Using regulation as a last resort?

Assessing the performance of voluntary approaches

Foreword

Nature is in trouble in the UK and right across Europe. Under the Convention on Biological Diversity (CBD), the governments of Europe have committed to taking action to halt the loss of biodiversity by 2020. Yet, the latest European Red List of Birds showed that nearly one in five (18%) bird species in the EU27 are threatened with extinction. In the UK, the most recent State of Nature Report showed that 60% of the species assessed have declined over the last 50 years and that one in ten are under threat of disappearing from our shores altogether.

This is bad news for nature and bad news for people too; as highlighted by the UK Government's Natural Capital Committee, nature sustains critical natural capital assets which underpin our future prosperity and well-being. The reasons for the perilous state of nature are well known – habitat loss and degradation, invasive non-native species, pollution, and over-exploitation – yet tackling these threats is by no means straightforward.

In the UK and right across Europe, environmental regulations are the bedrock of conservation efforts. Thankfully, we have some of the best environmental legislation anywhere in the world, providing vital protection for threatened species and special wildlife habitats. Without these laws, wildlife would be in a far worse state, exploited for short-term gain without proper consideration of the long-term consequences.

As part of regulatory reform agendas at both Member State and EU levels, concerns about the costs of regulation to business have led policymakers to promote the use of voluntary approaches (e.g. industry self-regulation) as an alternative to mandatory rules and regulations. Given the potential impact of this fundamental policy change, we were surprised to discover that there had been no systematic evaluation undertaken to assess the performance of voluntary approaches in policy making. We therefore undertook this novel analysis – the largest assessment of voluntary scheme performance to date – as a contribution to the evidence-base.

The results suggest that the impacts of most voluntary schemes are limited, and that the efforts of responsible businesses are often undermined by the failure of such schemes to attract widespread industry participation and compliance. The report highlights that voluntary schemes work best where there are clear incentives for participation and performance improvement. Best-practice design features include the need for clearly defined and measurable targets against which performance can be assessed, alongside robust and transparent monitoring and reporting requirements.

We hope this report will be a positive contribution to further discussions about how to improve environmental legislation and ensure that leading businesses and charities are supported in their efforts to "do the right thing" for the natural environment.

Mike Clarke
Chief Executive

About the RSPB

The RSPB is one of Europe's largest nature conservation charities, with more than one million members. It has more than 200 nature reserves, covering over 150,000 hectares, which are home to 80% of our rarest or most threatened bird species.

The RSPB is part of BirdLife International, the world's largest nature conservation partnership. The principal objective of the RSPB is to save nature. For over 100 years, the RSPB has been at the forefront of campaigning for policies that protect wildlife, special places, and the wider environment.

The RSPB is a founding member of the Aldersgate Group, an influential alliance of leaders from business, politics and civil society that drives action for a sustainable economy. The Aldersgate Group promotes polices that deliver environmental protection as well as long-term sustainable economic growth, jobs and competitiveness.

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Contents

Executive Summary

As part of regulatory reform programmes at both UK and EU levels, a range of steps have been taken in recent years to promote the use of voluntary alternatives to regulation in seeking to achieve public policy objectives. For example, according to the latest set of regulatory principles introduced by the UK Government in 2010[1], new regulations are only to be introduced as a last resort and only once it has been demonstrated that policy objectives cannot be achieved using alternative approaches such as voluntary self- or co-regulatory schemes.

"...the government wants regulation to be considered only as a last resort, and has introduced and strengthened incentives for departments not to regulate and to consider alternatives."

– National Audit Office (2014)[2]

The term "voluntary approach" refers to a broad spectrum of possible arrangements, including industry self-regulation and co-regulatory negotiated agreements, involving private sector actions or commitments that **go beyond existing legal requirements or regulatory standards**.

In seeking to achieve public policy objectives, there are a range of alternative instruments available to governments, all of which have **different strengths and weaknesses.** Proponents of voluntary approaches argue that they represent a low cost, more flexible, and less adversarial approach to policymaking than traditional regulatory approaches. In contrast, due in part to a perceived lack of transparency and accountability, critics argue that many firms are only motivated to participate in, or comply with, the requirements of voluntary schemes in order to reduce regulatory oversight and avoid the imposition of more stringent regulatory standards. Some schemes have been criticized on the basis that they adopt relatively unambitious targets or fail to achieve those targets as a result of low levels of industry participation, poor compliance and the undermining influence of free-riding.

Across a number of sectors, leading businesses are increasingly taking responsibility for their impacts on society and the environment, and are committing to reducing their negative impacts and enhancing their positive impacts, both independently and in partnership with other businesses and civil society organisations. However, despite the positive nature of such commitments, it remains unclear to what extent voluntary action alone by the private sector can be relied upon to ensure the achievement of overarching public policy objectives. The existing evidence-base regarding the performance of voluntary approaches is somewhat limited, with most previous assessments restricted to just a handful of case studies.

In order to build on the existing evidence-base, and assess the extent to which voluntary approaches can contribute to the achievement of public policy objectives, we conducted a novel quantitative assessment of voluntary scheme performance based on existing scheme assessments and published reports identified via extensive web-based searches. In total, sufficient information was available to assess the performance of 161 individual schemes covering a wide range of sectors and issues. Just over half of these schemes were from EU countries and over a quarter were from the UK.

We also reviewed the evidence regarding the key factors that influence the performance of voluntary schemes in order to establish a set of best practice design features for their future use.

A summary of the **results** and **conclusions** is presented overleaf.

1. Key results: performance assessment

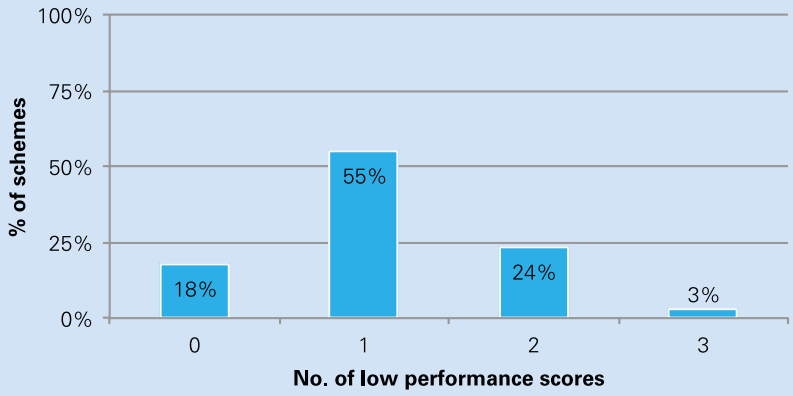
Voluntary scheme performance was assessed in relation to three dimensions of performance that together determine scheme impact: **target achievement** (the extent to which voluntary targets are realised), **target ambition** (the stringency of the targets relative to the policy objective), and **level of uptake** (participation rate).

A simple scoring technique was adopted whereby each performance dimension was allocated a low (0), medium (0.5), or high (1) performance score based on a set of clear evaluation criteria. The individual performance scores for each scheme were then combined in two different ways: first, by calculating an **average performance score (APS)** based on the arithmetic mean of the individual performance scores, and second by calculating a **scheme impact score (SIS)** based on the product of the individual performance scores.

Using these, methods, the following results were obtained:

- The **vast majority of schemes (82%) performed poorly** on one or more performance dimensions (**Fig. 1**), thus fundamentally limiting scheme impact. This is almost certainly an underestimate of the extent of poor performance as it wasn't possible to assess most schemes against all three performance dimensions. [i]
- 64% of schemes assessed in relation to target achievement performed poorly, meaning that they failed to achieve the majority of their targets (or, where relevant, compliance rates greater than 50%). 78% of schemes assessed in relation to target ambition performed poorly and 57% assessed in relation to level of uptake performed poorly (**Fig. 2**).
- There was no significant difference in the relative performance of UK and non-UK schemes. Schemes from within the EU as a whole performed significantly better than non-EU schemes. However, the majority of EU schemes still performed poorly on at least one performance dimension (**Fig. 3**).
- Environment-related schemes performed significantly better than non-environmental schemes, and co-regulatory schemes performed significantly better than self-regulatory schemes (**Fig. 3**). However, this was not the case at the UK level, where there were no significant differences in performance between the different scheme types. Regardless of how the schemes were grouped, in all cases the majority still performed poorly on at least one performance dimension.

Figure 1. Percentage of schemes by number of low performance scores



i The overall impact of a scheme is fundamentally constrained by its performance against the dimension(s) for which it performs least well. For example, a scheme that sets ambitious targets that are achieved by the majority of scheme participants will nevertheless produce only a limited impact if uptake is low i.e. if few firms actually participate. Note that, due to limited data availability, less than 20% of schemes were assessed in relation to all three dimensions of performance.

Figure 2. Percentage of schemes by performance score against each individual performance dimension

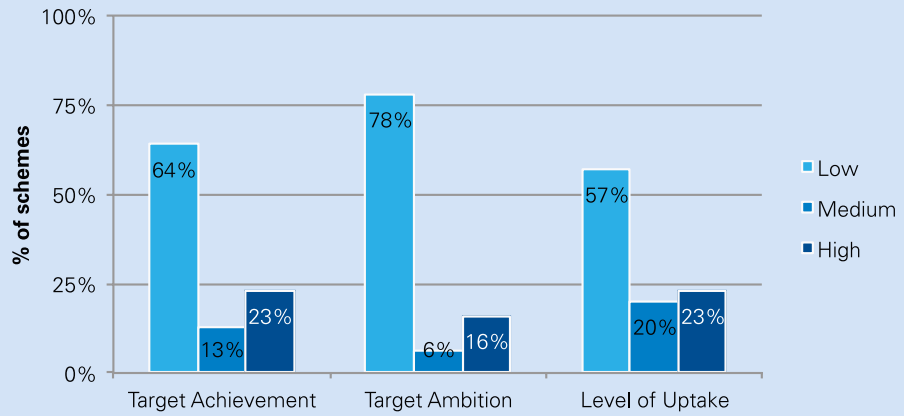


Figure 3. Differences in scheme APS/SIS by scheme country of origin and type

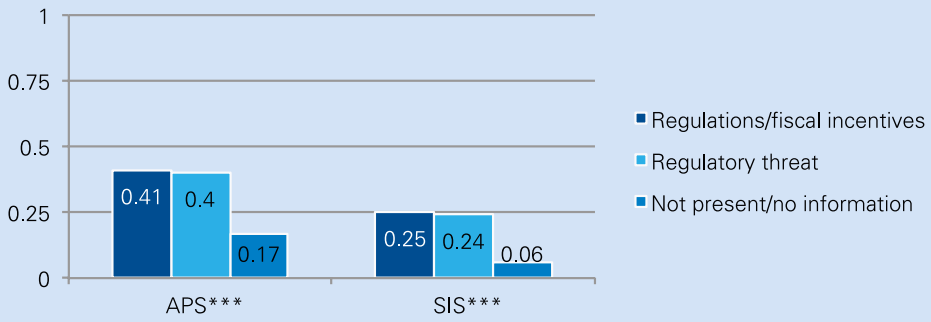
Note: * denotes a significant difference at the p<0.05 level, ** at the p<0.01 level, and *** at the p<0.001 level.

- Schemes that were implemented as part of a policy mix (e.g. alongside complementary regulations/fiscal incentives) or under a credible threat of regulation, performed significantly better than those schemes for which such policy drivers were not present or were not assessed due to a lack of information (**Fig. 4**). A significantly higher proportion (34%) of such schemes achieved a medium-to-high score on all performance dimensions assessed, compared to a figure of only 8% for all other schemes.

- For the vast majority of schemes assessed it was not possible to attribute any of the observed changes in performance to the schemes themselves due to insufficient monitoring and reporting, the presence of confounding factors and the difficulty in identifying what would have happened in their absence.

- Although these results suggest that voluntary schemes as a whole have very limited impacts, this does not contradict the fact that some individual firms demonstrated considerable improvements in their performance as part of these schemes.

Figure 4. Differences in scheme APS/SIS by policy driver



Note: * denotes a significant difference at the p<0.05 level, ** at the p<0.01 level, and *** at the p<0.001 level.

2. Conclusions and recommendations

- **The impact of most voluntary schemes is limited –** voluntary approaches are rarely if ever an effective substitute for regulatory or fiscal measures in seeking to achieve public policy objectives.
  - Firms that take voluntary action to improve their social and environmental performance should be commended and supported. However, for public policy, relying on voluntary action alone is likely to be **insufficient in seeking to tackle our most pressing social and environmental challenges.**
  - The principle of **using regulation as a last resort** is difficult to justify based on the findings of this assessment. It is not evidence-based and risks compromising the effectiveness and efficiency of public policymaking. Instead, we recommend a **presumption in favour of what works**.
- **Improve scheme design** – In order to improve the evidence base, strengthen incentives for firms to participate and comply, and minimise the risk of free-riding, voluntary schemes must have:
  - Clearly defined and measurable **targets** (e.g. quantitative and time-limited) set against a clear and credible baseline assessment
  - Robust and transparent **reporting requirements** (e.g. to prevent selective disclosure and improve accountability)
  - Regular and credible independent (e.g. third-party) **monitoring and evaluation** systems, with data made publically available
  - **Sanctions for non-compliance** (e.g. revocation of any benefits associated with scheme participation).
- **Use as part of a coherent policy mix –** There are a range of factors that can influence the performance of voluntary approaches. Incentives for firms to participate and comply are key; where the private benefits to industry are small relative to the social and environmental benefits, other forms of intervention are likely to be required. Voluntary approaches work best when used either:
  - As a **complement** to other policy instruments (e.g. regulatory or fiscal measures); and/or,
  - Under a **credible threat** of future regulation if the voluntary approach fails to deliver.
- **Use in the right context –** The appropriateness of using voluntary approaches depends on the context:
  - The use of voluntary approaches is not appropriate in situations where high rates of participation and compliance are required, where there is limited flexibility regarding actions and timings, or where serious **social or environmental risks** are involved (e.g. risks that are persistent, irreversible, or poorly understood).
  - They have the potential to be useful in some contexts, for example as a means of encouraging **beyond compliance improvements** in the performance of market-leading firms and as an interim measure for piloting new approaches to solving social and environmental problems, helping to improve policy design and build more **collaborative relationships** between government, industry, and civil society.

1 HM Government. (2010). *Reducing Regulation Made Simple: Less Regulation, Better Regulation, Regulation as a Last Resort.* Note that these principles were further elaborated by the Department for Business, Innovation and Skills. (2013). *Better Regulation Framework Manual: Practical Guidance for UK Government Officials.*

2 National Audit Office. (2014). Using alternatives to regulation to achieve policy objectives.

1. Introduction

Regulatory policies, designed to improve regulatory governance, have emerged as a key element of public sector reform over the past two decades (**Box 1** overleaf). These policies have brought about significant changes in the processes through which regulations are designed and implemented.[1] As part of regulatory reform programmes at both UK and EU levels, a range of steps have been taken to promote the use of alternatives to regulation, such as voluntary self- and co-regulation, in seeking to achieve public policy objectives.

At the EU-level, this approach was originally set out in the 2001 EU White Paper on European Governance, which took, as one of its starting points, the statement the EU should follow *"a less top-down approach"* by *"complementing its policy tools more effectively with non-legislative instruments"*. It was further developed in the 2003 Inter-institutional Agreement on Better Law making.[2] More recently, the final report of the High Level Group on Administrative Burdens recommended that the EU Commission place greater emphasis on the use of non-legislative alternatives to regulation.[3]

"...I want us to be the first Government in modern history to leave office having reduced the overall burden of regulation, rather than increasing it."

– David Cameron (2011)[4]

At the UK-level, promoting the use of voluntary approaches has been a key part of the better regulation agenda for over a decade.[5] Since 2010, a range of measures have been put in place *"to make Government Departments hesitate to regulate and more likely to consider non-regulatory ways of achieving their policy goals"*.[6] The UK Government's "Principles of Regulation" now state that new regulations are only to be introduced as a last resort and only once it has been demonstrated that policy objectives cannot be achieved using alternative approaches, such as voluntary self- or co-regulation.[7] According to the National Audit Office (2014), *"the government wants regulation to be considered only as a last resort, and has introduced and strengthened incentives for departments not to regulate, and to consider alternatives."*[ii]

"It is now much harder for ministers to regulate!"

– Michael Fallon MP (2013)[8]

As part of this framework, all new regulatory proposals are now assessed by an independent committee – the Regulatory Policy Committee – to ensure that regulatory costs to business have been accurately estimated and that sufficient justification has been given for *"...why new regulation is more appropriate than non-regulatory alternatives, such as voluntary codes of practice."*[9] Nevertheless, it remains difficult to accurately determine the extent to which alternative approaches are actually being used as there is no monitoring system in place.[10]

ii For example, under the "one-in, two out" rule introduced in 2013, the estimated net cost to business associated with new regulations has to be offset via the removal or simplification of existing regulations leading to double the equivalent cost saving to business. For more information, see: National Audit Office. (2014). *Using alternatives to regulation to achieve policy objectives.*

Box 1. What is regulatory policy?

