend its influence (beyond achieving internal reductions at source) | 171 |
| 3 | Carbon offsets should only be used following efforts to reduce the organisation's GHG footprint | 358 |
| 4 | Carbon offsets can have a role to play but can also divert the organisation's attention away from achieving internal reductions (for example because they are either cheaper or easier than reductions at source) | 740 |
| 5 | Carbon offsets are a distraction and have no role to play in an organisation's GHG management strategy | 323 |
| **Total** | | **1674** |

**Figure 6.5: Views on carbon offsetting within an organisational approach / strategy to GHG management and reduction**

Practitioner's activity and use of carbon offsetting schemes reflects the caution outlined in Figure 6.5 above. Concerns were also indicated that offset assurance schemes were confusing and restricting take up:

- Only 14% had purchased carbon offsets
- 17% had decided against the use of offsets
- 43% indicate there was confusion over credible offset assurance schemes and that this was a significant barrier to organisational take up

Practitioners also responded on other factors that have limited the take up:

- Uncertainty over the value of carbon offsetting
- Concerns and scrutiny over potential claims such as carbon neutrality
- The risk of challenge for example through the Advertising Standards Authority (ASA)

From the survey and workshops, it is clear that there is still a strong degree of caution in relation to carbon offsetting and that this has been significant in restricting and limiting the take up and use of this compensatory measure. Given the scale of the challenge and the need for action across all levels of the GHG Management Hierarchy, these practitioner concerns need to be addressed as a priority. Improved standards and clarity are required to give greater confidence to carbon offsetting and facilitate its responsible use and its important contribution. The following points are important:

- Support exists for a hierarchy approach to carbon management with carbon offsetting making and offering an important contribution.
- Concerns exist on the potential side effects of carbon offseting which may in some cases remove or reduce attention on internal reductions.
- Concerns have also been expressed over baselines and assumptions in relation to carbon offsets. In this context, equivalence is not widely recognised by practitioners and carbon offsets are generally not in practice seen as equivalent to a reduction at source.
- Clear guidance and improved, robust and more aligned standards would make a difference and enable practitioners to use offsets with greater confidence.

## 6.4 WINNING AND SUSTAINING THE BUSINESS CASE

Chapter 3 outlined and reviewed the drivers for change and barriers to progress that practitioners need to understand, utilise or address when developing a convincing and effective business case for GHG management. These form the reality of the business landscape and warrant close attention by practitioners. They may also change over time and therefore the embedded 'carbon strategy' must not be neglected and its business relevance should be checked and reset at regular intervals. Skills such as communication, partnership working and alliance building are essential for practitioners facing these challenges.

Practitioners have identified a wide range of issues, challenges and potential improvements (see Appendix 2). The following are summary points where a consensus view is clear. These and the fuller list of workshop and survey comments will be reviewed by IEMA to inform its forward programme on climate change:

- Make GHG reporting mandatory
- Clarity on guidance and a reporting norm (definitive)
- Standardise schemes and standards as much as possible
- Link more closely to ISO 14001 (i.e. guidance on use of 14001 for GHG reporting)
- Simplify guidance and reporting for SMEs
- Improve internal audit on GHGs and sustainable development
- Further improvement of conversion factors (reduce any confusion)
- Confirmation and increased awareness on official GHG guidance sources and conversion factors would be helpful
- Improved billing procedures by energy companies – e.g. providing $CO_2$ (e) would assist SMEs
- Quality and extent of GHG of training needs to be improved
- There is a need to support and build knowledge and skills

## 6.5 CHAPTER CONCLUSIONS

- Scope 3 emissions are an important and challenging area for GHG management.
- Supply chains are receiving significant attention from practitioners and organisations and form a key area for future GHG reduction.
- Green tariff electricity requires improved clarity for GHG accounting and reporting.
- Improved guidance and better alignment of standards are required to give practitioners greater confidence in the responsible and effective use of carbon offsetting.
- Ongoing investment is required in the wide practitioner skill set necessary to help build, embed and sustain the GHG business case within organisations

# 7 CONCLUSIONS

## STATUS REPORT

- There is a high level of activity and engagement within IEMA's membership on carbon and GHG management and reporting.
- IEMA members are active across a range of GHG and carbon management work, with the leading activity area being organisational GHG management and reporting. Other activities are strategy work for organisations, work on products and services and work regarding the assessment of plans, programmes, developments or projects.
- IEMA members indicate a high level of organisational GHG activity and also a high level of corporate GHG ambition, within the organisations where they are employed.
- Increasing growth in GHG reporting is evident over the last 10 years across all sectors and scales of business, with a clear relationship existing between organisational scale and achieved levels of activity.
- The very largest companies, multinationals and major corporates, along with organisations in the manufacturing sector appear to have made the earliest start on GHG management and reporting.
- Initially slower to start groups such as SMEs and the consultancy sector are now demonstrating progress in GHG management and reporting, from an initially low base.
- The extent of reported total GHG reductions relative to reported total GHG increases, has significantly improved in recent years although the degree to which the recession will have contributed to this is unclear.
- A relationship exists between the ability to state an achieved reported reduction and the scale/size of organisations with larger businesses and organisations being more able to report and provide quantified reductions.
- IEMA members identify a need for aligned standards and for improved clarity and consistency in approach.
- The 2009 Defra/DECC "Guidance on how to measure and report your greenhouse gas emissions" is being widely used by practitioners and provides a potential basis for future roll out of mandatory GHG reporting, which will also aid consistency in reporting.

## DRIVERS AND BARRIERS

- Initial business decisions to manage and report on GHGs are usually driven by a single compliance issue such as legislation or another early stage requirement (e.g. a contracted requirement from the supply chain).
- Legislation is recognised as the leading driver for initially engaging organisations in GHG management.
- Drivers such as cost savings, competitiveness, reputation and corporate values all contribute to sustaining and embedding GHG management and reporting.
- These broader drivers and 'business benefits' appear to increase in prominence as the GHG management approach becomes embedded and the organisational approach matures.
- Several specific barriers have been identified that can operate together to hinder progress by organisations.
- The leading barrier is the internally perceived lower priority of carbon and GHG management, relative to other business critical or legally required activities.
- GHG reporting and accounting are recognised as making an essential valuable contribution helping to address ongoing barriers to progress and enabling the realisation of wider, non compliance drivers as genuine business benefits for the organisation.
- The Energy Efficiency CRC is widely recognised by active practitioners as being a major development and a significant driver for potential transformational change.

## FRAMEWORK FOR ACTION

- GHG practice by members reflects the policy position within the IEMA GHG Management Hierarchy.
- There is a need for priority attention at the top of the GHG Management Hierarchy, where avoidance measures are a challenge.
- The GHG Management Hierarchy should be used as a planning tool and framework for guiding action and climate change strategies.
- Organisations will often have multiple opportunities for action which span the GHG Management Hierarchy at any one time.
- Compensatory action at the bottom of the GHG Management Hierarchy, such as carbon offsetting, should not be taken in isolation of GHG emission management and reduction at source

## VALUE OF REPORTING

- Reporting is a valuable tool helping to build, embed and sustain effective approaches to GHG management within organisations.
- Mandatory reporting for companies should be introduced in line with provisions of the Climate Change Act 2008.
- Mandatory reporting should be rapidly introduced for larger companies.
- For other companies, consideration should be given to the phasing in of mandatory reporting, prioritised relative to the scale of emission footprints.
- The 2009 Defra/DECC GHG reporting guidance for organisations should be used as the basis for a mandatory reporting standard.

## FURTHER ISSUES AND CHALLENGES

- Scope 3 emissions are an important and challenging area for GHG management.
- Supply chains are receiving significant attention from practitioners and organisations and form a key area for future GHG reduction.
- Green tariff electricity requires improved clarity for GHG accounting and reporting.
- Improved guidance and better alignment of standards are required to give practitioners greater confidence in the responsible and effective use of carbon offsetting
- Ongoing investment is required in the wide practitioner skill set necessary to help build, embed and sustain the GHG business case within organisations.

# APPENDIX I

## FULL OUTCOMES FROM IEMA GHG SURVEY (APRIL 2010)

This Appendix sets out the full response outcomes from a survey of IEMA members undertaken in April 2010. 1,674 practitioners responded with the survey completed by a wide range of environmental and sustainability professionals.

The five largest sectors represented by the respondents were Construction (10.6%), Manufacturing (11.4%), Consultancy (22.5%), Public Administration (8.7%), and Professional Scientific and Technical Services (10%).

As well as sectors, the survey also sought to identify the scale of organisations where practitioners worked (illustrated in question 35).

The survey sought to cater for practitioners both actively working in this field, as well as those who are interested but not currently working on GHG management or reporting. Approximately one third of respondents (595) followed a separate sub-strand of questions for those not actively working in this area. The other two thirds (1079) completed the primary question strand.

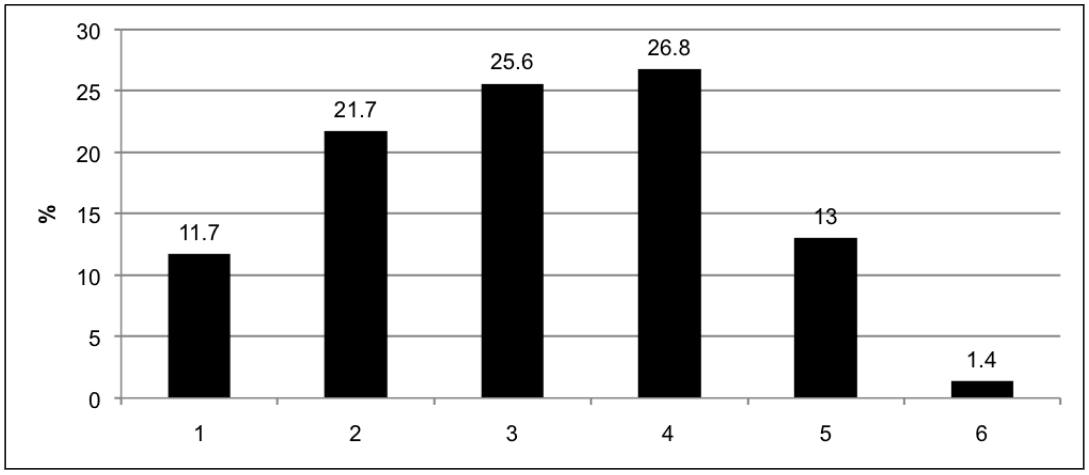
**Question 1 to Question 5** All respondents answered these questions (1674).
**Question 6 to Question 9** (Strand B or 'other' practitioners) - Respondents who answered question 6 to Question 9 had answered "no" to question 5 (i.e. they were not either individually or as an organisation calculating carbon or GHG emission footprints (595).
**Question 10 to 26** (Strand A or 'active' practitioners) - Respondents who answered these questions answered "yes" to question 5 on whether they either work for an organisation that calculates carbon or GHG emission footprints, or do so themselves (1079).
**Question 27 – Question 35** – All respondents answered these questions (1674).

Questions within the survey
Below is the full list of questions that the survey comprised of, in the order that they appeared.

1. As an environmental practitioner, which statement best describes your work in relation to energy or carbon/GHG management or reporting? Energy, carbon (GHG) management or reporting is…
2. In what circumstances are you undertaking work on energy or carbon/GHG management or reporting? My work in this field is undertaken as...
3. To what extent does energy or carbon/GHG management form part of your work in the following areas?
4. What is your organisation's position with regards to its own energy or carbon /GHG management and reporting?
5. Do you, or does your organisation, calculate any carbon or GHG emission footprints? e.g. for either the organisation as a whole/ operating unit or department/ products or services/ conferences or events/ project or development proposals.
6. What is your organisation's situation with regards to carbon/GHG footprinting? If you are a sole trader answer as such (effectively as a micro organisation)
7. What barriers do you face in your organisation in getting carbon and GHG reduction on the agenda?
8. What potential drivers could most directly influence your organisation to address carbon / GHG management?
9. Please answer the following questions for your organisation:
   Has your organisation ever sought any information from suppliers in relation to their carbon (GHG emissions?
   Have any of your clients/customers ever requested information from your organisation in relation to its carbon (GHG) emissions?
   Have any other stakeholders (such as investors or customers) ever sought information in relation to your organisation's carbon (GHG) emissions?
10. What are your organisation's main drivers for undertaking energy or carbon /GHG management?
11. Please indicate any compliance schemes that require your organisation to manage or report on GHG emissions (in the case of CRC will your organisation be required to comply)?