The OECD (2010) defines regulatory policy as *"an explicit, dynamic, and consistent whole-of-government policy to pursue high quality regulation".*[11] However, in practice such policies tend to differ considerably in the extent to which emphasis is placed on improving the overall quality of regulation as opposed to simply reducing the overall quantity of regulation (i.e. deregulation).[iii] The former approach essentially seeks to balance the costs and benefits of regulation in order to achieve better social, economic and environmental outcomes, whilst the latter approach focuses exclusively on reducing the costs of regulation to business.

In terms of the costs of regulation to business, there are two main categories to consider: administrative costs (i.e. the costs of complying with regulatory information obligations, traditionally referred to as "red tape") and policy (compliance) costs (i.e. all other direct costs to business associated with regulatory compliance obligations).[12] These latter costs are closely related to regulatory stringency and essentially reflect political decisions regarding the policy objectives to be achieved.[13] A third category of costs sometimes considered are so-called "irritation" costs; evidence suggests that business perceptions of the costs of regulation tend to be linked closely to subjectively felt "irritation" with regulation, despite the fact that such perceptions are not always correlated with administrative costs.[14]

Until recently much of the focus at both the UK level and EU level had been on administrative simplification, such as under the Action Programme for Reducing Administrative Burdens in the EU (2007–2012).[15] The aim of such programmes was to reduce unnecessary administrative costs, at the same time as maintaining and/or improving regulatory standards. However, the European Commission has recently come under pressure to extend this programme to also include targets for the reduction of policy (compliance) costs, thus putting regulatory standards at risk.[16]

"The cost of environmental regulations needs to be weighed against the benefits they provide, and which justify the regulations in the first place. The benefits are often important and severely underestimated."[17]

In terms of the magnitude of such costs, it makes sense for them to be weighed against the benefits; focusing exclusively on one or the other would be a mistake. In the UK, for example, the Government has estimated that the quantifiable benefits of environmental regulations outweigh the costs by a ratio of 3:1. Moreover, this ratio almost certainly understates the benefits compared to the costs due to the challenges associated with valuing all of the benefits in monetary terms.[18] For example, despite the proven effectiveness of environmental regulations in relation to the conservation of threatened species and sites, many of the associated benefits are non-market and are thus more challenging to value in monetary terms than the associated costs.[19]

"It is difficult, and sometimes impossible, to provide robust quantitative evidence of a causal relationship between a regulatory policy change and the impact on economic outcomes such as economic growth."[20]

In addition to direct costs and benefits, there is also a large body of evidence assessing the broader effects of regulation on competitiveness, innovation, and economic growth. A recent review by the OECD (2014) concluded that, at least in relation to environmental regulations, most of the available evidence is highly context-specific and largely inconclusive.[21] The effects tend to depend as much on policy design as on policy stringency; the impact of more stringent policies on aggregate productivity growth tends to be small.[22]

iii Regulation can be broadly defined as the "*imposition of rules by government, backed by the use of penalties that are intended specifically to modify the economic behaviour of individuals and firms in the private sector*". Government regulation of economic activity is generally designed to correct market failures, to deliver public goods, or to achieve distributional objectives. See: https://stats.oecd.org/glossary/detail.asp?ID=3295

1.1. An introduction to voluntary approaches

Voluntary approach is a generic term for a broad spectrum of possible arrangements including industry self-regulation and co-regulatory negotiated agreements between government and industry (e.g. **Box 2**). The defining feature of such approaches is their non-mandatory nature; they can be defined as a set of arrangements involving private sector commitments that go beyond existing legal requirements or regulatory standards.[iv]

"Regulation is not cost free... perhaps there are more flexible and cheaper ways. Some policy aims might be delivered more flexibly through voluntary measures."

– Michael Gibbons (2014)[23]

In relation to the achievement of public policy objectives, voluntary approaches essentially shift the burden of responsibility from the public to the private sector. Proponents of voluntary approaches argue that they represent a low cost, more flexible, and less adversarial approach to policymaking than traditional regulatory approaches.[24]

However, voluntary approaches are not without their critics (e.g. **Box 2**). They have been accused of setting undemanding targets and of failing to achieve those targets as a result of low levels of industry participation and compliance and the undermining influence of free-riding.[25] In part due to a perceived lack of transparency and accountability, it has been argued that many firms are only motivated to participate or comply in order to reduce regulatory oversight and avoid the imposition of more stringent regulatory standards.[26]

The classic example of this is in relation to tobacco and alcoholic beverage advertising, where voluntary schemes have been used as a tactic in seeking to avoid, or at least delay, the introduction of mandatory standards.[27]
In recent years, a series of self-regulatory failures in the financial services industry have drawn attention to the risks inherent in relying on industry as a whole to always "do the right thing".[28]

Box 2. The Public Health Responsibility Deal

There have been a number of high-profile voluntary agreements in the UK in recent years. One such example is the Public Health Responsibility Deal that was launched in 2011, consisting of a series of voluntary pledges by industry designed to tackle major public health issues, such as alcohol abuse and obesity. However, many prominent health groups, including the British Medical Association, the Royal College of Physicians and the British Heart Foundation, chose not to participate in the scheme because of their *"serious reservations"* regarding the vagueness of the pledges made by industry as part of the scheme.[29]

The Association of Directors of Public Health withdrew from involvement in the scheme in 2013 on the grounds that *"the Government is seemingly allowing vested interests to adversely influence policies intended to improve the public's health".*[30] Professor Simon Capewell, a public health expert and former advisor to the Conservative's Public Health Commission, has dismissed the Deal as *"a pantomime"*, describing it as *"like putting Dracula in charge of the blood bank".*[31] Although it remains too early to comprehensively evaluate the performance of the scheme,[32] the Health Select Committee are *"unconvinced"* that the scheme will be effective.[33]

iv The distinction between voluntary and regulatory approaches is by no means a simple one; far from being completely distinct approaches, it is more accurate to think of voluntary and regulatory approaches as being at opposing ends of regulatory continuum. Many forms of voluntary approach will rely on some degree of government involvement (e.g. co-regulatory negotiated agreements between public and private sector bodies). For a discussion of the different types of voluntary programme, see Segerson, K. (2013). Voluntary Approaches to Environmental Protection and Resource Management. *Annu. Rev. Resour. Econ.*, *5*(1), 161-180.

1.2. Voluntary approaches and public policy objectives

"...it is important to consider the whole range of possible interventions when policy interventions are designed."

– House of Lords Science and Technology Select Committee (2011)[34]

In seeking to achieve public policy objectives, there are a number of alternative policy instruments available to governments, all of which have different strengths and weaknesses. Policymakers face significant challenges in selecting the most appropriate instruments to achieve a range of objectives across a range of different contexts. In recognising that the effectiveness and efficiency of alternative instruments is dependent on a range of factors, many of which are context-specific, it becomes clear that there is no clear *a priori* reason why any one instrument should be considered superior to another across all contexts.[35] Instead, the process of instrument selection, design, and implementation requires evidence on *"...which policy and regulatory instruments work, why, when and with whom."* However, such evidence is frequently lacking, in part owing to a failure to evaluate the performance of existing instruments.[36]

"...voluntary schemes should be supported by an equivalent evidence base to a regulatory measure."

– Better Regulation Executive (2010)[37]

In terms of voluntary approaches, most previous assessments of their performance have been limited to just a handful of case studies. In order to build on this evidence base and assess the extent to which voluntary approaches can contribute to the achievement of public policy objectives, we conducted a novel quantitative assessment of voluntary scheme performance based on existing scheme assessments and published reports identified via extensive web-based searches (**Section 1**). We also examined the evidence regarding the key factors that influence scheme performance, particularly in relation to industry motivations and scheme design (**Section 2**). The report concludes with a number of case studies (**Annexes**).

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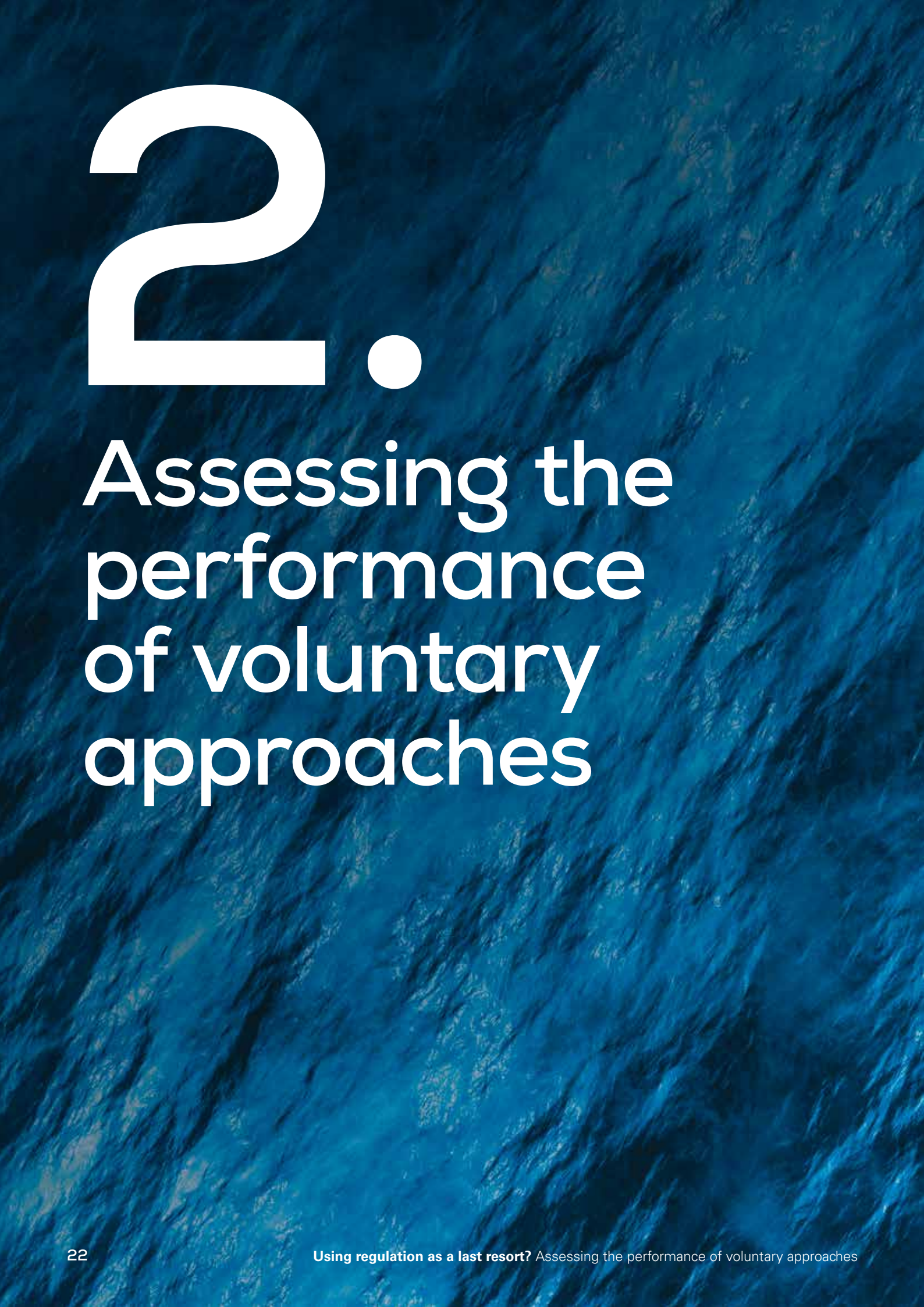

2. Assessing the performance of voluntary approaches

There are a range of different criteria against which the performance of policy instruments can be assessed.[1] Key economic criteria typically used for evaluation include effectiveness, cost-effectiveness, and economic efficiency, whilst other factors considered include the effects of different policy instruments on innovation and market structure.[2]

The first part of this section (**Section 2.1.**) focuses on the effectiveness of voluntary approaches i.e. the extent to which they can contribute to the achievement of public policy objectives. It starts by presenting a summary of the existing evidence before presenting the methods and results of a novel quantitative assessment of voluntary scheme performance.

The second part of this section (**Section 2.2.**) looks at the evidence regarding the cost-effectiveness of voluntary approaches and their broader impacts in terms of innovation, competitiveness, and market structure.

2.1. Effectiveness

2.1.1. Existing evidence

One of the major difficulties in assessing the performance of voluntary approaches is the limited availability of credible data.[3] In many cases, this is a result of the lack of attention paid to evaluation in scheme design. As well as a lack of robust monitoring and reporting mechanisms, many schemes lack clearly specified targets or indicators against which performance can be assessed.[4]

Most existing assessments of voluntary scheme performance have been based on anecdotal, theoretical or case study evidence.[5] Of the few attempts to conduct a quantitative assessment of the performance of voluntary approaches, most have been limited to a handful of schemes.[6] To date, such assessments have tended to conclude that voluntary approaches deliver little or no improvement in firms' performance beyond business-as-usual.[7] For example, based on a meta-analysis of 9 studies of U.S. voluntary schemes, Darnall and Sides (2008) conclude that participants in voluntary schemes fail to significantly improve their environmental performance compared to non-participants.[8] Similarly in Europe, the NEAPOL project (Negotiated Environmental Agreements: Policy Lessons to be Learned from a Comparative Case Study) assessed the performance of twelve voluntary approaches across 6 European countries and found mixed results regarding their performance.[9]

In the UK, the existing evidence is limited to a handful of case studies, although a number of recent reports have looked into the use of voluntary approaches in more detail. For example, the House of Lords Science and Technology Select Committee conducted an inquiry into performance of non-regulatory instruments in 2011. This inquiry found *"...no examples of significant change in the behaviour of a population having been achieved by non-regulatory measures alone"* and concluded that *"... non-regulatory measures used in isolation... are less likely to be effective"* [10]

In 2013, the Department for Environment, Food, and Rural Affairs (DEFRA) conducted a review of the performance of voluntary "partnership" approaches between public and private sector bodies. However, the review did not reach any clear conclusions regarding the effectiveness of voluntary approaches, in part due to the fact that it was difficult to attribute any of the observed changes that occurred to the schemes that were being assessed. Judging success was also made difficult by a lack of monitoring data and the challenge of establishing a baseline for some schemes. Nevertheless, the review did conclude that voluntary approaches tend to have less impact and take longer to deliver than regulatory or fiscal measures.[11] More recently, a report by the National Audit Office regarding the use of alternatives to regulation concluded, *"the effectiveness of alternative approaches varies by case and circumstance, and alternatives don't always work."* It also highlighted lack of evidence as an issue that needs to be addressed.[12]

2.1.2. Performance assessment: methods

In order to assess the performance of voluntary schemes, and in the absence of a comprehensive database of such schemes (i.e. an equivalent to the statute book), a set of relevant schemes was identified by conducting extensive web-based searches using a range of search terms such as "industry self-regulation" "voluntary agreement", "voluntary scheme", "voluntary code of conduct", "voluntary approach", "voluntary programme" and "voluntary initiative".[v] For each scheme identified through this process, a further targeted web search and in-depth review was conducted in order to obtain detailed information on its performance.

v Searches were conducted using the Google™ and Google Scholar™ search engines. Note that we did not include "environmental management systems" or "corporate social responsibility" initiatives pursued independently by individual firms.

A range of sources were consulted as part of this process, including newspaper articles, press releases, annual progress reports, and published academic papers. Note that we did not attempt to undertake a formal quality assessment of the sources used; as such, in some cases performance was assessed based on industry self-reporting rather than independently verifiable data. The full list of schemes assessed is presented in **Annexe 1**.

For the purposes of this assessment, scheme effectiveness was considered in relation to the achievement of public policy objectives, regardless of the extent to which the schemes themselves were directly responsible for the achievement of those objectives. Ideally, an assessment of voluntary scheme performance would also consider the extent to which any change in outcomes observed during the lifetime of a scheme could be attributed to the scheme itself rather than to other confounding factors. This requires an assessment of what would have happened in the absence of the scheme.[13] However, due to a lack of data it was not possible to conduct detailed counterfactual analyses as part of this assessment, such that it was not possible in most cases to attribute any changes in outcomes to the voluntary schemes that were assessed.