12. Please indicate any standards, schemes or guidance documents you have used to inform your GHG foot printing or reporting work.
13. How does your organisation report on any calculated carbon or GHG emission footprints?
14. When did your organisation start reporting publicly on carbon/GHG footprints for itself as an organisation?
15. How does your organisation publicly report on its organisational carbon or GHG footprint?
16. What levels of carbon/GHG reduction has your organisation achieved and reported on (either internally or publicly)? Only answer if you are certain of the data.
17. What level of assurance /confidence exists on the figures you have used in the previous question?
18. If you cannot answer the last two questions please use this space to tell us about your organisation's approach on carbon/GHG management and any changes to your footprint.
19. How extensive is your organisation's reporting/footprinting work with regard to scope 3 emissions? Please select the nearest description from the options below.
20. If you purchase green tariff electricity, how do you report on the carbon emissions associated with that electricity (e.g. within any organisational statement or report on carbon /GHG emissions?)
21. How do you perceive the contribution that GHG/carbon reporting can make in encouraging organisations to manage and reduce their emissions?
22. How ambitious is your organisation on carbon/GHG management? Please choose the statement that is closest description.
23. In your experience, how valuable is GHG/Carbon reporting in helping to address the following challenges for organisational carbon management?
24. To manage and reduce your organisation's carbon/GHG footprint, which of the following measures do you use?
25. Please answer the following questions for your organisation:
    Do you place any requirements on your suppliers to either manage, reduce, quantify or report on their carbon (GHG) emissions?
    Do any of your clients/customers place any requirements on your organisation to either manage, reduce, quantify or report on your carbon (GHG) emissions?
    Do any other stakeholders, such as investors, place requirements on your organisation to either manage, reduce, quantify or report on your carbon (GHG) emissions?
26. What barriers do you face in your work to achieve carbon and GHG reduction?
27. The Climate Change Act 2008 set a requirement for the Government to use powers under the Companies Act to make GHG reporting mandatory for companies or to explain to Parliament why it has not done so, by 6 April 2012. Would you be in favour of GHG reporting becoming a mandatory requirement upon companies?
28. Does your organisation have any experience of using or considering the use of carbon offsets? Indicate below the statement that would most closely apply.
29. Which of the following statements most closely captures your view on the role of carbon offsets within an organisation's approach to carbon/GHG management?
30. Which of the following issues (if any) do you feel have limited the take up of carbon offsetting by organisations?
31. Would knowing that you were buying Government approved offsets make you more or less likely to offset?
32. Would a robust standard/specification for the demonstration of carbon neutrality make you more or less likely to consider seeking carbon neutrality for your organisation?
33. What is your IEMA membership level? (select one)
34. Please indicate your occupational sector (select one as the most appropriate)
35. What is the size of your company or organisation?
36. Are there any other issues or needs that you feel should be addressed by IEMA in relation to energy, carbon or greenhouse gas (GHG) management?

1. As an environmental practitioner, which statement best describes your work in relation to energy or carbon/GHG management or reporting?




| | VALUE |
|---|---|
| 1.Not part of my work | 193 |
| 2.A very minor part of my work | 364 |
| 3.Part of my work | 428 |
| 4.An important part of my work but not my lead area | 449 |
| 5.My leading or primary work area | 217 |
| 6.I am currently not in work | 23 |
| **Total** | **1674** |

2. In what circumstances are you undertaking work on energy or carbon/GHG management or reporting? My work in this field is undertaken as...

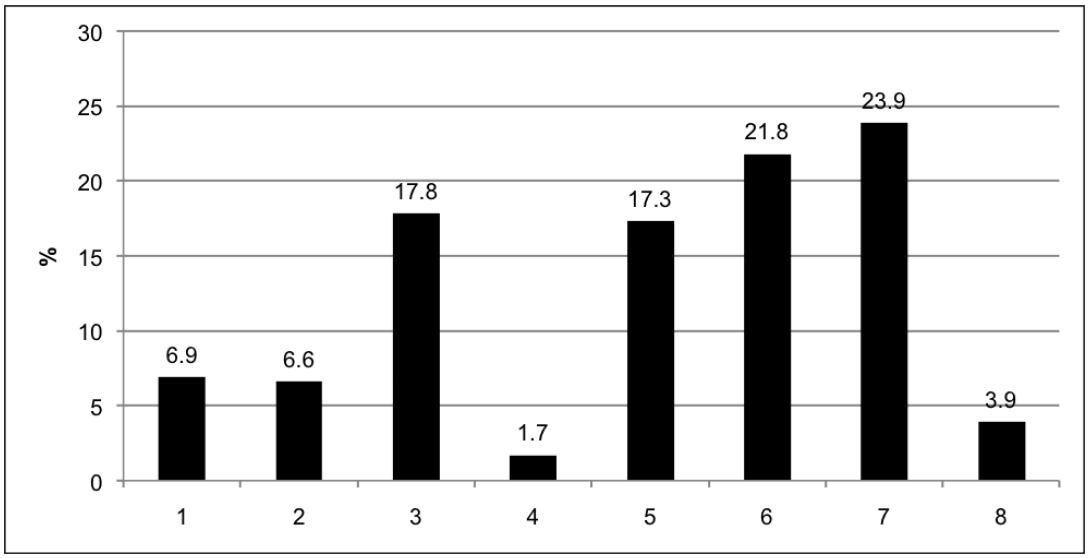
| | VALUE |
|---|---|
| 1.An employee with a consultancy | 335 |
| 2. An employee of a regulator | 46 |
| 3. An employee in a verification / certification company | 49 |
| 4.An employee of a university or other academic body | 37 |
| 5. An employee within a business or other organisation (not indicated above) | 793 |
| 6. A student engaged in education / research | 21 |
| 7.An individual consultant or other sole trader | 113 |
| 8. I am currently not undertaking work on carbon / GHG Management or reporting | 215 |
| 9.Other, please specify | 65 |
| **Total** | **1674** |

3. To what extent does energy or carbon/GHG management form part of your work in the following areas?

| | NOT AT ALL | PART OF MY WORK | SIGNIFICANT PART OF MY WORK | NUMBER OF RESPONDENTS |
|---|---|---|---|---|
| 1.Strategy development for an organisation | 35.8% | 46.2% | 18.1% | 1566 |
| 2.Management or reporting for an organisation | 25.6% | 50.8% | 23.6% | 1599 |
| 3.Management, assessment or reporting on products or services | 45.1% | 44.2% | 10.7% | 1518 |
| 4.Assessment of plans, programmes, developments or projects (e.g. within sustainability appraisal, SEA, EIA, BREEAM, etc) | 46.7% | 41.3% | 12.0% | 1557 |
| 5.Verification work | 69% | 25.9% | 5.2% | 1514 |
| 6.Policy or public affairs work | 64% | 28% | 8% | 1518 |
| 7.Developing and selling carbon offsets | 93.7% | 5.4% | 0.9% | 1487 |
| 8.Developing or delivering other new products/ services | 76.9% | 19.4% | 3.7% | 1506 |
| 9.Academic/research | 78.3% | 16.8% | 4.9% | 1490 |
| 10.Other | 75.9% | 20.8% | 3.3% | 1106 |

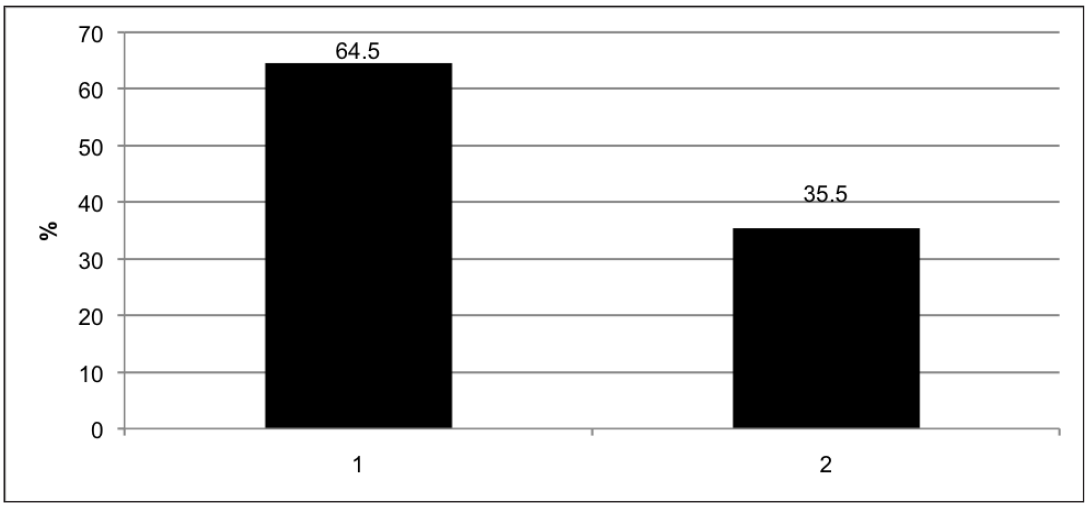
N.B.- The number of respondents for each part question varies as the question was not mandatory and some respondents did not provide answers for all/some of the part questions.

4. What is your organisation's position with regard to its own energy or carbon/ GHG management and reporting?




| | VALUE |
|---|---|
| 1.Our organisation does nothing and we have no current plans | 116 |
| 2.We currently do nothing but are investigating and developing an approach | 111 |
| 3.We manage energy or other environmental aspects but we do not quantify any carbon/ GHG emissions | 298 |
| 4.We quantify some carbon/ GHG emissions but do not seek to manage or reduce these | 29 |
| 5.We quantify some carbon/GHG emissions and seek to manage or reduce some within our immediate control (this might be energy or fuel use) | 289 |
| 6.We quantify an organisational carbon or GHG emission footprint and seek to manage/ reduce certain key direct emissions (e.g. energy use or fuel use) | 365 |
| 7.We quantify an organisational carbon or GHG emission footprint and seek to manage reduce a range of emissions (from energy and fuel use through to indirect emissions such as those associated with our supply chain, or our employee's travel to work). | 400 |
| 8. Other, please specify | 66 |
| **Total** | **1674** |

5. Do you, or does your organisation, calculate any carbon or GHG emission footprints? (e.g. for either the organisation as a whole/ operating unit or department/ products or services/conferences or events/ project or development proposals)

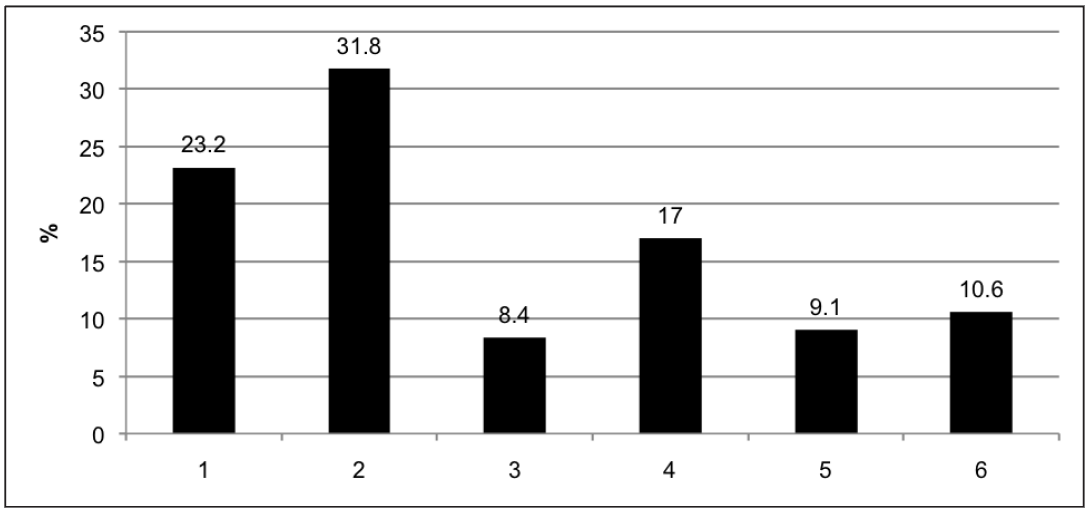



| | VALUE |
|---|---|
| 1.Yes | 1079 |
| 2.No | 595 |
| Total | 1674 |

## STRAND B – 'OTHER' PRACTITIONERS

Respondents who answered question 6 to question 9 had answered "no" to question 5 (i.e. they were not either individually or as an organisation calculating carbon or GHG emission footprints

6. What is your organisation's situation with regard to carbon/GHG footprinting? If you are a sole trader answer as such (effectively as a micro organisation).



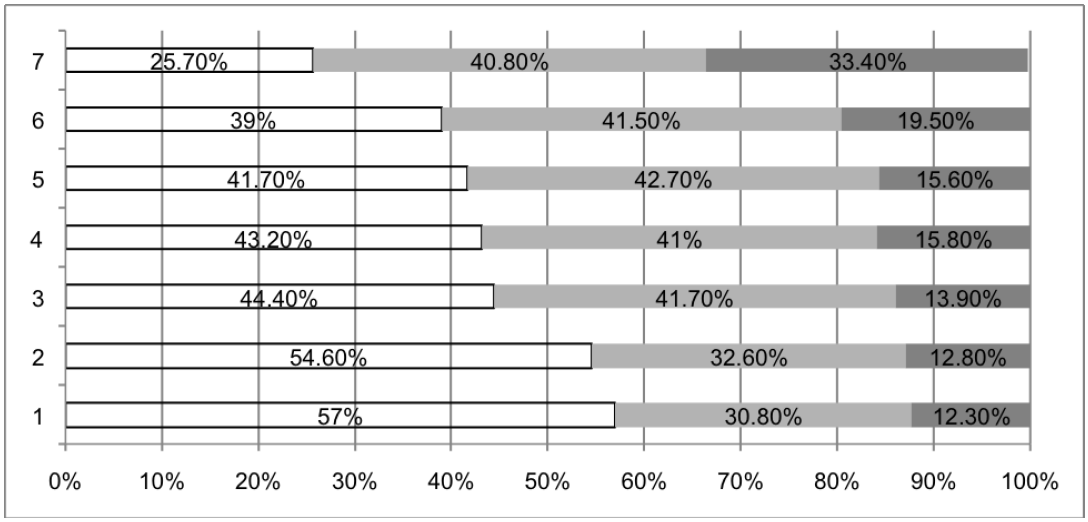

| | DESCRIPTION | VALUE |
|---|---|---|
| 1 | Our organisation has not considered its carbon or GHG emissions | 138 |
| 2 | Our organisation is at a very early stage and has only recently started to consider its carbon and GHG emissions | 189 |
| 3 | Carbon and GHG emissions have been considered by the organisation and an internal decision was made to not progress any footprinting or reporting of carbon/GHG emissions | 50 |
| 4 | Our organisation is investigating its carbon and GHG impacts and considering potential strategy (but is not yet quantifying footprints or reporting) | 101 |
| 5 | Our organisation has investigated its carbon and GHG impacts, is developing a strategy and intends to start quantifying footprints / reporting in the near future | 54 |
| 6 | Others | 63 |
| **Total** | | **595** |

7. What barriers do you face in your organisation in getting carbon and GHG reduction on the agenda?

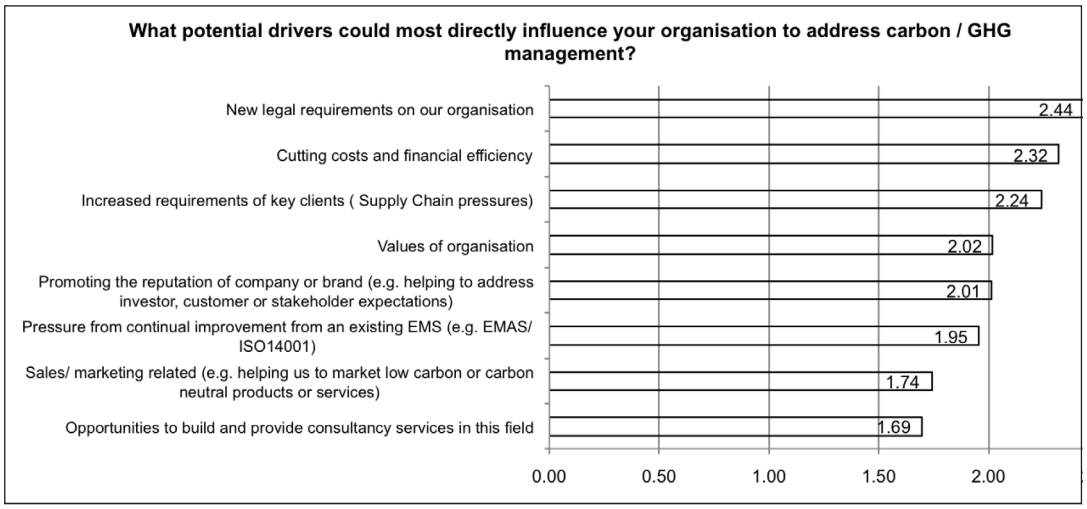
For this question three answers were possible for each descriptor:
1. Not a barrier
2. Contributing factor
3. Significant barrier

| | | NOT A BARRIER | CONTRIB-UTING FACTOR | SIGNIFICANT BARRIER | BARRIER OVERALL |
|---|---|---|---|---|---|
| 7 | Other competing (higher) priorities across the organisation that are business critical or legally required | 25.7% | 40.8% | 33.4% | 74.2% |
| 6 | General lack of any perceived business benefit | 39% | 41.5% | 19.5% | 61.0% |
| 5 | Lack of specific supply chain requirements on us to take action | 41.7% | 42.7% | 15.6% | 58.3% |
| 4 | Lack of pressure from other stakeholders (e.g. investors or customers) | 43.2% | 41% | 15.8% | 56.8% |
| 3 | Perceived scale and complexity of the job | 44.4% | 41.7% | 13.9% | 55.6% |
| 2 | Lack of board level or senior mgt support | 54.6% | 32.6% | 12.8% | 45.4% |
| 1 | Lack of higher levels skills and knowledge to help me personally drive the strategy forward | 57% | 30.8% | 12.3% | 43.1% |

595 respondents responded to each part of this question.
The "Barrier overall" column is the sum of those answering "Contributing factor" and "Significant barrier".
Above data on a 100% stacked bar graph;



8. What potential drivers could most directly influence your organisation to address carbon/GHG management?




For this question three answers were possible for each part:

1. Would not influence us
2. Would be of influence
3. Potential strong driver

The figures displayed in the above graph represent the average score for that driver, i.e. if all responses to a driver indicated it "Would not influence us" then the average score would be 1. The higher the potential driver score, the greater the influence it has.

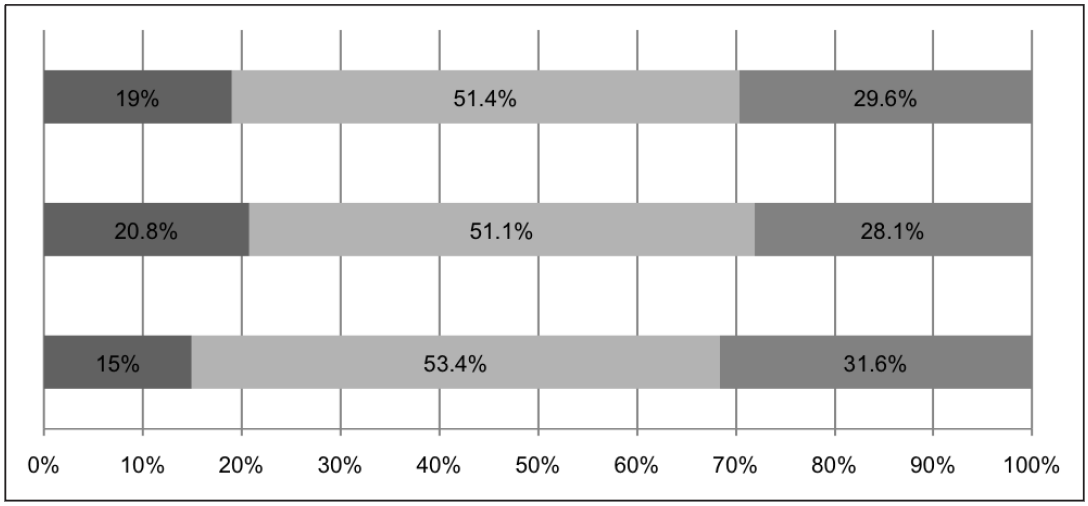
| | WOULD NOT INFLUENCE US | WOULD BE OF INFLUENCE | POTENTIAL STRONG DRIVER | COMBINED DRIVER % |
|---|---|---|---|---|
| New legal requirements on our organisation | 9.1% | 37.6% | 53.3% | 90.9% |
| Cutting costs and financial efficiency | 10.4% | 47.2% | 42.4% | 89.6% |
| Increased requirements of key clients (Supply Chain pressures) | 13.9% | 47.9% | 38.2% | 86.1% |
| Values of organisation | 19.5% | 59.2% | 21.3% | 80.5% |
| Promoting the reputation of company or brand (e.g. helping to address investor, customer or stakeholder expectations) | 21.2% | 56.3% | 22.5% | 78.8% |
| Pressure from continual improvement from an existing EMS (e.g. EMAS/ ISO14001) | 26.7% | 51.1% | 22.2% | 73.3% |
| Sales/ marketing related (e.g. helping us to market low carbon or carbon neutral products or services) | 40.5% | 44.7% | 14.8% | 59.5% |
| Opportunities to build and provide consultancy services in this field | 49.7% | 31.1% | 19.2% | 50.3% |

"Combined driver" is the sum of those answering "Would be of influence" and "Potential Strong driver". Each part of this question was answered by 595 respondents.