Following deVries et al. (2012), a simple framework was developed for evaluating the performance of voluntary schemes that takes into account three performance dimensions: **target achievement** (the extent to which voluntary targets are realised), **target ambition** (the stringency of the targets relative to the policy objective), and **level of uptake** (i.e. the level of participation).[14] Together, these three factors help determine overall scheme impact i.e. the extent to which a scheme contributes to the achievement of overarching public policy objectives.[15]

Each of the three performance evaluation dimensions are outlined in detail below:

- **Target achievement:** This dimension relates to the extent to which the target(s) of a voluntary scheme are realised, either by scheme participants or by all relevant firms depending on how those targets are defined and reported against. In assessing target achievement, ideally one would measure the implementation gap – the size of the gap between the target(s) that are set and the realised outcome(s) – but in many cases this is not possible due to a lack of available data. A simpler approach is to assess the proportion of scheme targets that are achieved, after accounting for differences in their relative policy importance via the identification of any key targets.

- **Target ambition:** This dimension relates to the extent to which scheme target(s) are set at a level that is consistent with achieving the overarching policy objective, or are in line with what could have been achieved using an alternative instrument (e.g. regulation or taxation).[16] At minimum, scheme target(s) should go beyond what would have been expected to occur under the counterfactual business-as-usual scenario i.e. what would have happened in the absence of the scheme. If the targets of a scheme do not require participants to go beyond what they would have done anyway (i.e. if they don't require any additional effort from participants), then they can be said to be lacking in ambition. There is a particular risk of this occurring in those situations where targets are set jointly through formal or informal "bargaining" between government and industry as a result of the potential for "regulatory capture" to occur. There is also a risk of this occurring in situations where targets are set relative to an inappropriate historical baseline, such that most of the proposed changes have already occurred prior to the introduction of the scheme.

- **Level of uptake:** As well as depending on target achievement and target ambition, the overall impact of a voluntary scheme depends on the level of industry participation (i.e. scheme uptake or coverage).[17] This can be assessed in a number of ways. For example, it can be assessed in terms of the percentage of individual firms in the relevant industry/sector that participate, the market share of the participating firms, or the extent to which the firms that participate are responsible for the social or environmental issue(s) that are being addressed by the scheme, hereafter referred to as "problem coverage".

Ignoring any one of these performance dimensions can potentially result in an incomplete picture of a scheme"s performance and overall impact (e.g. **Box 3**). For example, given that voluntary approaches are often dismissed by their critics on the basis that they set "easy to achieve" targets that do not go far beyond minimum regulatory requirements, target ambition is clearly an important dimension to consider alongside target achievement.[18] Similarly, focusing solely on target achievement in those situations where scheme participants represent only a small share of the market is likely to be somewhat misleading, due to the limited overall impacts that such schemes are likely to have.[vi]

For each scheme, performance against each of the three performance dimensions was scored on a simple three-point scale using the methods outlined in **Table 1** (page 27) (see also the case studies in **Annexe 2**). This resulted in a **performance score** for each dimension, whereby a score of 0 related to a low level of target achievement, target ambition, or uptake; a score of 0.5 related to a medium level of target achievement, target ambition, or uptake; and a score of 1 related to a high level of target achievement, target ambition, or uptake. In most cases, scores were allocated based on quantitative information. However, qualitative information was also used where quantitative data were not available.

Box 3. How partial performance assessments can be misleading

Suppose that an industry establishes a voluntary scheme that commits participating firms to reducing their emissions of a particular pollutant by 20%, relative to a government target of 20%. Suppose also that 50% of firms in the industry participate in the scheme and that, of those firms, 20% do not reduce their emissions at all and 80% reduce their emissions in line with the target. Assuming that the firms in the industry are homogeneous and than non-participants do not reduce their emissions at all, the emissions reduction achieved by the participants will be 16% and by the industry as a whole will be 8%. If all participating firms reduce their emissions in line with the target, the emissions reduction achieved by the participants will be 20% but the emissions reduction by industry as a whole will still only be 10%, thus remaining well below the government target. In fact, in this example only if all firms in the industry participate and reduce their emissions in line with the target will the reduction achieved by the industry as a whole be in line with the government target of 20%, demonstrating the way in which scheme impact is fundamentally dependent on all three dimensions of performance.

In terms of a practical example, in recent years, major multinational food and beverage companies have worked together within the International Food and Beverage Alliance (IFBA) to increase their commitments to public health, for example through a number of voluntary pledges relating to the "responsible" marketing of food and beverages to children. The results of independent monitoring (commissioned by the IFBA) suggest high rates of compliance (>90%) with the commitments by member companies.[19] However, concerns have been raised regarding the relevance of these results given that there have been only small reductions in children's exposure to the marketing of unhealthy products. A key issue relates to the lack of complete coverage of pledges across all relevant food companies. IFBA companies account for a relatively small fraction of global packaged food sales and just over half of soft drink sales. It seems likely that, without the full participation of *"the myriad of small- and medium-sized enterprises..., the impact of commitments made by IFBA members and other major multinational food and beverage companies will remain limited."*[20] A second key issue relates to audience definition (and hence target ambitiousness). Pledges typically specify "children's TV" as only relating to those TV programmes where 35–50% of the audience is under 12 years old.[21]

vi This is particularly important for those schemes where targets are designed and/or reported against for participants only, rather than for the relevant industry/sector as a whole.

In order to assess overall scheme performance across the three performance dimensions, the individual **performance scores** for each scheme were combined in two different ways, firstly by calculating an **average performance score (APS)** and then by calculating a **scheme impact score (SIS)**:

- The **average performance score (APS)** for each scheme ***i*** is defined as the arithmetic mean of the individual **performance scores *(PS)*** across the three performance dimensions ***(j=1** to **j=3)***. Note that n_i equals the number of performance dimensions ***j*** for which performance scores were obtained for scheme ***i*** (as it was not possible to evaluate all schemes against all three performance dimensions). Missing scores are treated as blanks.

$$APS_j = \left(\frac{\sum_{j=1}^{j=3} PS_{ij}}{n_i} \right)$$

- The **scheme impact score (SIS)** for each scheme ***i*** is defined as the product of the individual **performance scores (PS)** across the three performance dimensions ***(j=1** to **j=3)***, with missing scores treated as blanks. Scheme **SIS** is arguably more important than scheme **APS** when assessing performance, since the overall impact of a scheme is fundamentally constrained by scheme performance against the dimension(s) for which it performs least well. [vii]

$$SIS_i = \prod_{j=1}^{j=3} PS_{ij} \leq min(PS_{ij})$$

vii Formally, where $0 \geq PS_{ij} \leq 1$, it follows that $\prod_{j=2}^{j=2} PS_{ij} \leq min(PS_{ij})$. It seems reasonable to assume, for example, that a scheme that meets all of its targets will still have a limited overall impact if few firms sign up to those targets or if those targets are unambitious. Similarly, for a scheme with a high number of firms participating, the impact will be minimal if those firms do not improve their performance in line with scheme targets or if the targets that they do achieve are relatively unambitious.

Table 1. Set of evaluation points for each performance dimension

Performance Dimension	Evaluation Points	Explanation
Target achievement	• Proportion of scheme targets achieved. • Rate of compliance with scheme requirements.	This dimension was scored based on the **proportion of scheme targets achieved** or the rate of compliance with scheme requirements (e.g. % of code requirements breached/% of participating firms non-compliant). If information was available to show that the **gap between a target and an outcome** was ≤10%, then it was judged that the target had been achieved. We accounted for the **relative importance of core/key targets compared to basic procedural targets** by making the achievement of any such targets a de minimis requirement for receiving a high score. Note that a scheme that meets its targets will achieve the same score as a scheme that exceeds its targets.[viii] **Basic scoring key:** ≤50% = 0; 51-75% = 0.5; >75% = 1.
Target ambition	• Relationship between targets and business-as-usual. • Extent to which targets are in line with overarching policy objectives (or what could be achieved using an alternative policy instrument).	This dimension was score based on the extent to which scheme targets went **beyond business-as-usual,** or were in line with what could be achieved using **an alternative policy instrument,** or what would be required to achieve **overarching policy objectives**. **Basic scoring key:** – In line with business-as-usual and/or insufficient to meet overarching policy objectives = 0 – Beyond business-as-usual and/or close to what would be required to meet policy objectives = 0.5 – Significantly beyond business-as-usual and/or in line with what would be required to meet policy objectives = 1.
Level of uptake	• Proportion of relevant firms participating.	This dimension was scored based on the **proportion of firms participating**, ideally in terms of "problem coverage". Where this information was not available, proxy measures were used such as the % market share of participating firms or the number of participating firms as % of the total number of relevant firms. **Basic scoring key:** *≤50% = 0; 51-75% = 0.5; >75% = 1.*

viii As a result, overall performance could potentially be underestimated in those situations where scheme targets are unambitious and/or participation is low but this is compensated for by over-performing scheme participants. However, in practice this is unlikely to be an issue that frequently occurs. Note also that this framework does not account for the potential for voluntary approaches to lead to an improvement in the performance of non-participants via technological spillover. For example, see: Gamper-Rabindran, S. & Finger, S. R. (2013). Does industry self-regulation reduce pollution? Responsible Care in the chemical industry. *Journal of Regulatory Economics*, *43*(1), 1–30.

2.1.3. Performance assessment: results

2.1.3.1. Description of data

Sufficient information was obtained to be able to assess the performance of 161 schemes on at least one performance dimension.[22] 91% of schemes were assessed in relation to target achievement, 30% of schemes in relation to target ambition, and 52% of schemes in relation to the level of uptake. 42% of schemes were assessed in relation to only one dimension of performance, 42% were assessed in relation to two dimensions of performance, and 16% were assessed in relation to all three dimensions of performance; 58% of schemes were thus assessed in relation to two or more dimensions of performance.

Over half of the schemes assessed were from EU countries (58%) and over a quarter were from the UK (29%). Most of the remaining schemes were from the USA and Canada (19%) or Australia and New Zealand (13%) (**Table 2**). All of the schemes came from high (95%) or upper-middle income (5%) countries or regions (as classified by the World Bank) and most were launched in the 1990s (43%) or 2000s (42%).[23]

These 161 schemes covered a wide range of sectors and issues. Major sectors that were covered by a number of schemes included manufacturing, retail, agriculture, construction, electricity and water supply, and professional and financial services. A number of schemes covered multiple sectors. The majority of schemes (68%) dealt with environmental issues such as waste and recycling, energy efficiency, and pollution prevention and control. Other major non-environmental issues that were dealt with included advertising and labelling standards and a range of health and safety concerns. 68% of the schemes were classified as co-regulatory in that they entailed at least some form of government involvement in the scheme design and implementation, while the remaining schemes were classified as self-regulatory or industry-led schemes (such as unilateral declarations or self-regulatory codes of conduct).

2.1.3.2. Individual performance scores

In terms of individual performance scores, 64% of schemes assessed in relation to target achievement achieved a low score. The equivalent figures for target ambition and level of uptake were 78% and 57% respectively (**Table 3**). Of the 36% of schemes that achieved a medium-to high score on target achievement, almost half (49%) achieved a low score on one or more other performance dimension(s). Of the 22% of schemes that achieved a medium-to-high score on target ambition, over half (55%) achieved a low score on one or more other performance dimension(s). Of the 43% of schemes that achieved a medium-to-high score on uptake, over two-thirds (69%) achieved a low score on one or more other performance dimension(s).

Table 2. Number (%) of schemes assessed by country/region

Region	Country	No. of Schemes	Percentage
European Union (EU)	UK	47	29%
	Germany	9	6%
	Netherlands	5	3%
	Sweden	5	3%
	Belgium	3	2%
	Denmark	3	2%
	Ireland	3	2%
	Other	19	12%
	Sub-total	**94**	**58%**
Non-EU	USA and Canada	30	19%
	Australia and New Zealand	21	13%
	Other	16	10%
	Sub-total	**67**	**42%**

Table 3. Scheme performance against individual performance dimensions

	Target Achievement	Target Ambition	Level of Uptake
Low	64%	78%	57%
Medium	13%	6%	20%
High	23%	16%	23%

Table 4. Percentage of schemes achieving low performance scores by scheme type and country/region

	Env.	Non-env	Gov.	Industry	UK	Non-UK	EU	Non-EU
Target achievement	53%	88%	60%	73%	75%	60%	58%	71%
Target ambition	78%	75%	69%	94%	91%	74%	74%	82%
Level of uptake	55%	64%	54%	64%	65%	53%	49%	70%

Using a simple binomial test, we assessed whether there were any significant differences in performance between different scheme types and between UK/non-UK and EU/non-EU schemes across each of the three performance dimensions based on the percentage of schemes achieving a low performance score (**Table 4**). The proportion of environment-related schemes that achieved a low score for target achievement was significantly different to the proportion of non environment-related schemes that achieved a low score for target achievement (chi-squared = 15.67, df = 1, $p<0.001$). However, no other significant differences were found.

Across all the different scheme types and country/region groupings, the vast majority of schemes achieved a low performance score on one or more performance dimensions. However, the proportions were significantly different between environment-related and non environment-related schemes, and between EU and non-EU schemes (**Table 5**).

In terms of the relationships between the performance scores across each performance dimension, there was a significant positive correlation between scheme performance in relation to achievement and uptake; perhaps a result of the problems associated with free-riding that may emerge in situations of low uptake (Spearman's rho = 0.24, $p<0.05$, $n=71$). However, no other significant relationships were documented.

When the performance of a scheme is reported, it is sometimes the case that positive aspects of the scheme are emphasized over and above any shortcomings. However, reporting based on the best achieving performance dimension gives a misleading indication of the true performance of voluntary approaches, given that, of the 32% of schemes that achieved a high score on at least one performance dimension, the majority achieved a low score on at least one other performance dimension.

2.1.3.3. Average Performance Scores (APS) and Scheme Impact Scores (SIS)

In order to obtain a fuller picture of scheme performance, the individual performance scores for each scheme were combined in two different ways. Firstly by calculating an

Table 5. Percentage of schemes achieving at least one low performance score by scheme type and country/region

	Percentage of Schemes	Chi-squared	p-value
Environment	77%	4.55	<0.05
Non-environment	92%		
Government	78%	2.88	0.09
Industry	90%		
UK	89%	1.79	0.18
Non-UK	79%		
EU	76%	5.37	<0.05
Non-EU	91%		

average performance score (APS) for each scheme and then by calculating a **scheme impact score (SIS)** for each scheme (**Section 1.1.2.**). For each scheme, an **APS** was calculated by taking the arithmetic mean of the individual performance scores across the three performance dimensions and an **SIS** was calculated by taking the product of the individual performance scores across the three performance dimensions. On the basis of the scoring system adopted, both scores could range from a minimum of 0 to a maximum of 1.

The mean **APS** across all schemes was 0.26 and the median **APS** was 0. In total, almost two-thirds of all schemes (63%) achieved an **APS** of ≤0.25 and 84% of schemes achieved an **APS** of ≤0.5. Only 9% of schemes achieved an **APS** of >0.75.

The vast majority of schemes (82%) achieved a **SIS** of 0 i.e. a low score on at least one performance dimension. Just 9% of schemes achieved the maximum **SIS** of 1, although none of these schemes were assessed against all three performance dimensions. In fact, of all the schemes achieving a **SIS**>0, only one was assessed against all three performance dimensions and the majority were assessed against only one performance dimension.

Using the Mann-Whittney test, we compared the performance of UK and non-UK schemes, and EU and non-EU schemes based on scheme **APS** and **SIS**. There was no significant difference in relation to the performance of UK and non-UK schemes as measured by scheme **APS** or **SIS**. However, EU schemes performed significantly better than non-EU schemes. The difference in performance between environment and non-environment schemes, and government and industry schemes was also assessed based on scheme **APS** and **SIS**. In both cases, significant differences in performance were identified based on scheme **APS**, but only in relation to environment and non-environment schemes based on scheme **SIS** (**Table 6** and **Table 7**).

Table 6. APS information by scheme type and country/region

	Mean	Median	Test Stat (W)	p-value
Environment	0.32	0.25	3678	<0.001
Non-environment	0.13	0		
Government	0.31	0.25	3541	<0.01
Industry	0.16	0		
UK	0.19	0	2268	0.1
Non-UK	0.29	0.17		
EU	0.32	0.25	3837	<0.05
Non-EU	0.18	0		

Table 7. SIS information by scheme type and country/region

	Mean	Median	Test Stat (W)	p-value
Environment	0.18	0	3292	<0.05
Non-environment	0.04	0		
Government	0.16	0	3190	0.05
Industry	0.07	0		
UK	0.07	0	2396	0.1
Non-UK	0.16	0		
EU	0.18	0	3635	<0.05
Non-EU	0.07	0		

For UK schemes, there was no significant difference in performance between environment and non-environment schemes or between government and industry schemes based on scheme **APS** and **SIS**. For EU schemes as a whole, there was a significant difference in performance between environment and non-environment schemes and between government and industry schemes based on scheme **APS,** but only in relation to environment and non-environment schemes based on scheme **SIS (Table 8** and **Table 9**).

No significant differences were found in relation to scheme **APS** and **SIS** between schemes implemented pre-1990, from 1990-1999, and post-1999.

2.1.3.4. Policy driver assessment

Information about the presence of key policy drivers underpinning scheme design and implementation was documented for 39% of the schemes assessed. For the remaining schemes, key policy drivers were either not present or no information was available. Using this information, we found a significant difference in scheme performance between those underpinned by complementary regulatory/fiscal measures or a threat of future regulation, and those for which such policy drivers were not present or for which no information was available. However, due to the lack of information, these results should be treated as indicative only.

Schemes implemented in conjunction with complementary regulations/fiscal incentives or under a threat of future regulation performed significantly better than those schemes for which such policy drivers were not present or for which no information was available. In particular, a significantly lower proportion of those schemes achieved a low score on one or more performance dimensions (0.66 vs. 0.92; chi-squared = 15.47, df = 1, $p<0.001$). Significant differences were also documented based on scheme **APS** ($W=4236$, $p<0.001$) and scheme **SIS** ($W=4857$, $p<0.001$). There were, however, no significant differences in performance between schemes implemented in the presence of the different types of policy drivers (e.g. regulation vs. regulatory threat) (**Table 10**).

Table 8. APS information by scheme type broken down by country/region

		Environment	Non-environment	Test Stat (W)	p-value
UK	Mean	0.24	0.15	316	0.33
	Median	0	0		
EU	Mean	0.43	0.13	1511	<0.001
	Median	0.5	0		
		Government	**Industry**	**Test Stat (W)**	**p-value**
UK	Mean	0.3	0.17	321	0.2
	Median	0.25	0		
EU	Mean	0.37	0.21	1221	<0.05
	Median	0.33	0		

Table 9. SIS information by scheme type broken down by country/region

		Environment	Non-environment	Test Stat (W)	p-value
UK	Mean	0.09	0.06	269	0.78
	Median	0	0		
EU	Mean	0.26	0.04	1309	<0.01
	Median	0	0		
		Government	**Industry**	**Test Stat (W)**	**p-value**
UK	Mean	0.07	0.08	273	0.94
	Median	0	0		
EU	Mean	0.21	0.12	1073	0.23
	Median	0.33	0		

Table 10. APS and SIS information by policy driver

	APS		SIS	
	Mean	*Median*	*Mean*	*Median*
Regulations/fiscal incentives	0.41	0.5	0.25	0
Regulatory threat	0.4	0.33	0.24	0
Not present/no information	0.17	0	0.06	0

Table 11. APS and SIS information by number of performance dimensions assessed

	APS		SIS	
	Mean	*Median*	*Mean*	*Median*
One performance dimension assessed	0.18	0	0.18	0
At least two performance dimensions assessed	0.32	0.25	0.09	0

2.1.3.5. Missing information assessment

In order to assess whether the lack of information in relation to some performance dimensions for some schemes was important, we assessed the relationship between the number of dimensions assessed and the key performance metrics. We found a significant positive correlation between the number of dimensions assessed and scheme **APS** (Spearman's rho=0.32, $p<0.001$, n=161), and a significant difference in scheme **APS** between those schemes assessed against only one performance dimension and those schemes assessed against two or more dimensions ($W = 2164$, $p<0.001$) (**Table 11**). These results may be the result of a positive publication bias, with better performing schemes more likely to be subject to a detailed published assessment that provides information relevant to a greater number of performance dimensions. However, we found a significant negative correlation between the number of dimensions assessed and scheme **SIS** (Spearman's rho=-0.17, $p<0.05$, n=161), and no significant difference in scheme **SIS** between those schemes assessed against only one performance dimension and those schemes assessed against two or more dimensions ($W = 3486$, $p=0.1$).

There was also no significant difference in the proportion of schemes achieving a low score on at least one performance dimension between those schemes assessed against only one performance dimension and those schemes assessed against two or more performance dimensions (0.76 vs. 0.86; chi-squared = 1.82, df = 1 p = 0.18), suggesting that the core conclusions of the analysis are unlikely to be affected by the missing information.

2.2. Broader effects of voluntary approaches

2.2.1. Cost effectiveness and economic efficiency

"Effectiveness is a necessary prerequisite of cost-effectiveness."

– House of Lords Science and Technology Select Committee (2011)[24]

There is an almost complete lack of empirical evidence on the relative cost-effectiveness of voluntary approaches as policy instruments, despite this being one of their most widely cited advantages.[25] According to the definition of cost-effectiveness, a voluntary approach can be said to be cost-effective if it achieves a given improvement in performance at lowest possible cost (i.e. relative to an alternative policy tool such as regulation or taxation).

A broadly supported conclusion in the literature is that voluntary approaches are not cost-effective compared to market-based instruments. However, in relation to regulation, it is not as clear-cut. In theory, cost-effectiveness depends on the degree to which marginal compliance costs are equalized across all relevant firms.[26] In theory, by allowing firms' greater flexibility in relation to compliance strategies, voluntary approaches may be more cost-effective than regulation under some circumstances. However, given that many schemes fail to induce full participation and are subject to free-riding, it is unlikely that marginal compliance costs will always be equalized across both participating and non-participating firms, such that overall costs may not be minimized.[27] For example, evidence in relation to voluntary pollution reduction schemes suggests that they seldom incorporate mechanisms to equalize marginal costs across all firms.[28] There is thus no a priori reason to assume that voluntary approaches will minimize the cost of reaching a given target.[29] Despite a few limited examples to the contrary, the evidence suggests that the cost-effectiveness of voluntary approaches is thus generally low.

It is important to note that cost-effectiveness is related to more than just business costs. Although the use of voluntary approaches theoretically has the potential to reduce some costs, the negotiation, design and implementation of voluntary programmes can involve considerable public expense, particularly at the initial set-up stage.[30] For example, the UK Government apparently devoted a total of 31 civil servants and 17 person years to negotiating just 42 voluntary climate change agreements,[31] while the Courtauld Commitment involved *"a multi-million pound budget and up to ten staff"*.[32] In another example, the Danish voluntary agreement on transport packaging waste was only introduced in 1994 following two and a half years of negotiations.[33] Although the empirical evidence is scarce, there is clearly no guarantee that these costs will be lower under a voluntary approach, particularly if there are high transaction costs associated with the lengthy negotiations required to reach agreement.[34] Similarly, the costs of enforcement may also influence the cost-effectiveness of voluntary agreements.[35]

In relation to economic efficiency (i.e. the extent to which net economic benefits are maximized), the targets of voluntary agreements frequently fail to fully reflect social benefits and costs, so the resulting outcomes are unlikely to always be economically efficient.[36] In situations where there is neither a strong natural coincidence between the public and private interest in establishing a voluntary agreement, nor the existence of one or more external pressures sufficient to create such a coincidence of interest, it is unlikely that the outcome will be economically efficient.[37]

2.2.2. Innovation and productivity

The theory behind the potential for voluntary approaches to stimulate innovation and productivity improvements is unclear, although such effects are likely to be context-specific and depend on both scheme design and the stringency of the targets that are set.[38] Given that voluntary approaches rarely incorporate ambitious "technology-forcing" targets and frequently lack explicit sanctions for non-compliance, they are likely to generally provide weak innovation incentives for firms.[39] On the other hand, given that some voluntary schemes involve a more "collaborative" approach than traditional command-and-control regulations, they may potentially facilitate collective learning regarding new technologies that could stimulate innovation

via the diffusion of additional information and expertise (see **Section 2.2.4.** below).[40]

There is though a lack of empirical evidence in relation to these issues. The little evidence that does exist offers only limited support to the idea that voluntary approaches can be a significant stimulant to innovation.[41] For example, a case study of the 1997 Irish Packaging Agreement found that, of the small number of observed innovations, most did not go beyond what might have been expected under a business-as-usual scenario. In part, this was due to a lack of clear objectives and weak enforcement of the underlying regulations.[42] However, more recently in relation to the U.S. Climate Wise program (1993–2000) under which firms were encouraged to adopt new innovative processes and procedures in order to reduce their carbon emissions, Brouhle et al. (2012) have found some limited evidence to suggest that participation in the program enhanced the level of firm innovation.[43]

Compared to voluntary approaches, the impact of regulation on innovation and productivity growth is similarly complex and depends on the regulatory design and the type of regulation; impacts are both context- and sector-specific.[44] In relation to positive effects, for example, stringent environmental regulations can incentivise firms to improve resource efficiency and develop new technologies.[45] A recent review conducted by the OECD (2014) in relation to the economic effects of environmental policies concluded that most of the available evidence is inconclusive and/or highly context-specific; the overall impacts are rather ambiguous.[46]

2.2.3. Market structure: competitiveness

Like all policy instruments, the adoption of a voluntary approach can potentially affect the degree of competition within a given market.[47] However, limited empirical work has been undertaken examining the relationship between voluntary agreements and market structure. Economic theory suggests that voluntary approaches, particularly collective industry agreements, have the potential to negatively affect market competitiveness by increasing industry concentration, encouraging collusive behaviour, or by being strategically adopted to create barriers to entry. This is due to the fact that such approaches necessitate collective action and the establishment of agreements among firms; by favouring the adoption of collusive behaviour in the industry such approaches could potentially reduce competition. Voluntary approaches can also increase firms' costs, leading to exit from the industry, while firms can use proactive adoption of voluntary environmental protection measures strategically to erect barriers to entry for other firms. However, although the risk for collusion and other anti-competitive practices undoubtedly exists, little to no evidence exists to assess this claim.[48]

2.2.4. Soft effects

Some research has asserted the importance of a range of soft effects or positive side effects associated with the use of voluntary approaches, in terms of information dissemination (e.g. the diffusion of best practice), collective learning and awareness-raising. In terms of the latter benefits, for example, it has been suggested that participation in a voluntary environmental agreement may change participants' attitudes or behaviours and help build capacity for future environmental improvements. [49]

According to one review, "*self-regulation can... engender more commitment, pride and loyalty within a profession or industry...it can lead to greater awareness by business of negative impacts, such as on the environment, and greater responsibility to reduce them...*"[50] However, despite their potential long-term importance, measuring these effects has proven to be difficult.[51] Moreover, it is not clear how consideration of these elusive "soft effects" can be integrated within a common policy evaluation framework.

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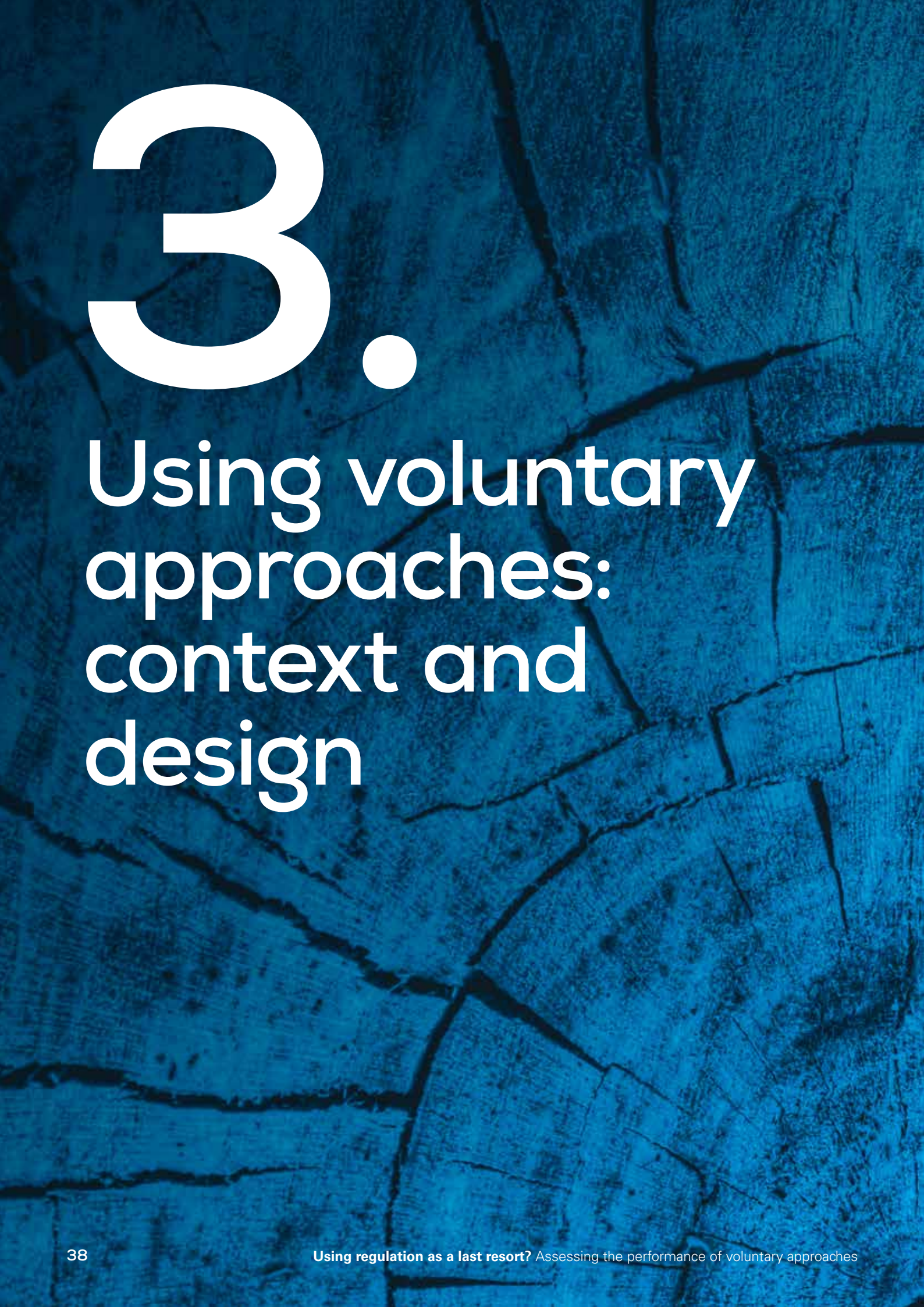

3. Using voluntary approaches: context and design

On the basis of the results presented in **Section 2,** it seems fair to conclude that the impact of most voluntary approaches is likely to be limited, such that they will rarely be an effective substitute for regulatory or fiscal measures in seeking to achieve public policy objectives.

Nevertheless, there are a number of situations where voluntary schemes have the potential to play a positive role. In particular, they may be able to add value to other policies if implemented as part of a policy mix by providing market-leading firms with stronger incentives to make beyond compliance social and environmental performance improvements, subject to minimum regulatory safeguards. In addition, they may be useful as an interim measure for piloting new approaches to solving social and environmental problems whilst regulatory processes are being developed, helping to improve policy design and build more collaborative relationships between government, industry, and civil society.[1]

The key to making appropriate use of voluntary approaches in future is to understand the range of factors that play a role in influencing their performance, many of which are context-specific.[2] In the following sections, some of these factors are considered. **Section 3.1.** discusses the key issue of industry motivations for participating in voluntary schemes and improving their performance, and makes it clear that if the private (net) benefits to industry are small relative to the public benefits, then other forms of intervention are likely to be required.[ix] Following on from this, **Section 3.2**. sets out a number of key principles for the design of future voluntary approaches that can help to strengthen the incentives for firms to participate and comply at the same time as improving our ability to evaluate scheme performance.

On a cautionary note, it is worth recognising that there are some circumstances where it is **not appropriate** to use voluntary approaches. In particular, the use of voluntary approaches is not appropriate in situations where high rates of participation and compliance are required, where there is limited flexibility regarding actions and timings, or where there are **serious social or environmental risks** (e.g. risks that are persistent, irreversible, or poorly understood) that need to be addressed.[3]

3.1. Motivation: the importance of incentives

"...if there is no credible threat of regulation and few economic benefits or financial incentives then the efficacy of a voluntary approach will be lessened."
– DEFRA (2013)[4]

There are a complex range of possible motivations that can lead firms' to choose to participate in voluntary schemes and improve their performance.[5] Understanding these motivations is important in relation to both the design and implementation of voluntary schemes. Broadly speaking, the existing evidence suggests that economic self-interest is key; despite the existence of ethical motivations to "do the right thing", market pressures dictate that most firms will only participate in voluntary schemes and improve their performance if it is economically beneficial to do so i.e. if the net benefits are positive.[6] Therefore, incentives to participate and comply are key.[7]

There are a range of potential incentives that can encourage firms to participate in voluntary schemes and improve their performance, including subsidies, tax-related incentives, the opportunity to avoid the introduction of more costly regulation, or the potential to capture the market for responsibly produced goods and services.[8] Other incentives can include the potential for positive publicity or reputational benefits for firms participating

ix A key rationale for government intervention stems from market failure (i.e. the failure of the market on its own to always deliver efficient outcomes) due to the potential for mismatches in private returns and the returns to society as a whole. It is clear that the choice of policy instrument needs to consider the extent to which the proposed form of intervention will correct this mismatch in returns to deliver an efficient outcome i.e. the extent to which private self-interest will be aligned with what is best for society as a whole. The public good nature of many social and environmental 'goods' suggests that the net benefits to firms associated with participating in voluntary approaches may not always be sufficient to ensure that the most efficient outcome is realised (i.e. the outcome that maximizes net benefits to society as a whole).

in voluntary schemes, making it easier to attract customers, recruit and retain skilled employees and raise capital from investors.[9]

Theory and evidence suggest that one of the most important incentives for participation and performance improvement is a credible threat of regulation or taxation for those firms that do not undertake proactive measures to improve their social or environmental performance.[10] The threat of regulation during both negotiation and implementation can result in the setting of more ambitious targets and can provide an important motivation for firms to participate and improve their performance. The results presented in **Section 2** support these findings: voluntary schemes implemented under the threat of regulation or as part of a policy mix were found to perform best overall, although their impacts were still relatively limited.