9. Please answer the following for your organisation (3 options for response).

| | YES | NO | DON'T KNOW | TOTAL |
|---|---|---|---|---|
| Has your organisation ever sought any information from suppliers in relation to their carbon/GHG emissions ? | 113 respondents (19%) | 306 respondents (51.4%) | 176 respondents (29.6%) | 595 |
| Have any of your clients ever requested information from your organisation in relation to its carbon/GHG emissions? | 124 respondents (20.8%) | 304 respondents (51.1%) | 167 respondents (28.1%) | 595 |
| Have any other stakeholders such as investors or customers) ever sought information in relation to your organisation's carbon / GHG emissions? | 89 respondents (15%) | 318 respondents (53.4%) | 188 respondents (31.6%) | 595 |

Above data on a 100% stacked bar graph in the order above;



## STRAND A – 'ACTIVE' PRACTITIONERS

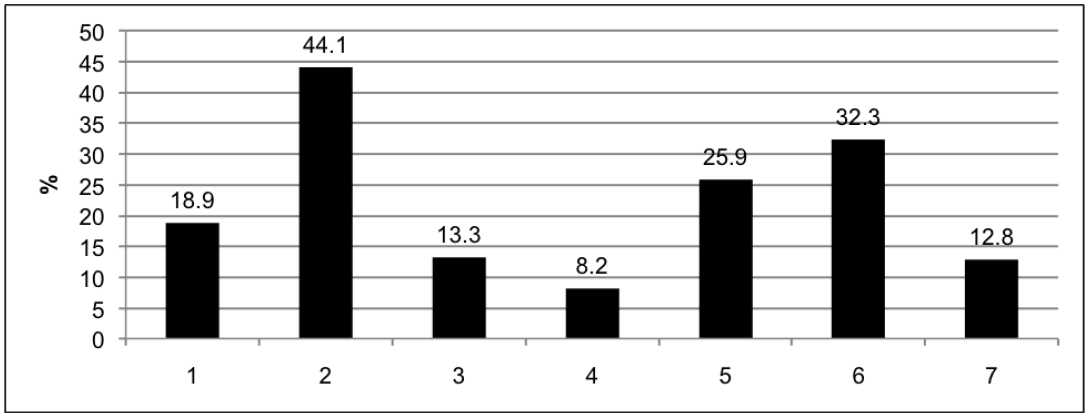
Respondents who answered these questions answered Yes to question 5 on whether they either work for an organisation that calculate carbon or GHG emission footprints, or do so themselves.

10. What are your organisation's main drivers for undertaking energy or carbon / GHG management?

| | NOT A DRIVER | INFLUENCES DECISIONS | STRONG DRIVER | DRIVER (COMBINED) |
|---|---|---|---|---|
| Values of the organisation | 9.3 % | 45.4 % | 45.3 % | 90.7% |
| Cutting costs and financial efficiency | 9.8 % | 42.6 % | 47.5 % | 90.1% |
| Promoting the reputation of the company or brand | 13.2 % | 45.3 % | 41.5 % | 86.8% |
| Compliance with legislation | 24.3 % | 30.5 % | 45.2 % | 75.7% |
| Pressure for continual improvement from an existing EMS | 23.9 % | 43.3 % | 32.8 % | 76.1% |
| Meeting requirements of our key clients | 32.9 % | 38.8 % | 28.3 % | 67.1% |
| Sales or marketing related | 41.3 % | 40.9 % | 17.8 % | 58.7% |
| Opportunity to build and provide consultancy services | 66.1 % | 18.3 % | 15.7 % | 34.0% |

"Driver (combined)" is the sum of those answering "Influences decisions" and "Strong driver".
Each part of this question was answered by 1079 respondents.

11. Please indicate any compliance schemes that require your organisation to manage or report on GHG emissions (in the case of CRC will your organisation be required to comply)?



| | VALUE |
|---|---|
| 1.EU Emissions Trading Scheme (EU ETS) | 204 |
| 2. CRC Energy Efficiency Scheme | 476 |
| 3.Sector level Climate Change Agreements in relation to the Climate Change Levy | 143 |
| 4.Individual (underlying) agreements in relation to Climate Change Levy | 89 |
| 5.Display Energy Certificates (as required for public building) | 279 |
| 6. None | 348 |
| 7.Other, please specify | 138 |

1079 respondents responded to this question and were able to supply more than one answer.

12. Please indicate any standards, schemes or guidance documents you have used to inform your GHG foot-printing or reporting work.

| | NOT USED OR N/A | LIMITED USE | LEAD SOURCE | USE (TOTAL) |
|---|---|---|---|---|
| Defra/DECC Guidance | 29.2 % | 37.2 % | 33.6 % | 70.8% |
| Regulated scheme | 39.8 % | 29.8 % | 30.4 % | 60.2% |
| Carbon Trust Standard – organisations | 44.1 % | 38.8 % | 17.1 % | 55.9% |
| GHG Protocol (corporate standard - organisations) | 49.5 % | 29.6 % | 20.9 % | 50.5% |
| Short version of Defra/DECC guidance | 63.1 % | 28.5 % | 8.3 % | 36.8% |
| ISO 14064 (part 1 – organisations) | 69.9 % | 23.3 % | 6.9 % | 30.2% |
| Others | 70.9 % | 19.4 % | 9.7 % | 29.1% |
| Carbon Disclosure standards | 72.8 % | 20.3 % | 7.0 % | 27.3% |
| GHG Protocol (project accounting) | 73.1 % | 21.4 % | 5.5 % | 26.9% |
| PAS 2050 | 75.7 % | 20.1 % | 4.2 % | 24.3% |
| ISO 14040 | 75.7 % | 20.3 % | 4.0 % | 24.3% |
| ISO 14064 (part 2 - projects) | 77.3 % | 19.2 % | 3.5 % | 22.7% |
| EN 16001 | 82.1 % | 15.2 % | 2.7 % | 17.9% |

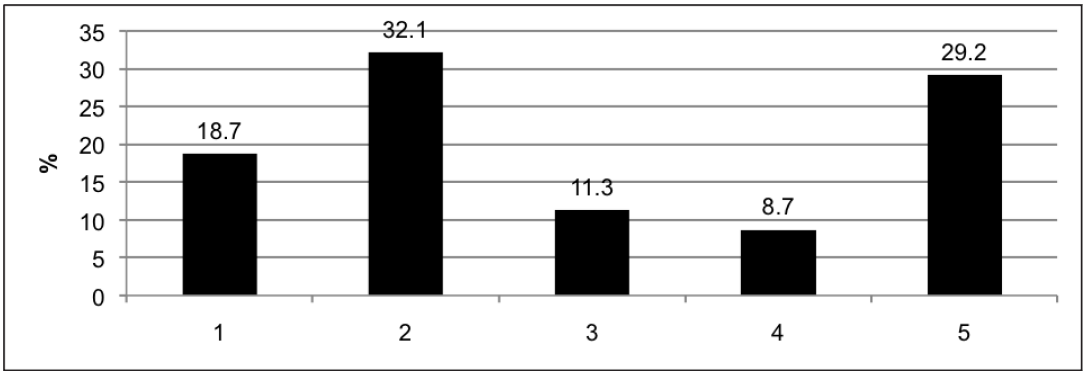
Each part of this question was answered by 1079 respondents.
"Use (Total)" is the sum of those answering "Limited use" and "Lead source".

13. How does your organisation report on any calculated carbon or GHG emission footprints?

| | NEITHER / N/A | INTERNAL REPORTS ONLY | INTERNAL & PUBLICLY AVAILABLE |
|---|---|---|---|
| For the organisation as a whole | 12.6 % | 30.1 % | 57.3 % |
| For operating unit or department(s) | 29.9 % | 52.2 % | 17.9 % |
| For products or services | 59.7 % | 24.8 % | 15.5 % |
| For projects or development proposals | 47.8 % | 35.8 % | 16.4 % |

Each part of this question was answered by 1079 respondents.

14. When did your organisation start reporting publicly on carbon/GHG footprints for itself as an organisation?




| | VALUE |
|---|---|
| 1.2009-2010 | 202 |
| 2.2006-2008 | 346 |
| 3.2002-2005 | 122 |
| 4.2001 or earlier | 94 |
| 5.We do not report publicly on carbon footprints for the organisation | 315 |
| **Total** | **1079** |

N.B. – those who answered "We do not report publicly on carbon footprints for the organisation" did not answer questions 15 to 18 and skipped to quesiton19.

15. How does your organisation publicly report on its organisational carbon or GHG footprint?

| | NOT USED | OCCASIONAL METHOD | REGULARLY USED | USED AT ALL |
|---|---|---|---|---|
| Within a company report such as the annual report or business review | 26.40% | 23.70% | 49.90% | 73.60% |
| Within a CSR or Corporate Responsibility Report | 47.00% | 18.80% | 34.20% | 53.00% |
| Within a Corporate Environmental Report (e.g. EMAS or ISO14001) | 47.60% | 18.80% | 33.50% | 52.30% |
| Within a Sustainability Report | 49.10% | 23.60% | 27.40% | 51.00% |
| Within a specific (separate) report on energy, carbon or Climate Change | 52.60% | 22.00% | 25.40% | 47.40% |
| As a specific entry on company web site | 49.30% | 27.20% | 23.40% | 50.60% |
| Within a wider organised scheme (e.g. Carbon Disclosure Project) | 67.70% | 11.80% | 20.50% | 32.30% |
| Others | 80.60% | 11.80% | 7.60% | 19.40% |

Table of results, ordered by "Regularly used".
Each part of this question was answered by 764 respondents.

**16 What levels of carbon/GHG reduction has your organisation achieved and reported on (either internally or publicly)?**

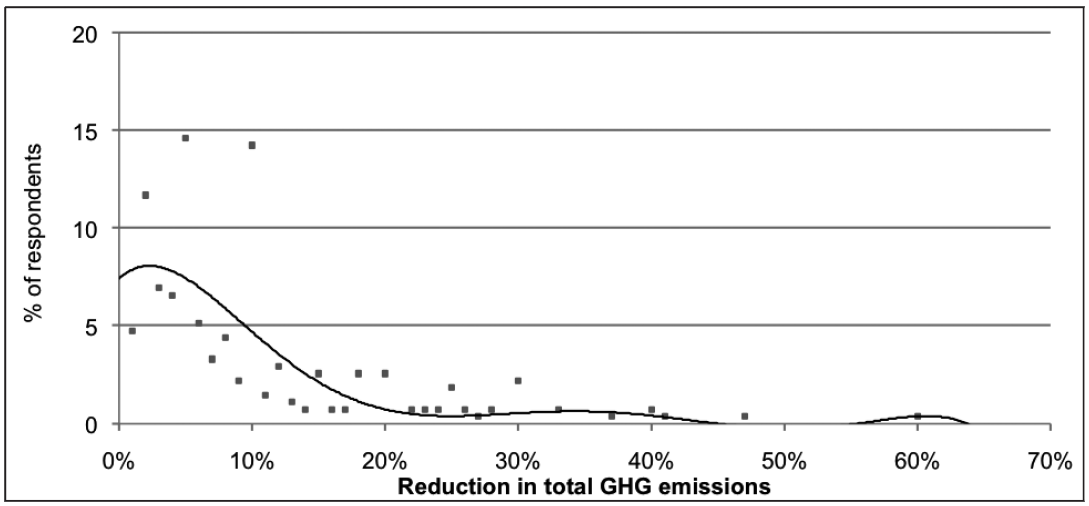
Question 16 had 6 part questions which are shown in the table below.

| | |
|---|---|
| 16.1 | Over the last 2 years our organisation's total GHG emissions increased by... |
| 16.2 | Over the last 2 years our organisation's total GHG emissions reduced by... |
| 16.3 | Over the last 2 years our organisation's relative GHG emissions reduced by... |
| 16.4 | Over the preceding 2 years our organisation's total GHG increased by... |
| 16.5 | Over the preceding 2 years our organisation's total GHG reduced by... |
| 16.6 | Over the preceding 2 years our organisation's relative GHG reduced by... |

Of the 1079 respondents on Strand A, 764 are reporting publicly on their carbon/GHG emissions. Of these 764 respondents, 405 answered at least one part of this question – a response rate of 53%.

The following graph presents the percentage of respondents to question 16.2 against the respective level of achieved and reported GHG reduction by organisations. A trend line is included.

As an example 3% of respondents indicating a reduction in their organisation's emissions over the 2 year period indicate this reduction as 12% over the period.