In order for such incentives to work, however, credibility is key. There needs to be a credible threat of sanctions if participants do not comply with scheme requirements, whether that is regulation or some other form of penalty. At minimum, any benefits associated with scheme participation should be revoked for those participants who consistently fail to comply.

3.2. Design and evaluation

The design of voluntary schemes is also important for a number of reasons, such that great care should be taken in ensuring that the right structures are in place from the outset.

One of the main reasons why design is so important is because the way in which schemes are designed can play an important role in strengthening the incentives for firms to participate and comply, for example by determining the extent to which scheme participants can be held to account regarding their actions and commitments.[11] Firms who wish to genuinely deliver improvements in their performance are likely to be keen to ensure that there are mechanisms in place to provide a level playing field and to prevent free-riding from occurring.[12] A second reason is that scheme design can play an important role in determining the extent to which overall scheme performance can be assessed; in order to improve our ability to monitor and evaluate voluntary scheme performance, scheme design will need to be substantially improved.

Many attempts have been made to set out "best practice" design features for voluntary approaches.[13] Alongside incentives for participation and performance improvement (and credible sanctions for non-compliance; see above), we set out here three key issues that need to be considered in the design of future voluntary schemes:

- **Target-setting:** voluntary scheme targets provide an essential basis for scheme monitoring and evaluation. Such targets should be clearly, transparently, and unambiguously defined, and set against a clear and credible assessment of baseline conditions and "business-as-usual". They should be as closely linked as possible to overarching policy objectives.

- **Progress reporting:** voluntary schemes require robust, transparent, and clearly prescribed reporting requirements in order to provide credible data for performance evaluation. Such requirements can improve accountability, prevent selective disclosure by scheme participants, and help to provide additional incentives for performance improvement.

- **Monitoring and evaluation**: in order to improve future evaluations of voluntary scheme performance and ensure that scheme participants are delivering on their commitments, regular and credible (i.e. independent/third-party) monitoring is essential. Participants' progress needs to be independently verified to ensure transparency and reliability/objectivity. Performance evaluations should cover both target achievement and level of uptake, linking the results to impacts and outcomes in relation to overarching policy objectives. The results should be made publicly available.

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Annexes

Annexe 1. List of schemes assessed and associated performance scores

The full list of schemes assessed is presented below. Those schemes for which case studies are presented in **Annexe 2** are highlighted in bold.

Note: * = "low" score of 0; ** = "medium" score of 0.5; *** = "high" score of 1.

1.1. UK schemes

Programme name	Country	Target achievement	Target ambition	Level of uptake
Alcohol Industry Advertising Self-regulatory Code	UK	*	*	
Alcohol Industry Health Labelling Agreement	UK	*		
Ashdown Agreement	UK	*		
Association of the British Pharmaceutical Industry Code of Practice	UK	*		
Better Retailing Climate	UK	***	*	**
British Beer and Pub Association's Framework Code of Practice	UK	*	*	
Campaign for the Farmed Environment	UK	*		**
Carrier Bag Agreement	UK	*	*	
Catchment Sensitive Farming Delivery Initiative	UK	*		*
Chemicals Industry Association Agreement	UK	***	*	***
Child Resistant Medication Containers	UK	*	***	
Climate Change Agreements	UK	***	*	
Code of Practice for Commercial Leases	UK	*		*
Code of Practice on Age Verification	UK	*		
Country of Origin Food Labelling	UK	**		
Courtauld Commitment Phase 1	UK	*	*	***
Courtauld Commitment Phase 2	UK	***		***
Dog breeding: Assured Breeder Scheme and Code of Ethics	UK			*
Ethical Trading Initiative Code of Labour Practice	UK	*		*
Farm Film Producers Group	UK		*	*
Federation House Commitment	UK	***		*
Fixed Odds Betting Terminals Code of Practice	UK	*		***
Food Hygiene Rating Scheme	UK	*		*
FSA Salt Reduction Targets	UK	**		
Halving Waste to Landfill	UK	*		*
Home Improvement Sector Commitment	UK	***		*
Horticultural Code of Practice	UK	*		*
Junk Mail Responsibility Deal	UK	*		*
Lobbying Industry Self-Regulation	UK	*	*	
Make a Corporate Commitment	UK			*

Programme name	Country	Target achievement	Target ambition	Level of uptake
National Association of Cigarette Machine Operators Code of Practice	UK	*		
Newspaper and Periodical Publishers Recycling Agreements	UK	***		
OilCare Campaign	UK	*		
Payday Lenders Customer Charter	UK	*		***
Peat Reduction Target	UK	*		
Press Complaints Commission Self-regulation	UK	*		
Prompt Payment Code	UK			*
Public Places Charter	UK	*		
RTFO Sustainability Standard	UK	*		
Sunbed Code	UK	*		*
Sustainable Clothing Action Plan/Roadmap	UK			*
The Voluntary Initiative	UK	**	*	
Traffic Light Food Labelling	UK			**
Treatments You Can Trust	UK			*
Voluntary Agreement on Tobacco Products Advertising and Promotion	UK	*		
Voluntary Code of Practice on Broadband Speeds	UK	*		***
Voluntary Emissions Reporting	UK	*		*

1.2. Non-UK schemes: Europe

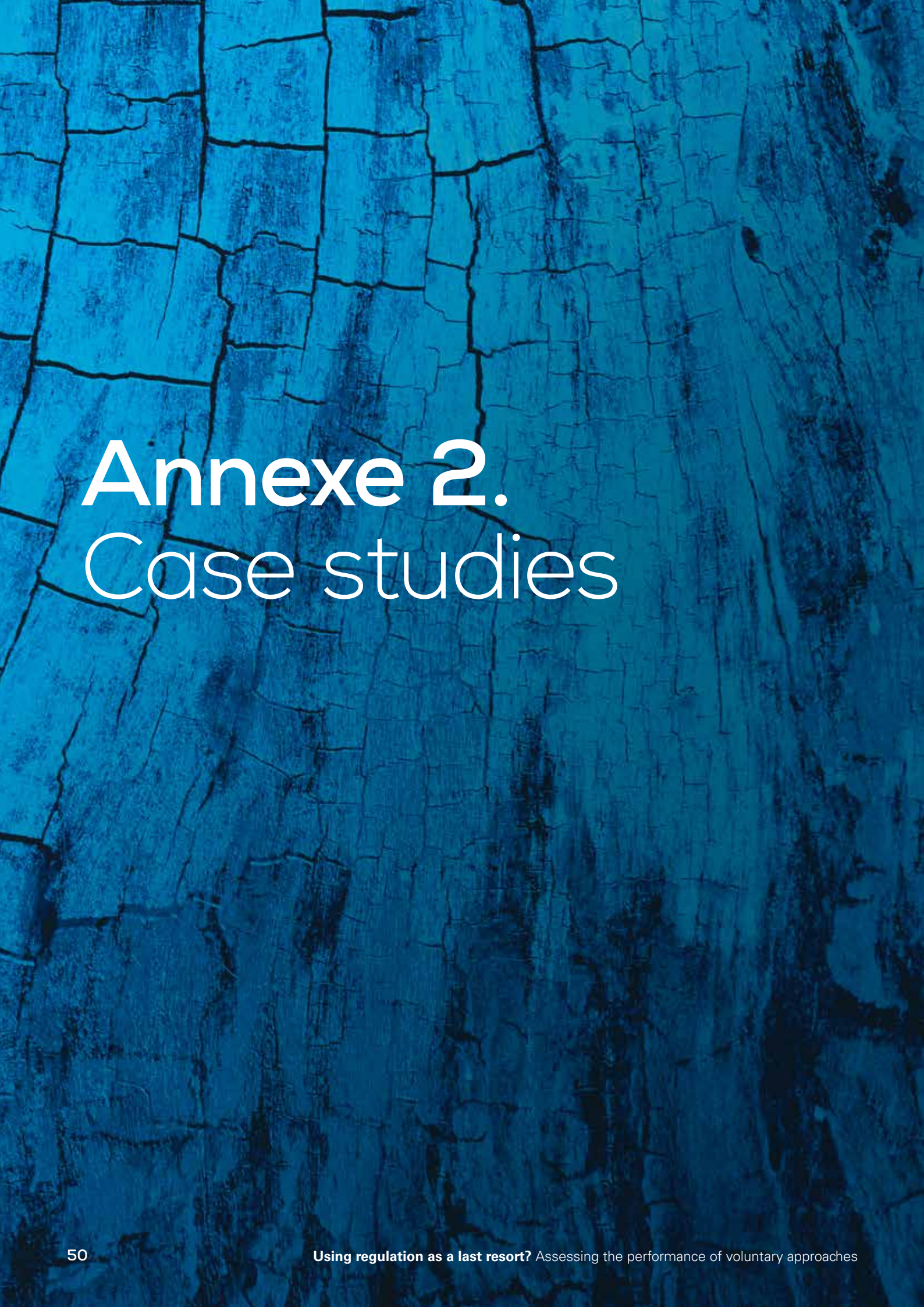
Programme name	Country	Target achievement	Target ambition	Level of uptake
Agreement on Producer Responsibility for Packaging	Sweden	**		***
Agreement on the Collection and Recycling of Batteries	Belgium	*	***	***
Agreement on the Gradual Lowering of the Impact of Washing Powders on the Environment	Czech Republic	***	*	*
Agreement on the Quality of Gasoline	Italy	***		
Agreement on the Recovery of Transport Packaging	Denmark	**		***
Agreement Regarding the Use of PVC	Denmark	**	*	**
Agreement Scheme on Industrial Energy Efficiency	Denmark	**		**
Code of Good Environmental Practice for Household Laundry Detergents	EU	*		***
Commitment on PBDE	Germany	***		
Covenant on Sulphur Dioxide and Nitrogen Oxide Emissions in the Power Generation Industry	Netherlands	***		
Declaration of German Industry on Global Warming Prevention	Germany	***	*	**
Duales System Deutschland Packaging Waste Agreement	Germany	***	**	
Dutch Task Force for the Improvement of Fatty Acid Composition	Netherlands	*		*
Eco-Emballages Packaging Agreement	France	*	***	*
EDTA Agreement	Germany	*		

Programme name	Country	Target achievement	Target ambition	Level of uptake
EKO-Energi Program	Sweden			*
Electricity Agreement	Belgium	***		
Energy Conservation Agreements	Finland	***		**
Energy Distribution Sector Voluntary Agreements	Netherlands	*		
Environmental Classification and Information System for Pharmaceuticals	Sweden	**		
Environmental Protocol between the Ministries of Environment and Industry and the Pulp Paper Industry	Portugal	*	***	***
EU Pledge	Germany	*		
Euro Chlor 10 Year Sustainability Programme	EU	**		
European Declaration on Paper Recovery	EU	***	*	
Industry Self-Commitment to Improve the Energy Performance of Household Consumer Electronics Products Sold in the European Union	EU	**		*
Irish Farm Plastics Recovery Scheme	Ireland	***		
Long Term Agreements	Netherlands	***		**
National Association of Vending Machines of Spain Agreement	Spain	*		*
Packaging Recycling and Repak	Ireland	***		
PAOS Code: Publicidad, Actividad, Obesidad y Salud	Spain	*		***
Pharmaceutical Industry Self-regulatory Code	Sweden	*		
Programme for Improving Energy Efficiency in Energy Intensive Industries	Sweden		***	***
Protection of Pedestrians and Cyclists	EU	*	*	
Raptor Nest Protection	Finland	***		
Reducing the Production of Residential Solid Waste in Flanders	Belgium		*	**
Sound Pressure in Discotheques	Germany	*		
The Voluntary Battery Agreement.	Germany	*	*	*
Vehicle Fuel Efficiency	EU	*		
Vinyl2010	EU	***	**	***
Voluntary Agreement on Smoke-free Areas	Germany	*		
Voluntary Agreement to Reduce Standby Consumption in TVs and VCRs	EU	***	*	**
Voluntary Agreements for the Reduction of Industrial GHG Emissions	France	**	*	*
Voluntary Agreements on Energy Efficiency in Household Appliances	EU	***		***
Voluntary Code of Conduct on Pre-contractual Information for Home Loans	EU	*		**
Voluntary Packaging Agreements	Netherlands	*		
Voluntary Pledge Regarding the Environmentally Sound Management of End-of-Life Vehicles	Germany	**	*	
Working Together for Cleaner Air	Ireland	*		

1.3. Non-UK schemes: rest of the world

Programme name	Country	Target achievement	Target ambition	Level of uptake
33/50 Program	USA	***	*	**
Accelerated Reduction/Elimination of Toxics	Canada	*	*	*
Advertising for Motor Vehicles Voluntary Code of Practice	Australia	*		
Alberta Nutrition Guidelines for Children and Youth	Canada	*		*
Alcohol Marketing Self-regulation Code	Brazil	*		
Antioquia Cut-flower Agreement	Colombia	**		*
Australian Association of National Advertisers' Code of Ethics/ Alcoholic Beverages Advertising Code	Australia	*		
Automobile Fuel Efficiency	Australia	**	*	
Ballast Management Program	USA	*		
California Urban Water Conservation Programme	USA	*		**
Carpet America Recovery Effort	USA	*		***
Certification for Sustainable Tourism	Costa Rica		*	*
Children's Food and Beverage Advertising Initiative	Canada	***	*	***
Children's Food and Beverage Advertising Initiative	USA	*	*	
Cigarette Advertising and Promotion Code	USA	*		
Clean Air Action Plan	USA	***	***	
Clean Industry Programme [Programa Industria Limpia]	Mexico	*		*
Clean Truck Programs	USA		*	
Cleaner Production Agreements	Chile	***	*	
Climate Challenge Program	USA	***	*	**
Climate Wise and Voluntary Reporting of Greenhouse Gases Program	USA	*		
Code of Conduct for the Shrimp Industry	Thailand			*
Commercial Whale Watching Voluntary Code	USA	*		
Daily Intake Guide	Australia	*		**
Dairying and Clean Streams Accord	New Zealand	*		
Dolphin Tourism Code of Conduct	New Zealand	*		*
Dolphin-watching and NAOO Viewing Guidelines	USA	*		
DrinkWise Australia Health Labelling Scheme	Australia	*	*	
East Antioquia Voluntary Agreement	Colombia	*		*
Electricity Sector Agreement	Colombia	*	*	
Energy Efficiency Accord	South Africa	*	***	*
Garden Plants Under the Spotlight Strategy	Australia	*	*	*
Greenhouse Challenge/Greenhouse Challenge Plus	Australia	*	*	**

Programme name	Country	Target achievement	Target ambition	Level of uptake
Health Canada Trans-fats Initiative	Canada	***	**	
Industry Standard and Forest Friendly Award Scheme	New Zealand	*		*
International Food & Beverage Alliance Commitments	Other	***	*	*
Invasive Plants "do not sell" List	USA	*		*
Keidanren Voluntary Action Plan on the Environment	Japan	**		*
Labelling of GM Foods	South Africa	*		
Leather Tanners in León	Mexico	*		
National Code of Conduct for Diving with Grey Nurse Sharks	Australia	***		
National Environmental Performance Track	USA	*	***	*
National Landcare Program	Australia	***		*
National Packaging Covenant	Australia	**		
Palm Oil Agreement	Colombia	*		***
Port Stephens Dolphin Watching Code	Australia	**	*	*
Responsible Care	USA	*		
Responsible Children's Marketing Initiative	Australia	*	*	*
Responsible Gambling Codes of Practice	Australia/ New Zealand	*		
Road Transport Heavy Vehicle Accreditation	Australia	**		*
Sea State By-Catch Agreement	USA	*		
Seabird Bycatch Code of Conduct	New Zealand			*
St Louis Voluntary Codes of Conduct for Nursery Professionals	USA	*		
Standard on Solaria for Cosmetic Purposes	Australia/ New Zealand	*		
Strategic Goals Program	USA	*		
Sustainable Slopes Program	USA	*		
Turtle Tourism Code of Conduct	Australia	*		
US Beer Institute Code	USA	*		
Vehicle Fuel Efficiency	Japan	*		
Voluntary "Area to be Avoided" Programme for the Right Whale	Canada	**		
Voluntary Agreements to Limit Carbon Dioxide Emissions	New Zealand	*		*
Voluntary Aluminium Industry Partnership	USA	***		***
Voluntary Challenge and Registry Programme	Canada	*	*	*
Voluntary Greenhouse Gas Reduction Agreements	Taiwan	***	*	**
Voluntary Program to Reduce the Likelihood of Collisions between Commercial Ships and Endangered Whales	USA	*		*
Voluntary Program to Reduce the Likelihood of Collisions with the Endangered North Atlantic Right Whale	USA	*		
WasteWise Program	USA	*		



Annexe 2. Case studies

2.1. UK schemes

1. Alcohol Industry Health Labelling Agreement (UK, 2005)

Target achievement	Target ambition	Level of uptake	APS	SIS
*			0.00	0.00

In May 2007, the UK Government launched a voluntary agreement with the alcohol industry to include alcohol unit and health information on labels of alcoholic drinks. The target of the agreement was to introduce labels on the majority of alcoholic drinks containers showing unit and other health information, including advice to women on alcohol and pregnancy. The Government stated that they expected at least 50% of labels to include five pre-defined elements of information by the end of 2008.

Independent monitoring was conducted in April 2009 to assess the extent to which the industry was compliant with the voluntary labelling agreement. Only 8% of labels were found to be content compliant across the five elements of information specified in the agreement **[low level of target achievement]**. Adjusted to market share values the figure increased to just over 10%, still a long way from the 50% target. 19% of samples were found to contain no unit or health information at all (15% by market share). Overall, the level of full compliance with the voluntary labelling agreement was deemed "modest" at best.[1]

2. Ashdown Agreement (UK, 2007)

Target achievement	Target ambition	Level of uptake	APS	SIS
*			0.00	0.00

The Ashdown Agreement on Plasterboard Recycling between the Gypsum Products Development Association and WRAP (Waste and Resources Action Programme) was launched in April 2007. It set out shared objectives for the diversion of waste plasterboard from landfill. A review of progress against the targets of the agreement in 2010 found that the industry had failed to achieve one of its key targets relating to the take back and recycling of plasterboard waste. **[low level of target achievement].**[2]

The target to reduce the amount of waste being sent to landfill (Target 2) was easily achieved, in part due to contractions in the construction industry over the same period. A strong regulatory backdrop, in particular changes to the landfill regulations for plasterboard from April 2009 (requiring segregation of all gypsum wastes at source), is also likely to have been an important driver of this improvement.[3] It was not possible to assess progress against the remaining two targets owing to their vague, qualitative nature.

Target	Evaluation	Target achieved?
1. Engage with all stakeholders to undertake activities that reduce the amount of new plasterboard waste to landfill and increase recovery of all plasterboard waste.	GPDA manufacturers have continued to work with stakeholders, government and WRAP over the past 12 months through ongoing projects.	N/A
2. Reduce the amount of waste being sent to landfill from UK plasterboard manufacturing operations to **5,000 tonnes** per year by 2010.	Results for the 12 months to 31 March 2010 were **504 tonnes** sent to landfill.	Yes
3. Increase the take back and recycling of plasterboard waste for use in plasterboard manufacture to **50% of new construction waste** arising by 2010.	Results for the 12 months to 31 March 2010 show that **26% of new construction waste** was recycled for use in plasterboard manufacture.	No
4. Work with all parties in the supply chain towards achieving the ultimate objective of zero plasterboard waste to landfill.	This Target in effect comprises an aspirational extension of Target 1.	N/A

3. Association of the British Pharmaceutical Industry Code of Practice (UK, 1958)

Target achievement	Target ambition	Level of uptake	APS	SIS
*			0.00	0.00

Since 1958, the Association of the British Pharmaceutical Industry (ABPI) has regulated the promotion of prescription medicines through its voluntary code of practice. All ABPI members are obliged to comply with the code. A review of the code for the years 1983–1988 showed that there were numerous breaches of the code, including provisions relating to regulatory standards. This review found that the ABPI gave virtually no adverse publicity to companies found to have breached the code. The only sanction it could impose was to suspend an offending company from membership of the association; this has been done once in 30 years.[4]

A 2005 House of Commons Health Select Committee's report on the influence of the pharmaceutical industry concluded that *"the examples cited to us of breaches of advertising regulations, cover-up of negative medicines information and provision of misleading information to prescribers suggest that self-regulation is not working satisfactorily."*[5] Following on from this inquiry, a review of marketing related documents from five pharmaceutical companies concluded that the major companies were systematically contravening the ABPI Code in a number of key areas. For example, promotional campaigns targeting health professionals were found to *"...use emotional drivers, irrational constructs and branding strategies that are far removed from the Code's requirement for communications to be 'accurate, balanced, fair, objective and unambiguous'"* **[low level of target achievement]**.[6]

4. Better Retailing Climate (UK, 2008)

Target achievement	Target ambition	Level of uptake	APS	SIS
***	*	**	0.50	0.00

A Better Retailing Climate is a voluntary initiative that sets out the collective environmental ambitions of a group of members of the British Retail Consortium (BRC) representing about half of the sector by market share **[medium level of uptake].** The initiative was launched in 2008 and consisted of four targets to reduce the environmental impact of the retail sector to be achieved by 2013. Progress was measured against a 2005 baseline. From 2011 onwards, progress against a fifth target was also included in the annual progress reports. Of the original targets set out in 2008, all were achieved **[high level of target achievement]**.[7] However, in absolute terms, performance on two of the targets was less impressive.

Target	Evaluation	Target achieved?
1. Cut energy-related emissions from buildings by 25% on 2005 levels by 2013 (on a like-for-like basis).	Reduced by 30% [8% in absolute terms].	Yes
2. Reduce energy-related carbon emissions from store deliveries by 15% by 2013 compared with 2005 levels (on a like-for-like basis).	Reduced by 29% [8% in absolute terms].	Yes
3. Ensuring we measure water-use in sites collectively anticipated as accounting for at least 75% of usage, and setting targets for reductions by 2012.	83% of water use measured. No targets specified.	Yes
4. Diverting waste from landfill so that less than 25% of waste is landfilled by 2013.	6% of waste sent to landfill.	Yes

It is not clear the extent to which the observed performance improvements went beyond business-as-usual i.e. the extent to which the targets that were set were sufficiently ambitious. The ENDS Report described the targets of the initiative as *"weak"*, while according to the BRC, the targets that were set were *"less ambitious"* than they would have liked, but were established in order make the scheme *"as inclusive as possible"*.[8] Some targets were subsequently revised after being met ahead of schedule. In 2011, Forum for the Future described the targets as *"not that stretching"* and argued *"the sector needs to go further"* **[low level of target ambition]**.[9]

5. British Beer and Pub Association's Framework Code of Practice (UK, 2004)

Target achievement	Target ambition	Level of uptake	APS	SIS
*	*		0.00	0.00

The deep-seated problems regarding the relationship between pub companies and their lessees, who run pubs, have been the subject of repeated scrutiny by Parliamentary select committees. A 2004 Trade and Industry Committee review recommended that the British Beer and Pub Association's (BBPA) Framework Code of Practice *"should be revised as a matter of urgency"*.[10] A follow-on inquiry in 2009 by the Business and Enterprise Committee found that the revised Code of Practice had not solved the problems in the industry of inequality in bargaining power and inadequate means to resolve disputes.[11] The code was again revised. A 2010 Business, Innovation and Skills (BIS) Committee Report stated that: *"We do not believe previous BBPA and pub company Codes of Practice have been sufficiently robust. Nor do we believe the pub companies have properly complied with them. This history of evasiveness... inevitably requires a critical response to the new Framework Code."*[12]

A fourth review in 2011 found that a number of principles were not being adhered to. Although some *"modest improvements"* had been made, these only addressed a limited number of areas. The standards represented *"an absolute de-minimis requirement"* **[low level of target ambition]**. In many areas, it was judged that there was not *"a genuine commitment to reform"*. The implementation process was described as *"half-hearted"*, proceeding *"at a glacial pace and only as a result of dogged scrutiny by Parliamentary Committees"*. Overall, the self-regulatory attempts by the industry were judged to have failed. Some of the problems identified included the lack of oversight and/or meaningful sanctions for non-compliance. High numbers of breaches were allowed before a company was judged non-compliant **[low level of target achievement]**.[13]

In its 2012 Annual Report, BIS highlighted pub companies as a successful area in which the Department had found solutions to problems without the need for new regulation: *"BIS worked with pub companies to strengthen an existing code of practice rather than introduce new regulation. The code will bring about immediate improvements in rent, insurance, training and dilapidations."*[14] However, when the BIS Committee asked then Secretary of State Vince Cable for evidence of any immediate improvements he stated that:

"We do not have any evidence, because, disappointingly, as I understand it, that strengthened code of practice has not yet appeared or been agreed... That is the complaint that I have had from people representing pubs: they were waiting to see the impact of this code of conduct and they have not seen the impact of it yet... I continue to get very negative feedback. I asked recently what progress had been made, and the answer was, "Not very much". As it happens, I am in the process of writing to the people involved in the code of practice to ask what on earth is going on."[15]

"...despite four select committee reports over almost a decade highlighting the problems faced by publicans, it is clear the voluntary approach isn't working."

– Vince Cable (2014)[16]

After consulting the industry, the Secretary of State announced that he had decided to consult on establishing a statutory code. The Government's response to this consultation stated that: *"While self-regulation has brought a number of improvements... these changes have not gone far enough... many tied tenants continue to face unfair treatment and hardship. Self-regulation has not been able to effect the step change desperately needed in the industry to ensure that all tied tenants are treated fairly."* New legislation was consequently announced.[17]

6. Campaign for the Farmed Environment (UK, 2009)

Target achievement	Target ambition	Level of uptake	APS	SIS
*		**	0.25	0.00

Launched in 2009, the first phase of the Campaign for the Farmed Environment (CFE) was a three-year industry-led voluntary approach to environmental land management. It was introduced primarily as a voluntary alternative to new regulatory measures and was designed to help retain and exceed the environmental benefits lost after the abolition of mandatory set-aside. The campaign aimed to encourage land managers to adopt a range of measures to benefit the countryside and wildlife. A number of formal targets were set in order to assess the performance of the campaign. Overall there has been mixed success in meeting the land management targets, while overall, the management of voluntary measures did not consistently apply all of the recommended management prescriptions. The field surveys suggested that a sizeable proportion of land with voluntary measures will not have maximised environmental benefits.[18]

Target	Target	Evaluation	Target achieved?
1. To increase the uptake of key arable target options in ELS.	80,000 ha	57,773 ha	No
2. To double the uptake of "more of the same" options in HLS.	16,800 ha	25,277 ha	Yes
3. To help achieve Natural England's target of 70% of farmland within agri-environment agreements by March 2011.	70%	70%	Yes
4. To double the uptake of ELS options EE9 and EE10 (6m buffer strips next to watercourses).	9,760 ha	4,230 ha	No
5. To retain and increase the area of un-cropped land from the 1 January 2008 baseline by 20,000 ha.	179,000 ha	136,100 ha	No
6. To increase the area of land managed voluntarily by 30 000 ha above current levels.	188,700 ha	214,900 ha	Yes
7. To promote participation in the campaign by those farmers outside agri-environment agreements.	60%	54%	No
8. To seek to improve the environmental management of at least one third of the uncropped land.	59,600 ha	80,000 ha	Yes
9. To encourage farmers and land managers to take up voluntary measures with the greatest environmental value.	N/A	N/A	N/A

Overall, only half of the targets were achieved. According to the final review, the target relating to the area of uncropped land – a *"key campaign target"* – was missed by a substantial margin. In fact, the area of uncropped land fell in successive years to 136,100 hectares in 2012 compared to a baseline of 179,000 hectares in 2008 **[low level of target achievement]**. In relation to uptake, approximately half of arable farmers recorded land within at least one of the campaign voluntary measures in 2012 **[medium level of uptake]**. Evidence suggests that only a small proportion of farmers initiated new management in response to the campaign. According to one review, in each year only a small proportion of measures would not have been in place in the absence of the campaign. Most features recorded were simply existing uncropped land that would have remained in the absence of the campaign, or management that was part of the usual farm rotation. The most common measures taken were often the "easiest".[19]

It is important to note that these results are based primarily on farmer self-reports via a voluntary postal survey undertaken by DEFRA annually. Verification monitoring was carried out by the Food and Environment Research Agency (FERA) on a sample of farms who responded to the DEFRA survey in order to verify if measures were implemented as the farmer had declared on the DEFRA return and according to management requirements. This monitoring found a *"considerable number of discrepancies"* between the actual and self-reported designation of measures and in the areas attributed. According to the report, *"for most measures there was a consistent over-recording of both frequency and area on the DEFRA returns."* Overall, the 2012 results suggest 30% less area than expected on those farms undertaking management as part of the campaign.[20]

7. Carrier Bag Agreement (UK, 2008)

Target achievement	Target ambition	Level of uptake	APS	SIS
*	*		0.00	0.00

Plastic bags and other plastic debris can cause serious environmental damage, particularly in the marine environment. For example, a large number of marine species, such as sea turtles and albatrosses, are known to be harmed or killed by plastic debris (e.g. through entanglement, ingestion, suffocation etc.) each year.[21] In 2008, the British Retail Consortium and leading supermarkets agreed to a voluntary approach to cut the number of single-use plastic carrier bags given to customers by 50% by spring 2009 (against a 2006 baseline) and by 70% *"in the longer term"*.

It was reported in July 2009 that retailers had cut the number of single-use plastic carrier bags used by 48%, narrowly missing their 50% target. However, this figure was based on a comparison of plastic bag use in the month of May only (May 2009 compared to May 2006). Looking at the annual figures, it emerged that total use on an annual basis had only declined by just over 40% between 2006 and 2009 **[low level of target achievement]**. In addition, much of this decline had occurred prior to the announcement of the agreement in 2008. Evidence collected in 2010, 2011, and 2012 showed that, following the end of the agreement, plastic bag use rose in every year. By 2012, overall use had increased to 8.1 billion, almost as high as it was in 2008 when the agreement was announced. In fact, the lasting impact of the agreement is that overall plastic bag use was only 6% lower in 2012 than it was in 2008.

	2006	2007	2008	2009	2010	2011	2012
Number of single-use bags (millions)	12,174	11,065	8,605	7,208	7,568	7,976	8,077
Total % change (2006 baseline)		-9%	-29%	-41%	-38%	-34%	-34%
Total % change (2008 baseline)				-16%	-12%	-7%	-6%
Annual % change				-16%	**+5%**	**+5%**	**+1%**

However, although overall plastic bag use across the UK rose every year following the end of the agreement, the situation in Wales was slightly different. In October 2011, Wales introduced a small mandatory charge for single-use plastic carrier bags. Over the following year, plastic bag use declined by almost 80%, giving an indication of the impact of the introduction of the mandatory charge and of the relatively low ambition of the voluntary agreement **[low level of target ambition]**.[22] This charge is widely supported by the general public.[23] In the Republic of Ireland, the €0.15 plastic bag levy introduced in 2002 resulted in 90% reductions in annual use.[24] Similar taxes are now planned, or are in place, in England and Scotland.