The average reported change in the organisations GHG emissions over the period is given for each part question below.

| | 16.1 | 16.2 | 16.3 | 16.4 | 16.5 | 16.6 |
|---|---|---|---|---|---|---|
| Mean | 10.7% | 9.3% | 10.2% | 12.7% | 8.9% | 10.7% |
| Median | 5% | 7% | 8% | 7% | 5% | 5% |
| Response Rate | 16.1% | 33.2% | 12.8% | 6.7% | 8.4% | 5.4% |
| Responses | 123 | 254 | 98 | 51 | 64 | 41 |

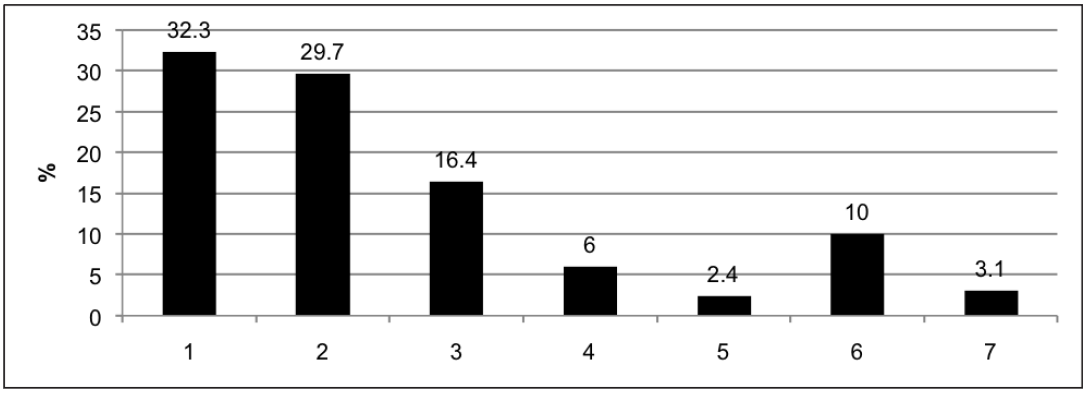
17. What level of assurance/confidence exists on the figures you have used in the previous question?

| | PERCENT |
|---|---|
| 1. Externally verified and publicly reported figures | 22.6% |
| 2. Internally audited/checked and publicly reported | 27.0% |
| 3. A confident estimate (based on measurement, quantification and extrapolation) and reported publicly | 13.6% |
| 4. A confident estimate (based on measurement, quantification and extrapolation) but not reported publicly | 19.5% |
| 5. An approximation and not using any publicly reported data | 17.3% |

18. Options and comments question any publicly reported

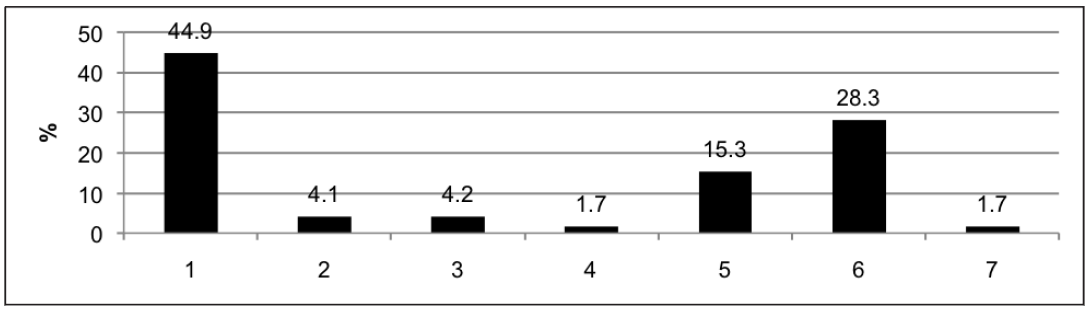
This was an open question; respondent's comments included personal data and are not included here.

19. How extensive is your organisation's reporting/footprinting work with regards to scope 3 emissions? Please select the nearest description from the options below.



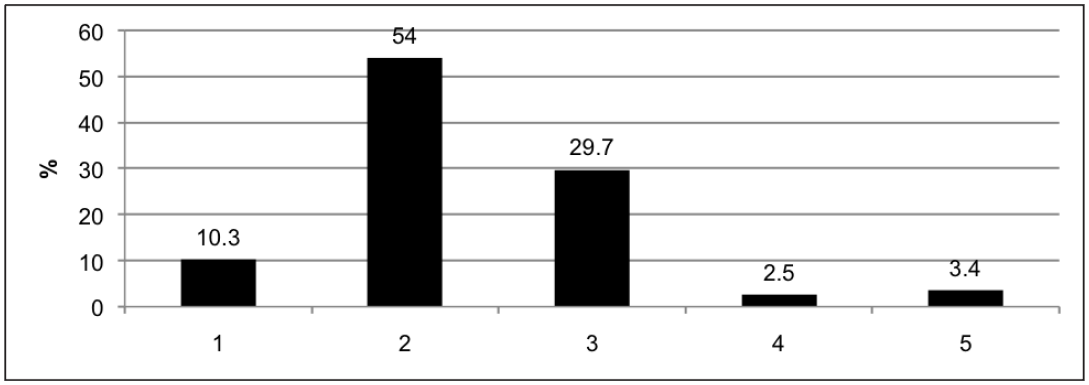

| | | VALUE |
|---|---|---|
| 1. | We do not measure scope 3 emissions | 349 |
| 2 | Our reporting and foot printing only covers some very limited scope 3 emissions (e.g. one or two sources like business travel or employee travel to work) | 321 |
| 3 | Our reporting and foot printing addresses a number of scope 3 emissions (e.g. all travel and some key supply chain emissions ) but we are aware there are Other significant scope 3 emissions that are not included | 177 |
| 4 | Our reporting and foot printing addresses all significant (or material) scope 3 emissions that we have identified for our organisation | 65 |
| 5 | Our reporting and foot printing addresses all of our organisations scope 3 emissions | 26 |
| 6 | Unknown | 108 |
| 7 | Do not understand the question | 33 |
| **Total** | | **1079** |

20. If you purchase green tariff electricity, how do you report on the carbon emissions associated with that electricity (e.g. within any organisational statement or report on carbon /GHG emissions?)



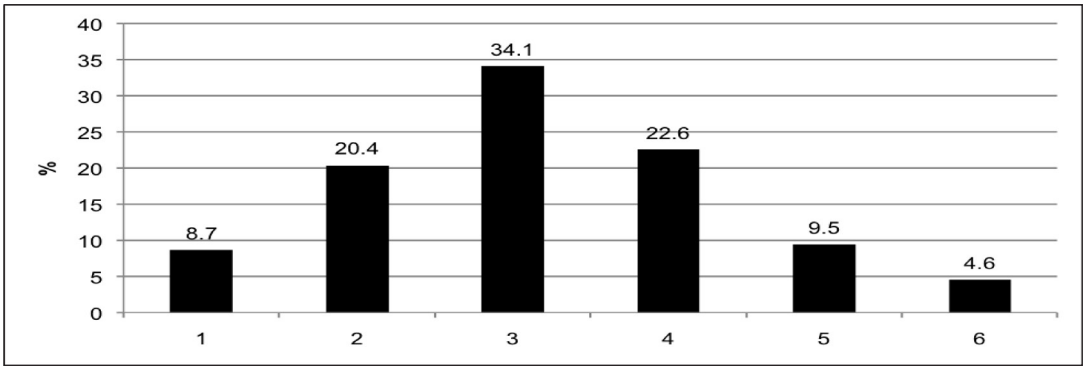

| | | VALUE |
|---|---|---|
| 1 | We do not purchase green tariff electricity | 484 |
| 2 | Our green tariff electricity use is always stated as zero carbon within our GHG footprint reports | 44 |
| 3 | Our green tariff electricity use is reported as 'grid average' emissions within our gross (total) footprint but as zero carbon within our net footprint | 45 |
| 4 | Our green tariff electricity use is reported as 'grid average' emissions within our gross (total) footprint and only the identified 'additional' element to the tariff is discounted in the net footprint | 18 |
| 5 | We purchase green tariff electricity but do not report on it any differently (it is all counted as grid average) | 165 |
| 6 | Unknown | 305 |
| 7 | Do not understand the question | 18 |
| **Total** | | **1079** |

21. How do you perceive the contribution that GHG/carbon reporting can make in encouraging organisations to manage and reduce their emissions?



| | | VALUE |
|---|---|---|
| 1 | Carbon/GHG reduction would not be on the organisation's agenda if active reporting was not in place | 111 |
| 2 | The process of reporting makes a valuable contribution to keeping carbon/ GHG reduction on the agenda | 583 |
| 3 | Reporting plays a small role as one of several drivers/ measures that encourages the organisation to manage emissions | 321 |
| 4 | Reporting makes no contribution | 27 |
| 5 | None of the above | 37 |
| **Total** | | **1079** |

22. How ambitious is your organisation on carbon/GHG management? Please choose the statement that is closest description.




| | | VALUE |
|---|---|---|
| 1 | We aim to make transformational changes that will radically alter our business model and make us a low or zero carbon leader in our field | 94 |
| 2 | We aim to improve existing operations and supply chains, achieve substantial carbon (GHG) reductions and become a low carbon leader in our field | 220 |
| 3 | We aim to achieve significant carbon (GHG) reductions and build a positive reputation as a low carbon responsible business/ organisation | 368 |
| 4 | We aim to be ahead of legal requirements, stakeholder expectations and the requirements of our leading clients | 244 |
| 5 | We aim to be legally compliant | 103 |
| 6 | We have no specific ambition in this area | 50 |
| **Total** | | **1079** |

23. In your experience, how valuable is GHG/Carbon reporting in helping to address the following challenges for organisational carbon management?

| | NO EFFECT | HELPS | VALUABLE | ESSEN-TIAL | ALL LEVELS OF USE |
|---|---|---|---|---|---|
| Building commitment and support from Board and senior management | 7.7 % | 31.3 % | 36.3 % | 24.7 % | 92.3 % |
| Securing staff engagement | 11.4 % | 42.2 % | 32.3 % | 14.2 % | 88.7 % |
| Securing commitment and participa-tion from departments, business units, branch plants, subsidiaries etc. | 13.1 % | 38.7 % | 33.5 % | 14.6 % | 86.8 % |
| Engaging with and promoting the strategy to other stakeholders (e.g. shareholders and investors). | 13.3 % | 35.9 % | 35.8 % | 15.0 % | 86.7 % |
| Engaging with and promoting the strategy to customers | 14.6 % | 37.2 % | 35.4 % | 12.9 % | 85.5 % |
| Unlocking Funds and achieving investments in 'low carbon' measures and initiatives. | 19.0 % | 42.5 % | 28.0 % | 10.5 % | 81.0 % |
| Securing the participation and engagement of suppliers | 24.0 % | 41.9 % | 27.7 % | 6.4 % | 76.0 % |

Each part of this question was answered by 1079 respondents.
"All levels of use" is the sum of those answering "Helps", "Valuable" and "Essential".

24. To manage and reduce your organisation's carbon/GHG footprint, which of the following measures do you use?

| MEASURE | USED | NUMBER |
|---|---|---|
| Active energy management and reduction on site | 71.2 % | 768 |
| Improvements to your buildings and premises | 69.4 % | 749 |
| Wide staff engagement and awareness campaigns | 63.2 % | 682 |
| Travel plans | 60.0 % | 647 |
| Investing in new plant, equipment and processes | 56.3 % | 607 |
| Team approaches (e.g. with champions) | 50.4 % | 544 |
| An overall organisation scale management system - either specific (e.g. on energy / GHGs) or existing (e.g. an EMS) | 47.5 % | 512 |
| Sustainable procurement (efficiencies /low carbon through supply chains) | 46.2 % | 499 |
| A strategic approach to reducing the GHG footprint of products / services provided by the organisation | 32.5 % | 351 |
| Substitution (e.g. fuel switching to lower carbon sources) | 30.6 % | 330 |
| Developing on-site renewable energy generation | 30.4 % | 328 |
| Purchasing 'green tariff' energy | 27.4 % | 296 |
| Land management on our sites (e.g. woodland creation) | 13.1 % | 141 |
| Purchasing carbon offsets | 11.3 % | 122 |
| Other, please specify | 4.0 % | 43 |

Each part of this question was answered by 1079 respondents.