8. Catchment Sensitive Farming Delivery Initiative (UK, 2005)

Target achievement	Target ambition	Level of uptake	APS	SIS
*		*	0.00	0.00

The England Catchment Sensitive Farming Delivery Initiative (ECSFDI) was launched in December 2005. Phase 1 of the initiative ran to March 2008 and Phase 2 to March 2011. ECSFDI was a voluntary initiative, delivered jointly between DEFRA, the Environment Agency and Natural England, seeking to reduce diffuse water pollution from agriculture by encouraging farmers to adopt best practice voluntarily. It was part of the national response to meet the requirements of the Water Framework Directive and contributes towards achieving Natura 2000 and Site of Special Scientific Interest objectives. Farmers participating in the initiative received free training, information, and advice, as well as help getting funding for capital investment on the farm. Between 2007 and 2011, the ECSFDI Capital Grant Scheme provided £29 million of funding improvements. The evaluation of the scheme found the following results: [25]

Target	Evaluation	Target achieved?
1. Increase awareness amongst farmers and land managers of the impact of Diffuse Water Pollution from Agriculture.	83% of farmers who received one-to-one advice indicated their knowledge of water pollution had improved, but **the majority still did not believe that agriculture makes a significant contribution to water pollution**.	No
2. Improve practices amongst farmers within the priority catchments.	58% of individual measures recommended through one-to-one advice were implemented by early 2011. However, **36% of holdings failed to implement more than half of the recommended measures**.	No
3. Reduce the pollution of water caused by farming within priority catchments.	Water quality monitoring demonstrated a reduction in pollutant loads and concentrations. However, initial analysis of ecological monitoring data from rivers within Priority Catchments found no evidence of any response.	Yes

Performance against the individual catchment objectives and targets, many of which were quantitative in nature, was not included in the evaluation report. Therefore, progress was assessed against the qualitative targets. Overall, the level of target achievement was low: following the scheme awareness of farmers of the impact of agriculture on water pollution remained unsatisfactory, and many of those farmers failed to implement the recommended measures **[low level of target achievement]**. In relation to coverage, 17% of all farm holdings within Priority Catchments received advice through the scheme and 45% within targeted sub-catchments **[low level of uptake].**

Some of the key drivers for change were the financial incentives of free advice, reduced costs and grants. Motivation to take action to keep up with regulatory requirements (or to keep one step ahead of future potential requirements), and to benefit from capital grants for work farmers already planned to do, were also important drivers of change.[26]

9. Chemicals Industry Association Agreement (UK, 1997)

Target achievement	Target ambition	Level of uptake	APS	SIS
***	*	***	0.67	0.00

In 1997, the UK Chemicals Industry Association (CIA), representing 85% of sector energy consumption, signed a voluntary agreement on energy efficiency improvement with the Secretary of State for the Environment, Transport, and the Regions **[high level of uptake]**. The aim of the agreement was to reduce the energy consumption of the industry by 20% per tonne of output by 2005 (against a 1990 reference level). According to Salmons (2002), the CIA *"hoped that an agreement would allow it to ward off the introduction of a carbon-energy tax, or at least ensure exemption for their members".* However, although the agreement was due to run until 2005, it ceased to apply following the introduction of the Climate Change Levy on industrial energy consumption in 2001.

The objective of the agreement was well defined and quantified and it was underpinned by a highly credible control system; as such, compared to many voluntary agreements the scheme was well specified. In terms of target achievement, available data made it difficult to assess improvements in energy efficiency. However, Salmons (2002) provides an assessment based on the milestones that were set for the first two years, which were fully implemented **[high level of target achievement]**.

Nevertheless, according to Salmons (2002), the 20% target did not require the implementation of all cost-effective improvement measures or represent *a "significant improvement over a realistic counterfactual"*. In fact, it was likely to be significantly less than what would have been required from the sector in order for the government to meet its overall emissions reduction objectives **[low level of target ambition]**.[27]

10. Climate Change Agreements (UK, 2000)

Target achievement	Target ambition	Level of uptake	APS	SIS
***	*		0.50	0.00

The UK Climate Change Agreements (CCAs) were negotiated with a number of energy-intensive sectors prior to the introduction of the Climate Change Levy (CCL) as part of a sophisticated policy mix. The targets were negotiated separately with each sector by DEFRA. Participants were entitled to an 80% discount on the CCL provided that that negotiated energy efficiency targets were met.

According to Ekins and Etheridge (2006), the CCAs were designed and implemented "*in a way that is very much consistent with the [best practice] OECD recommendations*". The great majority of the sectors met their 2002 targets **[high level of target achievement]**. However, the results of the first target period suggest that the targets of the CCAs were not stringent and were in the main met well before the due date.[28] Glachant and de Muizon (2007) conclude that the targets *"probably were modest for the majority of companies"* such that the CCAs *"may not have delivered much more environmental improvement than what would have happened without them"* i.e. they did not go much beyond business-as-usual **[low level of target ambition]**.[29] A parliamentary select committee inquiry in 2008 pointed out the difficulty of evaluating the effectiveness of the CCAs but nevertheless recommended that the targets be *"considerably toughened"*.[30] This followed on from a report by the National Audit Office, which stated that *"it seems likely that some proportion of Agreements targets have not been as stringent as possible."*[31]

It is worth noting that many sectors implemented energy efficiency savings that went beyond the targets that were set. Therefore, in spite of the lack of target ambition, the CCAs may nevertheless be considered to have raised awareness in some sectors of the existence of opportunities to make cost-effective energy efficiency improvements, such that measuring impact based on target achievement and ambition alone could potentially underestimate scheme impact. Nevertheless, the evidence suggests that only a proportion of the reported results are actually additional savings achieved by the CCAs.

11. Country of Origin Food Labelling (UK, 2010)

Target achievement	Target ambition	Level of uptake	APS	SIS
**			0.50	0.50

"The EU is considering new rules... while Defra would prefer industry to respond voluntarily... [we] will also be pressing for the option of compulsion to be kept open."
– DEFRA Press Release (August 2010)[32]

In November 2010, a number of major retailers signed up to a new voluntary code of conduct on food labelling developed by the British Retail Consortium. The aim of the "*Principles on Country of Origin Information*" was to provide consumers with clear, accurate information on the origin of their food. The voluntary set of principles applied to meat, processed meat products, and dairy products.

An initial evaluation was undertaken in April 2011 *"primarily...to provide a benchmark for future assessments of uptake"*. This evaluation found that overall compliance was 73% for composite products, 70% for meat products, and 65% for dairy products. However, as the evaluation was based on product label information alone, compliance with the full range of advice in the principles could not be assessed.[33] A follow-on evaluation in early 2012 found no statistically

significant differences in overall compliance across the different categories assessed; although compliance increased slightly for meat products and composite products, these changes were not found to be statistically significant **[medium level of target achievement]**.[34] According to the chief science and regulatory affairs adviser for the National Farmers Union, *"Unless all companies sign up and then consistently stick to their promises, some consumers will still be misled."*[35]

12. Courtauld Commitment Phase 1 (UK, 2005)

Target achievement	Target ambition	Level of uptake	APS	SIS
*	*	***	0.33	0.00

The voluntary Courtauld Commitment (Phase 1) was launched in 2005. It was an agreement between the UK Government's Waste and Resource Action Programme (WRAP) and major UK retailers, brand owners, manufacturers and suppliers aimed at developing solutions across the whole supply chain to reduce both household packaging and household food waste.

Of the original targets that were set, two out of three were achieved. The target to reduce the amount of food waste thrown away by UK households was easily achieved. However, the key target relating to achieving an absolute reduction in the volume of grocery packaging waste by 2010 was not met, with the total weight of packaging used remaining level at about 2.9 million tonnes per year **[low level of target achievement].** The retail participants that signed the commitment represented 92% of the UK's grocery market **[high level of uptake]**.[36] The targets of the scheme were described as lacking in ambition and urgency by the Sustainable Development Commission **[low level of target ambition]**.[37]

A second phase of the Courtauld Commitment was launched in 2010. According to the final progress report, two of the second phase targets were achieved and one was narrowly missed.[38] A third phase was launched in 2013.

13. Farm Film Producers Group (UK, 1995)

Target achievement	Target ambition	Level of uptake	APS	SIS
	*	*	0.00	0.00

In 1995, a number of suppliers of plastic silage film launched a non profit-making scheme to collect and recycle waste film from UK farms. The participants each contributed to the cost of the scheme by paying a per unit "environmental protection contribution". However, a number of suppliers did not join the scheme, allowing them to undercut the prices of the participants. This destabilised the scheme and participants began to withdraw in early 1996 **[low level of uptake]**. Despite repeated requests from the Packaging and Industrial Films Association for supporting government legislation to be introduced, it soon became clear that legislative backing would not be forthcoming. The operation of the scheme was suspended in early 1997.[39]

The scheme operated for only two years, with 5,000 tonnes of waste film collected in each year. This was broadly in line with expectations for the first year, but below expectations for the second. The implicit threat of costly legislation provided the key motivation for the companies involved to reach an agreement. There were no quantitative targets specified **[low level of target ambition]** and, partly as a result, the environmental impacts of the scheme were minimal. The quantity of film collected from farmers represented an insignificant fraction of the waste and the scheme thus had a negligible impact on water and air quality.[40]

14. Federation House Commitment (UK, 2008)

Target achievement	Target ambition	Level of uptake	APS	SIS
***		*	0.50	0.00

The Federation House Commitment is a voluntary agreement, which aims to help reduce overall water usage across the UK food and drink industry by 20% by 2020 (against a 2007 baseline). The agreement was signed in 2008 and progress is assessed using two key performance indicators: absolute water use and water use per tonne of product. According to the 2013 progress report, between 2007 and 2012 signatories collectively made a 16.1% reduction in their water use (excluding that in product), while water use intensity decreased by 20.9% **[high level of target achievement]**. [41]

These results were based on data from 85% of sites and 80% of signatories. However, it is important to note that these figures include water savings made since 2007 by signatories that were not part of the scheme from the outset, meaning that many of the reductions cannot necessarily be directly attributed to the voluntary scheme.[42] In 2008, there were only 36 signatories.[43] According to the 2013 report, this has grown to 71 signatories representing approximately 25% of the UK food and drink manufacturing sector based on water use **[low level of uptake]**.[44]

15. Food Hygiene Rating Scheme (UK, 2010)

Target achievement	Target ambition	Level of uptake	APS	SIS
*		*	0.00	0.00

The Food Hygiene Rating Scheme was launched in 2010 and is a partnership initiative between local authorities and the Food Standards Agency (FSA), the regulatory body responsible for food safety and food hygiene across the UK. Under the scheme, businesses are given a sticker and certificate showing their food hygiene rating and encouraged to display these clearly at their premises. The aim of the initiative is to provide consumers with information about hygiene standards in food premises. The success of the scheme depends on consumers using the information to inform their decision, and so accessibility to ratings at the point of choice is especially important. However, the scheme has resulted in only a limited increase in the number of businesses in England displaying their ratings.[45]

Rating	% of Businesses displaying	
	2011–12	***2012–13***
0–2	12%	10%
3	26%	28%
4–5	56%	64%*
All	43%	52%*

Note: * = significant change

Research in 2011–2012 found that 43% of businesses in England displayed a Food Hygiene Rating somewhere on their premises **[low level of uptake]**. Businesses with higher food hygiene ratings were found to be far more likely to display their ratings. 56% of businesses in England rated a 4 or 5 displayed a sticker/certificate compared with 12% of those rated a 0 to 2. Between 2011–2012 and 2012–2013, there was a significant increase in the % of businesses displaying ratings. However, this was mainly as a result of more businesses with a rating of 4 (good) or 5 (very good) displaying; there was no significant change in display rates amongst low and middle rated businesses. Moreover, only 32% of businesses in England displayed their rating certificate in a place that was visible from outside the premises **[low level of target achievement].** On the basis of these results, it does not appear to be the case that the scheme is having a major impact on the level of readily available information to consumers regarding hygiene standards.[46]

Interestingly, almost a quarter of businesses interviewed as part of the evaluation study thought that it was compulsory to display the rating. Research commissioned by the FSA indicated strong consumer and local authority support for mandatory display. Following the failure of the voluntary approach, it was announced that mandatory display would be introduced in Wales in late 2013 and was also likely to be introduced in Northern Ireland following a public consultation.

16. FSA Salt Reduction Targets (UK, 2006)

Target achievement	Target ambition	Level of uptake	APS	SIS
* *			0.50	0.50

In 2003, the Food Standards Agency (FSA) and the Department of Health committed themselves to reducing salt intakes and set an objective to reduce the average salt consumption of adults to 6 g/d. In order to achieve this objective, the FSA chose to work with the UK food industry to set targets for reducing salt levels, given that the majority of dietary salt is obtained from processed food. It was determined that reaching the population average intake target of 6 g/d would require *"a substantial and concerted effort by manufacturers, retailers and food service outlets, as well as a supportive environment backed by the government, to stimulate consumer engagement."*[47]

The first set of salt reduction targets for the food industry was published in 2006 covering 85 food types in 30 different food categories. After consulting on proposals for revisions to the targets, the FSA published a new set of stricter salt target levels in 2009 to be achieved by 2012.

Overall, evidence suggests a significant reduction in the population's average salt intake from 9.5 g/d in 2000–2001 to 8.6 g/d in 2008 and to 8.1g/d in 2011. Despite this progress, intakes remain well above 6 g/d, with 70% of the population estimated to have a daily intake of salt higher than the recommended maximum. According to He et al. (2014), with the current rate of 2% reduction per year, it would take another 12 years for the population salt intake to reach the target of 6 g/d. [48]

Since the targets were set in 2006, *"nearly all manufacturers and retailers have made significant reductions in the amount of salt added to food"*[49] However, in terms of assessing target achievement as opposed to overall impact, most of the existing figures on salt reductions made by food manufactures and retailers have not been independently verified and rely on commercial label data and industry self-reports. Brinsden et al. (2013) examined changes in the salt content of bread – the single largest contributor of salt to the UK diet – between 2001 and 2011 and found that 71% of products were meeting the 2012 target, although the percentage was less than 50% for branded products. There is thus evidence that companies could further substantially reduce the amount of salt **[medium level of target achievement]**.[50]

The extent to which the voluntary targets are responsible for any of the observed reductions is not clear as the programme also included a major public health campaign. According to He et al. (2014), although the programme has been voluntary, it has been *"...underpinned by sustained media pressure, direct pressure on the government and ministers, particularly the public health ministers, so that they would maintain a strong stance with the food industry."*

17. Halving Waste To Landfill (UK, 2008)

Target achievement	Target ambition	Level of uptake	APS	SIS
*		*	0.00	0.00

The construction industry is responsible for more than 100 million tonnes of construction, demolition and excavation (CD&E) waste every year, or around one third of all waste in the UK. In June 2008, the joint Government-industry *Strategy for Sustainable Construction* established a target (in England) of a 50% reduction in CD&E waste to landfill by 2012.[51] In order to drive progress towards the achievement of this target, the voluntary "Halving waste to landfill commitment" was launched in October 2008. According to the Government's Waste and Resources Action Programme (WRAP), the scheme was *"a great success"*.[52]

However, the final progress report tells a slightly different story. Between 2011 and 2008, the amount of CD&E waste sent to landfill in England actually increased in absolute terms by 551,798 tonnes, equivalent to a 4% increase. In relative terms, this is equivalent to an increase from 133 tonnes/£ million construction output in 2008 to 140 tonnes/£ million construction output in 2011 (an increase of 6%) **[low level of target achievement]**.[53] The contractors participating in the scheme represented approximately a quarter of the UK construction market **[low level of uptake]**.[54]

18. Home Improvement Sector Commitment (UK, 2009)

Target achievement	Target ambition	Level of uptake	APS	SIS
***		*	0.50	0.00

Following the launch of the UK Packaging Strategy in 2009, which advocated the use of voluntary approaches in the drive to reduce packaging,[55] a number of UK retailers signed a voluntary agreement aimed at reducing packaging and waste to landfill. The target(s) of the scheme were to achieve a 15% packaging reduction and a 50% reduction in waste to landfill by the end of 2012, against a 2007 baseline, and to help consumers to recycle more.

An interim report in 2011 showed good overall progress on a number of the quantitative targets although, across individual firms, progress had been more mixed.[56] By 2012, the two quantitative targets of the agreement had been exceeded by participants **[high level of target achievement]**. However, many retailers did not sign up to the scheme; signatories to the agreement represented less than half (45%) of the home improvement sector market by market share **[low level of uptake].**[57]

19. Horticultural Code of Practice (UK, 2005)

Target achievement	Target ambition	Level of uptake	APS	SIS
*		*	0.00	0.00

The majority of non-native species in the UK are plants and ornamental horticulture is considered to be the main pathway for their introduction.[58] Although there are prohibitions against the planting of certain listed species in the UK, the sale of many of these plants is not banned.

A Horticultural Code of Practice that aimed to prevent the spread of invasive non-native species (INNS) through encouraging responsible behaviour by industry was produced by DEFRA in 2005.[59] The main guidance set out for retailers stated that they should *"avoid selling non-native plants that are known to be invasive, and are already posing a threat to native biodiversity"*. If retailers did sell such plants, then they were encouraged to *"ensure that they are clearly and correctly named, labelled... labels on plants should identify the dangers to the wider environment if these plants were to escape from gardens or horticultural premises"*.

In 2009, research was conducted to assess awareness of the code, and the extent to which it was being followed, by horticultural retailers.[60] Fewer than half the retailers sampled (48%) were aware of the code, and fewer than 10% had a formal written policy **[low level of uptake]**. Although 82% of those who were aware of the code (40% of the sample) stated that they followed it, only 68% could provide an example of how it was followed by their organisation. Fewer than 10% of retailers stated that they labelled invasive plants or provided customer information, and less than 5% stated that they would not sell invasive plants. The majority (>75%) of retailers had sold one or more potentially invasive species that year **[low level of target achievement].** According to the assessment, *"the findings suggest there is still some way to go to persuade the horticultural retail trade to change their behaviour with regards to INNS."*

Retailers were asked what, if anything, DEFRA could do to discourage them from selling such plants. The main suggestions were to provide retailers and consumers more information (27%) or to ban the sale of such plants (12%). The trade representatives interviewed during the research suggested that DEFRA and central and local government should require all contractors to abide by the code in order to send a clear signal of its importance. It was suggested that this would increase its uptake "at a stroke". A new code was introduced in 2011. No information is available to assess its performance.