25. Please answer the following questions for your organisation

| | DON'T KNOW | NO | YES |
|---|---|---|---|
| Do any of your clients/customers place any requirements on your organisation to either manage, reduce, quantify or report on your carbon (GHG) emissions? | 17.4% | 43.9% | 38.6% |
| Do any other stakeholders, such as investors, place requirements on your organisation to either manage, reduce, quantify or report on your carbon (GHG) emissions? | 22.4% | 41.1% | 36.5% |
| Do you place any requirements on your suppliers to either manage, reduce, quantify or report on their carbon (GHG) emissions? | 19.9% | 51.8% | 28.3% |

Each part of this question was answered by 1079 respondents.

26. What barriers do you face in your work to achieve carbon and GHG reduction?

| | NOT A BARRIER | LIMITS PROGRESS | SIGNIFICANT BARRIER | TOTAL - LIMITING |
|---|---|---|---|---|
| Other competing (higher) priorities across the organisation that are business critical or legally required | 17.0 % | 44.3 % | 38.7 % | 83.0 % |
| Lack of access to investment funds/capital | 25.0 % | 49.7 % | 25.3 % | 75.0 % |
| Limitations of internal processes (such as a need to provide return on investments over an annual or other short time period) | 26.3 % | 51.5 % | 22.2 % | 73.7 % |
| Perceived scale and complexity of the job | 35.8 % | 49.2 % | 15.0 % | 64.2 % |
| Departments, business units or branch plants lack enthusiasm and are not engaged | 36.8 % | 49.1 % | 14.1 % | 63.2 % |
| General lack of awareness across staff and the organisation | 39.7 % | 47.3 % | 13.1 % | 60.4 % |
| Difficulties working with suppliers (difficult to engage) | 46.2 % | 44.1 % | 9.6 % | 53.7 % |
| Confusion over guidance and schemes (too many or too complicated) | 48.9 % | 38.5 % | 12.6 % | 51.1 % |
| Lack of higher level skills and knowledge to help me personally drive the strategy forward | 53.5 % | 35.8 % | 10.8 % | 46.6 % |
| Lack of board level or senior management support | 57.6 % | 31.3 % | 11.0 % | 42.3 % |
| Lack of sufficient or accessible written guidance | 64.5 % | 28.8 % | 6.7 % | 35.5 % |

Each part of this question was answered by 1079 respondents.

## QUESTIONS ANSWERED BY ALL PRACTITIONERS IN THE SURVEY

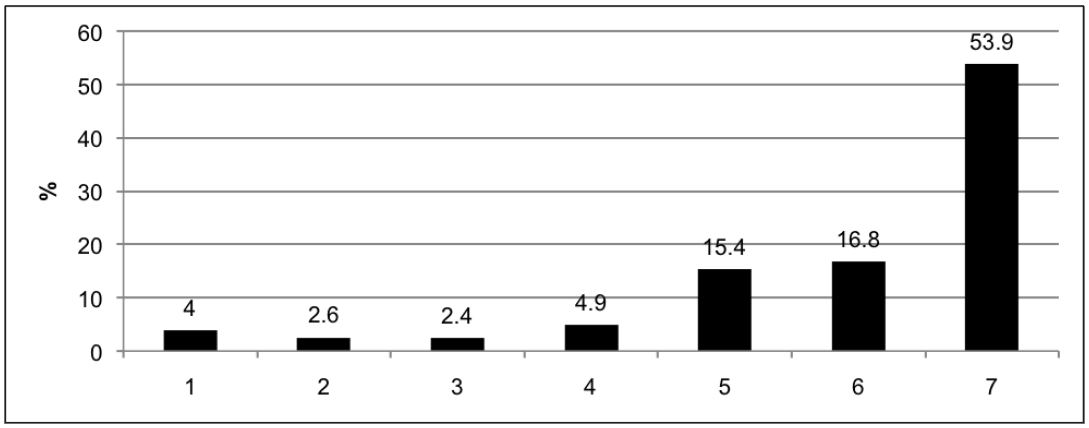
27. The Climate Change Act 2008 set a requirement for the Government to use powers under the Companies Act to make GHG reporting mandatory for companies or to explain to Parliament why it has not done so, by 6 April 2012. –

    Would you be in favour of GHG reporting becoming a mandatory requirement upon companies?

In the question, we are not seeking the position of your company or organisation. Please answer the question based on your views as an individual practitioner.

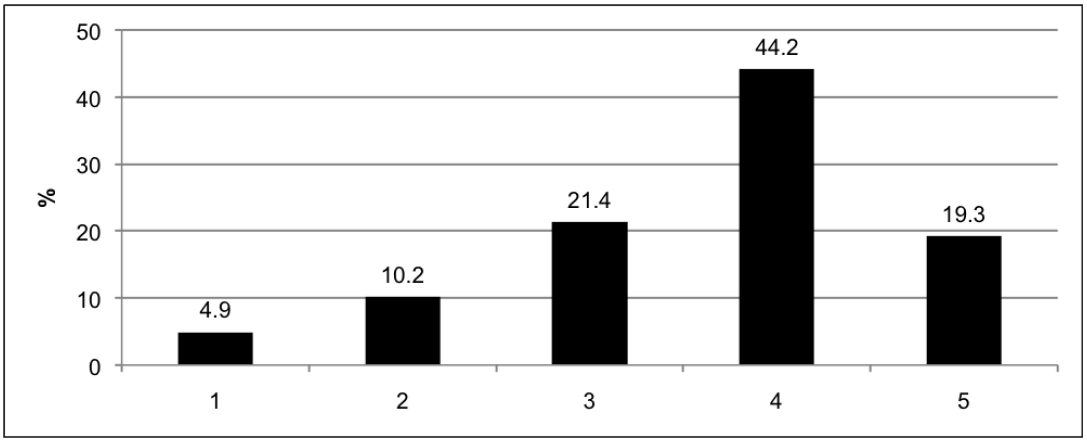
| | VALUE |
|---|---|
| 1.Yes | 1353 |
| 2.No | 321 |
| Total | 1674 |

28. Does your organisation have any experience of using or considering the use of carbon offsets? Indicate below the statement that would most closely apply.



| | | VALUE |
|---|---|---|
| 1 | Our organisation purchases carbon offsets and has made either a declaration of carbon neutrality or a commitment to become carbon neutral | 67 |
| 2 | Our organisation purchases carbon offsets and is considering the potential to become carbon neutral | 43 |
| 3 | Our organisation purchases carbon offsets but has decided against claiming carbon neutrality | 41 |
| 4 | Our organisation purchases carbon offsets but has not considered carbon neutrality | 82 |
| 5 | Our organisation has not purchased carbon offsets, but we are considering or investigating their potential use | 257 |
| 6 | Our organisation has decided against the use of carbon offsets | 282 |
| 7 | Our organisation has not yet considered the use of carbon offsets | 902 |
| **Total** | | **1674** |

29. Which of the following statements most closely captures your view on the role of carbon offsets within an organisation s approach to carbon/GHG management?



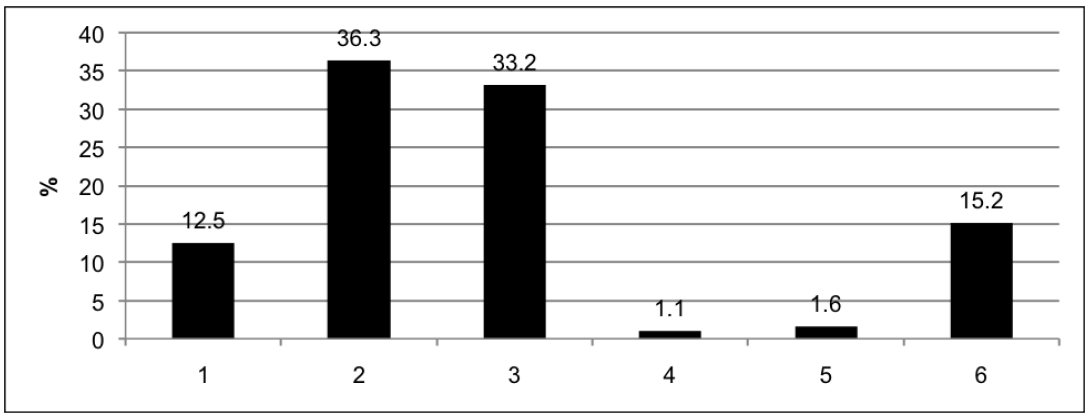

| | | VALUE |
|---|---|---|
| 1 | If it is cheaper to offset than reduce at source then organisations should prioritise offsetting | 82 |
| 2 | Carbon offsets have a valuable role to play and within a balanced strategy, they can allow the organisation to extend its influence (beyond achieving internal reductions at source) | 171 |
| 3 | Carbon offsets should only be used following efforts to reduce the organisation's GHG footprint | 358 |
| 4 | Carbon offsets can have a role to play but can also divert the organisation's attention away from achieving internal reductions (for example because they are either cheaper or easier than reductions at source) | 740 |
| 5 | Carbon offsets are a distraction and have no role to play in an organisation's GHG management strategy? | 323 |
| **Total** | | **1674** |

30. Which of the following issues (if any) do you feel have limited the take up of carbon offsetting by organisations?

| | NOT AN ISSUE | OF SOME CONCERN | SIGNIFICANT CONCERN |
|---|---|---|---|
| Media and public scrutiny over company claims of carbon neutrality | 23.0% | 55.5% | 21.5% |
| Scientific or other uncertainty over the value of some carbon offset schemes | 11.9% | 50.3% | 37.8% |
| Confusion over credible assurance schemes for carbon offsets | 11.4% | 45.5% | 43.1% |
| The lack of any credible standard for claims of carbon neutrality | 11.9% | 43.8% | 44.3% |
| The risk of legal or other challenge e.g. by the Advertising Standards Authority (ASA) | 38.4% | 49.3% | 12.4% |
| The potential for offsets to reduce focus on internal efforts towards GHG reduction (because they are easier or cheaper) | 18.2% | 48.2% | 33.6% |

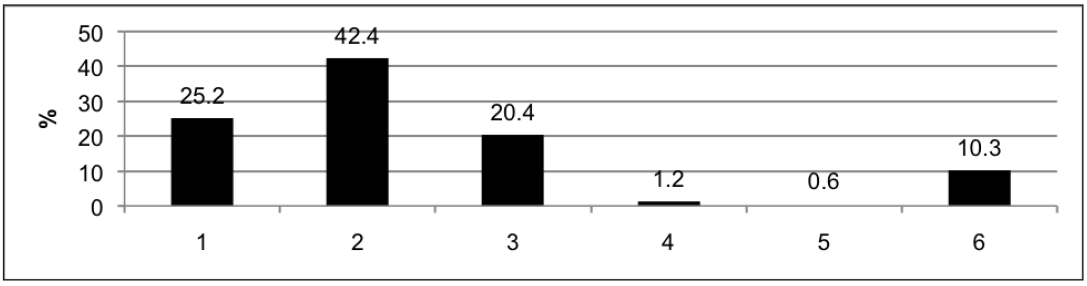
1674 practitioners responded to all options in this question.

31. Would knowing that you were buying Government approved offsets make you more or less likely to offset?



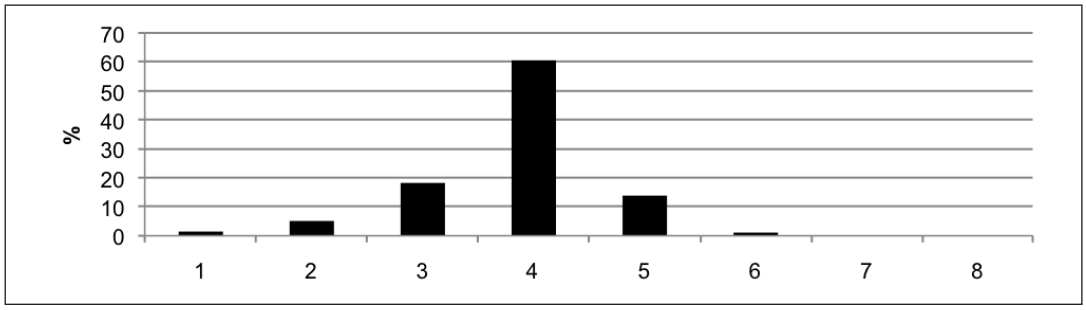

| | VALUE |
|---|---|
| 1. A lot more likely | 210 |
| 2. A little more likely | 608 |
| 3. It would make no difference | 556 |
| 4. A little less likely | 19 |
| 5. A lot less likely | 26 |
| 6. Don't know | 255 |
| **Total** | **1674** |

32. Would a robust standard/specification for the demonstration of carbon neutrality make you more or less likely to consider seeking carbon neutrality for your organisation?




| | VALUE |
|---|---|
| 1.A lot more likely | 422 |
| 2.A little more likely | 709 |
| 3.It would make no difference | 341 |
| 4.A little less likely | 20 |
| 5.A lot less likely | 10 |
| 6.Don't know | 172 |
| **Total** | **1674** |

33. What is your IEMA membership level? (Select one)

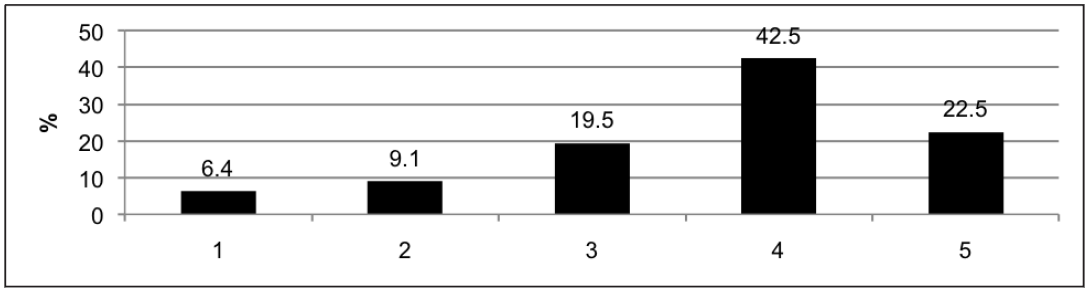



| | VALUE |
|---|---|
| Student | 23 |
| Graduate | 82 |
| Affiliate | 302 |
| Associate | 1014 |
| Full | 229 |
| Fellow | 18 |
| Retired | 0 |
| Corporate Voter | 6 |
| **Total** | **1674** |

34. Please indicate your occupational sector (select one as the most appropriate).

| | PERCENT | VALUE |
|---|---|---|
| Agriculture, Fisheries and Forestry | 1.1 | 18 |
| Mining and Quarrying | 1.1 | 18 |
| Manufacturing | 11.4 | 191 |
| Water Supply, sewerage, waste & remediation | 2.0 | 33 |
| Wholesale and Retail Trade | 1.2 | 20 |
| Accommodation and Food Services | 0.1 | 2 |
| Finance and Insurance services | 1.0 | 17 |
| Professional, Scientific and Technical services including consultancy | 10.0 | 168 |
| Public Administration and Defence | 8.7 | 146 |
| Human Health and Social Work services | 1.2 | 20 |
| Construction | 10.6 | 178 |
| Transport and Storage | 3.2 | 54 |
| Information and Communication Real Estate Services | 0.4 | 6 |
| Administrative and Support services | 1.0 | 16 |
| Education | 3.2 | 54 |
| Arts, Entertainment and Recreation | 0.5 | 9 |
| Activities of Extraterritorial organisations | 0.2 | 3 |
| Consultancy | 22.5 | 376 |
| Other, please specify | 20.6 | 345 |
| **Total** | | **1674** |

35. What is the size of your company or organisation?




| | VALUE |
|---|---|
| 1.Sole trader | 107 |
| 2.Micro business | 152 |
| 3.SME (e.g. fewer than 250 employees) | 327 |
| 4.A large company / organisation | 711 |
| 5.Major corporate or Multinational (e.g. scale equivalent to FTSE100) | 377 |
| **Total** | **1674** |

# APPENDIX 2

## IEMA GHG MANAGEMENT AND REPORTING WORKSHOPS - SUMMARY OF OUTCOMES

In May and June 2010, IEMA ran eight workshop sessions at various locations in the UK (Glasgow, Bristol, Leeds, Newcastle, Peterborough and 3 sessions in London). The sessions were two and a half hours long and each was attended by between 20-30 delegates.

In total, just over 200 environmental practitioners participated from a range of relevant backgrounds and organisational levels (e.g. energy managers, climate change officers, environmental managers, sustainability and CSR officers, heads of function and directors, auditors, verifiers, consultants and many more). Participants were generally either:

1. Practitioners already engaged in the process of GHG management or reporting inside / on behalf of organisations
2. Practitioners who are very likely to be active in the near future (e.g. in response to the Energy Efficiency CRC or other current drivers)
3. Practitioners in related roles concerning audit, verification, advice or training

IEMA used the workshop sessions to engage with members and to better understand the following:
- The nature of organisational action on carbon/GHGs
- The role, value and effectiveness of GHG reporting
- The key issues and challenges in this important field

Through the workshops, IEMA members were provided the opportunity to:
- Learn about carbon management and GHG approaches from experienced colleagues and peers
- Discuss early findings from IEMA's 2010 GHG practitioner survey
- Debate and identify key issues, challenges and barriers for the profession
- Improve and develop both their own and IEMA's understanding on the effectiveness of GHG management and reporting

## WORKSHOP TASKS AND OUTCOMES

The following sections present a summary of outcomes that Practitioners worked on and identified through the workshops.

Prior to the work tasks, group balance was checked to ensure each table held a reasonable mix of practitioners. After this, three exercises were undertaken and within these the working groups were set questions/tasks to discuss and feedback on. At the end of each exercise, full session feedback took place with discussion on the collated outcomes.

Exercise 1 tasks were undertaken entirely without additional information. In exercises 2 and 3, members were able to refer to IEMA survey outcomes if required. In the majority of cases however groups tended to rely and draw upon their own experience as practitioners. Summary outcomes from these workshop exercises are presented below:

## EXERCISE 1

In Groups discuss & agree the main drivers and barriers to addressing GHG reduction within your respective organisations

The primary task was for groups to discuss and agree where possible a priority order (significance) for key drivers and barriers and as a sub task to comment on any significant scope for action (i.e. to resolve barriers or support drivers). The task was completed and summary outcomes are outlined below.

Leading Drivers for organisational action on GHGs

The table below summarises the leading drivers identified by practitioners in the workshops. The outcomes are listed in priority order from the top (reflecting frequency of occurrence and also consensus response via group discussion)

| RANKED ORDER | TYPES / CATEGORY | SPECIFIC EXAMPLES STATED |
|---|---|---|
| 1 | Legislation | EU ETS / forthcoming CRC / Climate Change Act – mandatory reporting requirement |
| 2 | Cost savings for organisation | Ongoing efficiency savings / reduced bottom line |
| 3 | Requirements of others | Supply chain and clients / investors and funding bodies / parent companies / others (e.g. audit commission) |
| 4 | Competitive edge | Tender applications / bids |
| 5 | Reputational issues | Corporate Social Responsibility (CSR), organisational image, expectations of stakeholders (staff / customers) |
| 6 | 'Other' issues | Various |

Through the workshops, a number of broad consensus points were reached as follows:

- Although the above order is acknowledged, there will be some important differences between individual organisations (e.g. in smaller businesses a supply chain requirement can be critical, for a major corporate the reputational concern could be paramount).
- For some situations where significant progress is being achieved, there may be a number of connected drivers at play. In this context, the organisation may for example be both complying with legislation, reducing its annual costs and also winning new work (so that the strategic approach on carbon reduction making a number of business critical contributions).
- Although the above 'dynamic situation' can arise it is infrequent and for most a very long way off. In securing progress by the organisation a single business critical driver is usually required.
- New legislation or mandatory requirements are recognised as the foremost significant driver and with most potential impact to generate progress on a wide front. Other drivers are contributory, but only mandatory requirements are viewed as offering the potential for any significant step change in activity.

Barriers to progress

A short group exercise was also undertaken on the organisational barriers to progress (summarised below). The first 8 barriers were consistently mentioned in all groups.

1. Lack of finance / resources / access to capital
2. Issues over senior management or board 'buy in'
3. Apathy and other competing priorities
4. Gaps in skills, awareness and expertise
5. Perceived complexity / scale of task
6. Data access/ quality / lack of data
7. Lack of commercial pressure
8. Lack of supplier co-operation
9. Lack of a strong enough business case

10. Culture / behaviour change
11. Lengthy pay back periods
12. Perception of too many standards
13. Need for better guidance
14. Specific business complexities (e.g. reporting difficulties from landlord/tenant arrangements

From the workshop discussions and feedback sessions it is clear that;
- A number of barriers (1-8 above) are frequently mentioned and appear to be leading/most significant.
- There is some consensus that barriers will act together to limit progress.

Practitioner experience has demonstrated a critical relationship between drivers and barriers. As an example, the leading 5 drivers identified, can all potentially be influential upon barriers 2, 3, 7 and 9 in the above list. Further work on these 'connections' may be useful in future exercises.

The above exercises have been useful to further understand the dynamics and connections that exist as well as the importance of key drivers and barriers as follows;

- Key (critical) business drivers will often be the pressures that oblige or require an organisation to respond. Legislation and mandatory requirements are foremost in this context and stand significantly ahead of other drivers. For some organisations a supply chain/client requirement can also be significant. Connections between drivers can be important and can significantly influence (contribute to) the rate of progress. The primary driver however is usually a mandatory or similar 'requirement'.

- Following a decision to manage / report on GHGs there are a number of barriers that can be significant (either individually or more usually in combination). The situation can be complex and vary between organisations. There appears to be eight leading barriers to progress.

## EXERCISE 2

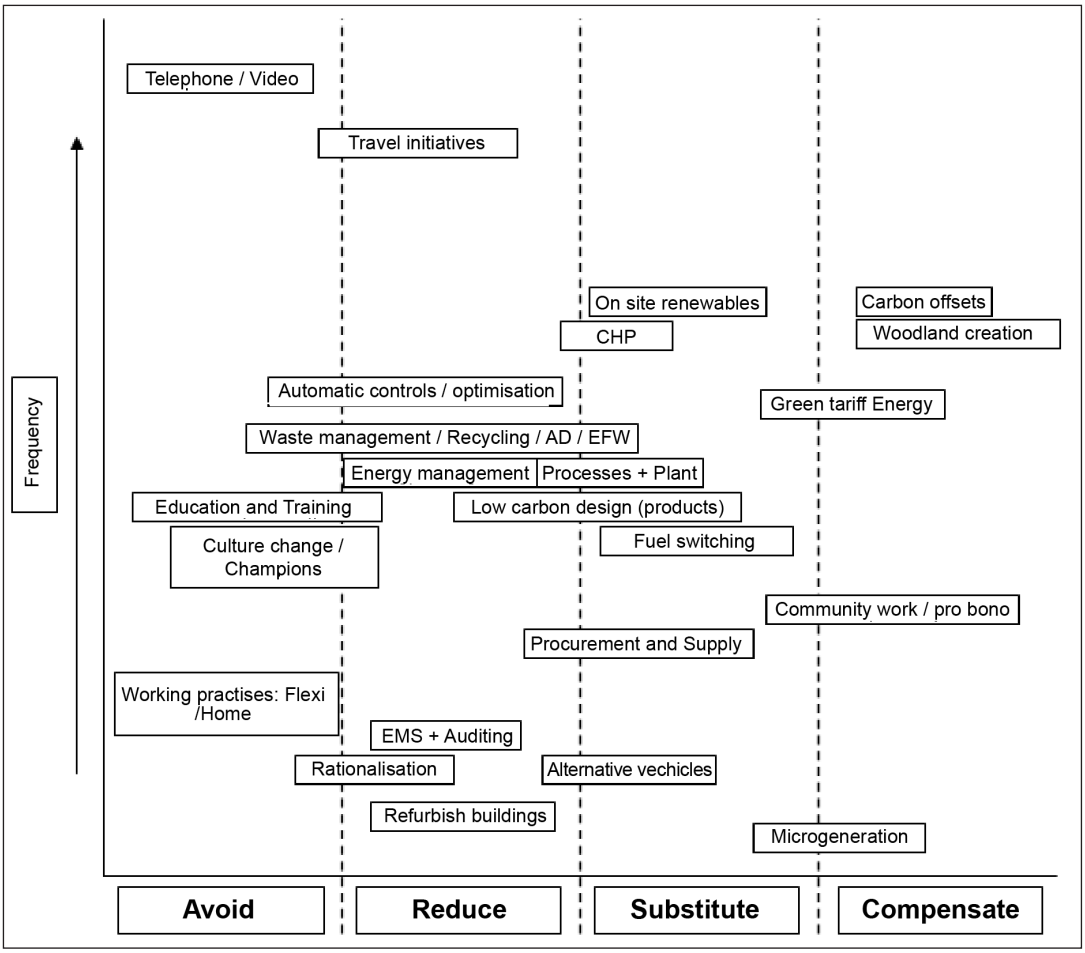
**In groups, plot out your organisations methods for addressing carbon / GHGs against the IEMA GHG management hierarchy**

The GHG management hierarchy has been compiled by IEMA as a planning and conceptual tool to assist practitioners and organizations when developing strategic approaches on carbon and GHG reduction. The hierarchy and its associated rationale was discussed with the working groups (commencing with avoidance, working through reduction and substitution measures and culminating with compensation). Following this the above task was described as follows.

Groups were asked to work corroboratively with colleagues and to populate a blank A3 copy of the GHG management hierarchy. They were asked to try and complete the exercise as much as possible from their own experience (although GHG survey outcomes were available if groups wished to use these).

In completing the task groups were also asked to consider; which methods achieve largest impacts and any situations where the hierarchy might not fit. Further, they were also requested to consider why of how organisations might compensate along with how the hierarchy should be used - for example should it always be strictly sequential, or instead used as a guide to assist focus and planning?

The outcomes from this exercise have been collated and used to produce an overview planner of practitioner awareness on GHG management measures plotted against the GHG management hierarchy (overleaf). The vertical axis represents how frequently measures are identified. The GHG management hierarchy is spread along the horizontal axis (from avoid through to compensate). Where an action or measure spreads over from one hierarchy level to another (e.g. from reduction to substitution) this is a direct reflection on the outcomes from the exercise. To provide an example most respondents indicated Combined Heat and Power (CHP) as a reduction measure but for some others it was seen as substitution (primarily as a fuel switch measure).




NOTE - In the above mapping exercise, frequency relates to practitioner awareness of GHG management measures and has not been cross referenced to GHG survey information.

## EXERCISE 3

This exercise involved groups responding to the following tasks:

- In groups, discuss and indicate your views on the value of GHG reporting?
- If GHG reporting becomes a mandatory requirement then how far or how fast should it be implemented (everyone? size threshold? extent of reporting?)
- Discuss and identify any significant reporting issues/ problems that you have encountered? (general or specific)
- Identify any potential proposals/improvements

### 3.1 – Value of GHG reporting

The working groups identified a number of areas where GHG reporting adds value to the organisation and makes an important contribution to the carbon/GHG reduction strategy. The most frequently mentioned points were as follows (note some overlap):

1. Reporting is important to ensure the 'measure to manage' process is communicated to decision makers and stakeholders. It helps to inform (prioritise) on areas for improvement and also on the scale of the opportunity / challenge.
2. Reporting provides essential visibility both internally (e.g. staff, departments and the Board) and externally (customers, clients, investors and other stakeholders). It therefore helps to build and sustain the process of carbon and GHG management and to avoid progress being lost.

3. Reporting is valuable as it keeps senior staff and the board informed of progress (essential link to decision making).
4. Reporting provides a mechanism for benchmarking both externally (between organisations) and internally (between business units and over time).
5. Reporting helps the organisation to improve and build a robust and effective process over time (e.g. helps to identify and address information gaps).

A number of further 'reporting benefits' were also outlined. These are set out below and again there are some overlaps and connections with the above primary points:

- Reporting enables target setting and monitoring of progress
- It leads to cost and resource savings
- It leads to GHG reduction and resource efficiency
- It enables the organisation to address supply chain pressures
- It is the easiest way to link finance with carbon
- Reporting helps to engage the finance director and others (i.e. as a well understood / accepted 'business language' or process)
- It helps the organisation to demonstrate commitment
- It can assist in influencing Government (and other parties)
- It helps to highlight inefficient areas
- It supports culture change within the organisation
- It compliments and supports CSR or sustainability processes
- It demonstrates legal and wider compliance
- It informs public disclosure
- It can lead to innovation (consequence of the need to demonstrate progress)
- It helps to build ownership of the carbon reduction challenge

The extensive responses indicated a range of benefits for practitioners and their respective organisations. In summary, carbon or GHG reporting (either on its own or within a wider process) is valued for its contribution in building board support, enabling target setting and helping to ensure that progress in year 1 does not disappear (continuous improvement over time). In these and other ways, reporting appears to play a very important role in contributing to on-going progress over both the short and long terms.

### 3.2 Mandatory reporting – how far / how fast?

If GHG reporting becomes a mandatory requirement then how far or how fast should it be implemented?

Strong support exists for mandatory reporting, but there is also some concern on the potential impact and response difficulties from too 'speedy' an introduction. The key outcomes from these work group discussions are summarised below:

- Mandatory reporting should be implemented but the scale and/or pace of introduction will need to be phased (or staggered).
- Implementation could be phased with regard to the scope (extent) of reporting and potentially also the size of company.
- It was acknowledged that although smaller businesses may struggle on reporting certain scope 3 aspects, as a rule the reporting complexity reduces in line with reduced scale of the business.
- Many practitioners believed that if the extent of mandatory reporting was initially limited (to GHG scopes 1+2) then all businesses of reasonable size (SME and above) should be able to respond.
- As a further (or alternative) suggestion, it may be possible for mandatory reporting to be introduced through an introductory phase of internal reporting (preparing for public reporting from a set date)

**A number of specific points were also raised (some differing / many complimentary).**
**These are listed below in order:**

- Stagger and phase in implementation (by either scope or company size)
- SMEs and others may find full reporting difficult (e.g. if scope 3 is required)
- Introduce to all but only require scopes 1+2 in first phase
- Apply to all businesses at SME / above but initially limit compulsory requirements to just scopes 1+2 (possibly with business travel included)

- Standardised format required (use Defra / DECC 2009 guidance)
- Publish league tables (make publicly available)
- Provide simplified easy guidance and template
  (e.g. in line with Defra 2009 guidance for organisations on GHG reporting)
- Difficulties may exist for businesses in multi-occupancy buildings
- Role out approach to larger companies only in first phase (PLCs)
- Clear guidance / instruction required on level of audit / verification
  (potentially linked to a size threshold?)
- Investigate if process can be incorporated within other required company reporting

### 3.3) Reporting Issues and problems

Discuss and identify any significant reporting issues/ problems that you have encountered?
(general or specific)

A number of issues were raised in this discussion by Practitioners. Issues raised were often very specific to defined situations within an individual business or organization. However, some stood out and were frequently raised as 'general issues' e.g:

1. Lack of a consistent standard. Although recognizing the need for specific guidance in specialist areas, many expressed concern that there is confusion and that no single standard method (or tool) is consistently used for organisational GHG reporting. It was however acknowledged that the Defra 2009 guidance has potential to become a reporting norm.
2. A group of specific issues were raised around data quality, data availability and validation
3. A number of concerns were raised in connection with conversion factors

**Further issues that were also raised included:**

- Difficulties with organisational boundaries and the extent of the GHG footprint
  (e.g. in PFI or other complex 'ownership' situations)
- Benchmarking comparisons can be unrealistic
- Inconsistent auditing / verification
- Some concerns over usefulness of reported data
- Difficulties with scope 3 (can be very challenging)
- Time and resource implications
- Complexity of data and reporting
- Conflicting scheme requirements (e.g CRC and HEFCE)
- Difference in approaches and requirements between countries

### 3.4) Proposals and improvements

Many of the proposals and improvements suggested by working groups, mirror the issues already identified. Broadly the proposals fall in two groups as follows;

**Frequently proposed improvements:**

- Make reporting mandatory
- Clarity on guidance and a reporting norm (definitive)
- Standardise schemes and standards as much as possible
- Link more closely to ISO14001 (i.e. guidance on use of 14001 for GHG reporting)
- Simplify guidance and reporting for SMEs
- Improve internal audit on GHGs and sustainable development
- Further improvement of conversion factors (reduce any confusion)
- Sector specific guidance and benchmarks (via trade bodies)
- Confirmation and increased awareness on official sources and conversion factors
- Improved billing procedures by energy companies – e.g. providing CO2 (e)

Other mentioned proposals:

- National awareness campaign
- Financial support e.g. tax relief
- Energy supply companies to support SMEs with reporting
- Mainstream GHG reporting into general company reporting
- Sub metering and AMRs
- Influence the direction of international standards (to improve consistency)
- Quality of training needs to be improved
- Build knowledge and skills
- Government to support knowledge and skills
- Roll out mandatory reporting to large companies first
- Develop a step by step approach to CRC and reporting
- Public sector to lead by example

# APPENDIX 3

Acronyms, Abbreviations and Terms

| | |
|---|---|
| AD | Anaerobic Digestion |
| BRE | Building Research Establishment |
| BREEAM | Environmental Assessment Method |
| BSI | British Standards Institution |
| CCL | Climate Change Levy |
| CDM | Clean Development Mechanism |
| CDP | Carbon Disclosure Project |
| CHP | Combined Heat and Power |
| $CO_2$ | Carbon Dioxide |
| $CO_2e$ | Carbon Dioxide equivalent |
| CRC | CRC Energy Efficiency Scheme (Carbon Reduction Commitment) |
| CSR | Corporate Social Responsibility |
| DECC | Department for Energy and Climate Change |
| DEFRA | Department for Environment, Food and Rural Affairs |
| EFW | Energy From Waste |
| EIA | Environmental Impact Assessment |
| EMAS | Eco-Management and Audit Scheme |
| EMS | Environmental Management System |
| EU ETS | European Union Emissions Trading Scheme |
| GDP | Gross Domestic Product |
| GHG's | Greenhouse Gases |
| HEFCE | Higher Education Funding Council for England |
| IPPC | Integrated Pollution Prevention and Control |
| ISO | International Organisation for Standardisation |
| LAAs | Local Area Agreements |
| LULUCF | Land Use, Land Use Change and Forestry |
| PAS | Publicly Available Specification |
| Pro Bono | Professional work undertaken voluntarily |
| SEA | Strategic Environmental Assessment |
| SDiG | Sustainable Development in Government |
| SMEs | Small and Medium Sized Enterprises |
| UKCIP | United Kingdom Climate Impacts Programme |
| UN | United Nations |
| UNFCCC | United Nations Framework Convention on Climate Change |

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