20. Junk Mail Responsibility Deal (UK, 2011)

Target achievement	Target ambition	Level of uptake	APS	SIS
*		*	0.00	0.00

The average UK household receives more than 370 items of unsolicited paper mail a year, the majority of it unaddressed.[61] The roll-out of key commitments under a 2011 voluntary responsibility deal between government and the direct mail industry[62] stalled in late 2012 **[low level of target achievement]** as the Direct Marketing Association (DMA) was not willing to fully commit to the deal unless full industry backing was secured. Due to the fact that other organisations did not sign up to the deal, complying with its commitments would have placed the DMA at a potential commercial disadvantage **[low level of uptake]**.[63] In particular, there was a risk that DMA members might start distributing leaflets via other industry parties that did not sign up to the scheme. As a result, the DMA stated that it would not continue with the scheme unless other industry parties also agreed to take action to cut waste, arguing that if its members were to sign up to the opt-out scheme, firms will simply switch their junk mail advertising to newspapers and other methods of delivery.[64]

21. Lobbying Industry Self-Regulation (UK, 2010)

Target achievement	Target ambition	Level of uptake	APS	SIS
*	*		0.00	0.00

In 2007, the House of Commons Public Administration Select Committee (PASC) launched an inquiry into the lobbying industry. At that time, the industry was subject to no specific external regulation, relying instead on a number of self-regulatory codes of conduct operated by the three main industry associations. The inquiry assessed the effectiveness of this self-regulatory approach, and judged the underlying principles to be *"perhaps unsurprisingly, something of a lowest common denominator"* **[low level of target ambition]**.

The final report recognised there to be an *"in-built conflict of interest"* for the industry associations involved and concluded *that "in the final analysis, what lobbying organisations refer to as "self-regulation" appears to involve very little regulation of any substance"* and that *"transparency requirements are never likely to be enforceable through self-regulation"*. On that basis, the committee stated that they saw *"no advantage whatsoever to a voluntary register"* which effectively *"allows those who wish to hide the nature and scale of their activity to do so, and leads to the availability of uneven and partial information of no real benefit to those wishing to assess the scale and nature of lobbying activity"*.[65]

However, the then Government chose not to introduce a statutory register, preferring more *"robust"* self-regulation instead.[66] In March 2010, the three main lobbying industry bodies announced the creation of the UK Public Affairs Council (UKPAC), an independent not-for-profit body, to carry out a range of self-regulatory functions for the industry. The Council was tasked with maintaining a voluntary register as a response to the recommendations of the 2009 PASC report. This voluntary approach to the regulation of industry lobbying is widely regarded as having been a failure. One of the three founding members, the Public Relations Consultants Association (PRCA), withdrew from the register in December 2011.

The PRCA chief executive at the time described the UKPAC voluntary register *as "incomplete, inaccurate and unreliable"*, arguing that "*UKPAC has failed and we need a statutory register...*"[67] It called on ministers to quickly introduce legislation for a statutory register that could help regain public confidence. The PRCA said it was clear the UKPAC voluntary register had failed and that it lacked the credibility and competence to meet the Government's objectives **[low level of target achievement].**[68] A new statutory register of lobbyists was introduced in 2014 under the Transparency of Lobbying, Non-party Campaigning and Trade Union Administration Act.

22. National Association of Cigarette Machine Operators Code of Practice (UK, 1998)

Target achievement	Target ambition	Level of uptake	APS	SIS
*			0.00	0.00

Until 2011, the sale of tobacco from vending machines in England was controlled by a voluntary agreement between cigarette vending machine manufacturers and the managers of sites where vending machines were located. This non-binding agreement stated that machines should be sited in places where children could not access them and where they were in full view of staff.

According to the Department of Health, this agreement did not achieve adequate results, as demonstrated by the proportion of young people using tobacco vending machines. Cigarette vending machines account for less then 1% of total cigarette sales, but research suggests that around 17% of under age smokers have used vending machines to buy cigarettes.[69]
Data collected for the 2008–09 period revealed that, despite the voluntary code of practice, illegal sales to under-18s were made at the majority (58%) of vending machines tested. Over a quarter (28%) of vending machines were assessed as not being located in supervised areas and almost a third were assessed as being likely to result in sales to under-18s **[low level of target achievement].**[70] Regulations were introduced in 2011 banning the sale of tobacco from vending machines in England.

23. Newspaper and Periodical Publishers Recycling Agreements (UK, 1991)

Target achievement	Target ambition	Level of uptake	APS	SIS
***			1.00	1.00

In 1991, the UK newspaper industry committed itself to a voluntary target to increase the recycled content of newspapers to 40% by the year 2000. However, by the end of 1993 the recycled content of newspapers had barely risen. As a result, the then Environment Secretary threatened the industry with regulation if it failed to substantially increase recycling and encouraged newspaper publishers to produce an action plan.[71] By 1995, the proportion of waste paper in newsprint used by British papers had risen to 35%. The following year, the 40% target was achieved, four years ahead of schedule.[72]

Nevertheless, in 2000 a bill to regulate the recycled content of newsprint was proposed in Parliament, stipulating that newspaper and magazine publishers should recycle half of their products, and that newspapers should contain 80% recycled fibre by 2010.[73] However, this bill was rejected in favour of a further voluntary agreement with the Newspaper Publishers Association. Nevertheless, it seems likely that the threat of regulation was an important motivator of industry action.[74]

In April 2000, the Government and the Newspaper Publishers Association reached a voluntary agreement to increase the recycled content of newsprint to 60% by the end of 2001, 65% by the end of 2003, and 70% by the end of 2006. By the end of 2003, recycled content had almost reached 70%, three years ahead of target **[high level of target achievement]**.[75] A voluntary agreement was also reached with the Periodicals Publishing Association in 2005 to raise recycling levels to 50% by 2007, 60% by 2010, and 70% by 2013.[76] The 2013 target was exceeded in 2008.[77]

24. Payday Lenders Customer Charter (UK, 2012)

Target achievement	Target ambition	Level of uptake	APS	SIS
*		***	0.50	0.00

In 2012, payday loans company trade associations representing 90% of the market signed up to a new customer charter and code of practice relating to the fair treatment of customers **[high level of uptake]**.[78]

A review of the market by the Office of Fair Trading (OFT) in March 2013, prompted in part by concerns that some payday lenders were taking advantage of people in financial difficulty, concluded that the market was *"..not working well for many consumers"*, in particular as a result of irresponsible lending. The review found evidence of *"widespread non-compliance"* with the legislation and discovered that many lenders were not meeting the standards set out in the OFT Irresponsible Lending Guidance. 38 of the 50 lenders inspected (representing 90% of the industry) failed to comply with at least one of the complaint handling rules of the Financial Ombudsman Service. In addition, across the sector, the review found that the majority of lenders were not conducting adequate affordability assessments, with some using aggressive debt collection practices falling far below the standards set in the OFT Debt Collection Guidance.[79]

Analysis of compliance with the pledges made by the industry in 2012 found that 12 of the 14 pledges were being broken. Although this analysis found that many lenders were being much clearer about how much loans would cost in total, major failings were identified across multiple aspects of the customer charter **[low level of target achievement]**.[80] A separate survey carried out by the Department for Business, Innovation and Skills to assess industry compliance with the standards set out in the voluntary codes also documented poor performance against a number of code standards. For example, the survey found that nearly a quarter of consumers were put under pressure to extend their loan and approximately half were not made aware of the risks of loan extension. On the basis of these results, it was concluded that the industry was failing to self-regulate effectively and a number of legislative measures were proposed.[81]

25. Peat Reduction Target (UK, 1999)

Target achievement	Target ambition	Level of uptake	APS	SIS
*			0.00	0.00

Peat bogs, one of Europe's most threatened habitats, are increasingly recognised as being vitally important for wildlife and as an important store of carbon. However, less than 6% of the UK's original lowland bog habitat now remains.

In 1999, the UK Government set a target for 90% of the materials used in horticultural growing products (growing media and soil improvers) to be peat-free by 2010. By 2007, 73% of all growing media were still peat-based.[82] It became clear in 2010 the target had been missed by a significant margin, with alternatives only supplying 58% of the market. In addition, the rate of peat replacement had started to slow down; from 2007 to 2009 total UK peat use fell by only 1.63% **[low level of target achievement]**. At these rates of decline in peat usage, the UK will not be peat-free for another 120 years.[83]

In 2011, a broad cross-section of stakeholders in the UK horticulture industry, which together account for some 70% of the growing media sold in the UK, asked the Government to consider a legislative approach on the basis that the voluntary approach to peat reduction was failing to achieve the market change required. It was noted that, without a clear legislative driver, investment in the development of alternatives to peat was simply *"not commercially viable"*.[84] Despite this, the Government decided to continue with the voluntary approach to phasing out peat use.[85]

26. Prompt Payment Code (UK, 2008)

Target achievement	Target ambition	Level of uptake	APS	SIS
		*	0.00	0.00

"For too long too many large companies have been getting away with not paying their suppliers on time to maximise their profits...we will now make it compulsory for large companies to publish information about their payment practices so that those who are not playing fair can be held to account."

– Vince Cable (2014)[86]

The Prompt Payment Code is a voluntary scheme, launched in 2008, that commits signatories to a range of good payment practices. The code is administered for the Department of Business, Innovation and Skills by the Institute of Credit Management. Those that sign up to the scheme, commit to paying their suppliers within the terms of their contract and to not extending payment terms on unreasonable grounds. The main aim of the code is to protect small and medium-sized enterprises from larger firms that fail to settle bills on time.

In January 2013, the then Business and Enterprise Minister Michael Fallon, warned that he would *"name and shame"* the big companies that were resisting signing up to the code. Despite this threat, less than half of FTSE 350 companies signed up. In total, 1,453 companies backed the code, a small fraction of Britain's four million businesses **[low level of uptake]**.[87]

No information is available to assess the extent to which participants complied with the terms of the code. However, between 2008 and 2012 the overall level of late payments to small and medium size businesses almost doubled from £18.6 billion to £35.3 billion. As of February

2013, the average amount owed to a small business stood at £31,000, and 85% said they had received a late payment in the last two years.[88]

In August 2013, it was announced that the secretary of state was looking at imposing a levy on businesses that failed to pay their suppliers promptly.[89] In October 2013, David Cameron announced that businesses that fail to pay suppliers on time could be fined in order to tackle the *"devastating"* impact of late payments.[90] A consultation was launched in December 2013.[91] Following this consultation, the Government announced a number of new legislative proposals and committed to strengthening the Code. [92]

27. Public Places Charter (UK, 1999)

Target achievement	Target ambition	Level of uptake	APS	SIS
*			0.00	0.00

For most of the post-war period in the UK, tobacco control measures have been voluntary rather than legislative; according to Cairney (2007), the history of these voluntary agreements is arguably *"…one of slow movement and limited government 'bite'."*[93] Following the *Smoking Kills* White Paper in 1998, the voluntary Public Places Charter was launched by the Department of Health in 1999, backed by the UK's major hospitality trade groups, which oversaw its implementation. The charter was promoted and financially supported by members of the tobacco industry. Under the charter, participant pubs and restaurants were required to commit to *"increasing provision of facilities for non-smokers and the availability of clear air"*.

An evaluation of industry progress in 2003 found that only 43% of pubs had a formal written smoking policy and appropriate signage in place (compared to a target of 50%). One-third of all pubs were completely non-compliant with the charter. Of those pubs that were charter compliant, almost half allowed smoking throughout **[low level of target achievement].**[94] Less than 1% of pubs went smoke-free, while those with non-smoking areas relied on ventilation systems that the tobacco industry knew were limited; industry documents show that despite internal acknowledgment that ventilation and air filtration systems were ineffective, the industry extensively promoted them as they were seen as a means of circumventing smoking restrictions. [95]

Comprehensive smoke-free legislation came into force in July 2007.

28. Sunbed Code (UK, 1995)

Target achievement	Target ambition	Level of uptake	APS	SIS
*		*	0.00	0.00

In the UK, the sunbed industry is regulated under the Sunbeds (Regulation) Act 2010. Prior to the introduction of this Act, an industry association, The Sunbed Association (TSA), provided voluntary regulation via a code of practice, adherence to which was a condition of membership of the association. The code required salons to be supervised, set out age restrictions, and specified other aspects of best practice. [96] Compliance with the code has been assessed by a number of surveys. These identified serious problems in several areas related to safe use, including lack of assessment of customer skin type or cancer risk, absence of eye protection, use by under-16s, lack of safety information, and unregulated session times **[low level of target achievement]**.[97] In 2010, approximately 20% of sunbed operators were TSA members **[low level of uptake]**. [98]

29. The Voluntary Initiative (UK, 2001)

Target achievement	Target ambition	Level of uptake	APS	SIS
**	*		0.25	0.00

The Voluntary Initiative is an industry-led, UK-wide programme promoting responsible pesticide use. In 2001, the programme was jointly proposed by the farming and crop protection (agrochemical) industries as an alternative to a pesticide tax, which had been under consideration by the Government. Initial targets for the programme were set for 2006.

An evaluation of the scheme in 2006 found that, of the 18 Outcome Targets, only half had been achieved in full **[medium level of target achievement]**. The majority of the Operational Targets were achieved.[99] Although the programme resulted in many potentially valuable measures and activities likely to reduce the environmental impact of pesticide use, a number of targets were not achieved, while many of those targets that have been achieved were *"insufficiently challenging"* according to the government's Sustainable Development Commission **[low level of target ambition]**.[100]

30. Treatments You Can Trust (UK, 2005)

Target achievement	Target ambition	Level of uptake	APS	SIS
		*	0.00	0.00

Cosmetic interventions are a booming business in the UK, worth £2.3 billion in 2010, and estimated to rise to £3.6 billion by 2015. In light of concerns about the cosmetic interventions industry following the scandal caused by faulty breast implants made by the French firm Poly Implant Prothèse (PIP), the government announced an independent review into the regulations governing the whole industry in the UK in early 2012.[101] The review, which reported in April 2013, concluded that those having cosmetic procedures should be better protected. It stated that someone having a non-surgical cosmetic procedure "*has no more protection and redress than someone buying a ballpoint pen or a toothbrush*".[102] In particular, the review highlighted the fact that non-surgical cosmetic interventions such as dermal fillers (injections of an acid to reduce the appearance of wrinkles and scars), which can have irreversible adverse effects on health and well-being, are almost entirely unregulated, and called on the UK government to urgently make the required legislative changes.

Following a previous review of cosmetic surgery regulation, carried out by the Department of Health in 2005, (which also called for *"better regulation and licensing"* of aesthetic fillers[103]), a voluntary register and associated quality assurance mark for cosmetic injectable treatment providers – *Treatments You Can Trust* (TYCT) – was set up with the support of government funding. A trade association for private healthcare and cosmetic surgery providers operated the scheme.

According to the most recent review, the TYCT scheme has attained limited support from the sector and consumer awareness of the register is low. According to the review, the attempts at self-regulation by the industry have failed *"largely because voluntary codes have meant that only the best in this disparate sector commit themselves to better practice, whilst the unscrupulous and unsafe carry on as before"* **[low level of uptake]**. Separate research carried out for the Clinical Cosmetic & Reconstructive Expo, found that a majority (85%) of clinicians and medical professionals believe that current systems for regulation of the cosmetics industry, such as the Government-backed voluntary register TYCT, do not protect patients from unscrupulous practices,[104] while a survey of the awareness and perceptions of the general public and practitioners found that over half of the public sample felt that it should be more tightly regulated. There was an overwhelming call for greater regulation based on real concerns about the lack of safeguards across many interventions.[105]

Responding to the report Dan Poulter, the then Health Minister for England, said: *"While there are some responsible clinics which do take proper care of their patients... there is a significant risk of people falling into the hands of cowboy firms or individuals whose only aim is to make a quick profit. These people simply don't care about the welfare of the people they are taking money from."* He said he agreed *"entirely"* with the principles of the recommendations, stating, *"it is clear that it is time for the government to step in to ensure the public are properly protected."*[106]

31. Voluntary Agreement on Tobacco Products Advertising and Promotion (UK, 1994)

Target achievement	Target ambition	Level of uptake	APS	SIS
*			0.00	0.00

Historically, the regulation of tobacco products in the UK has been largely by means of voluntary agreements. The voluntary agreement on tobacco products' advertising and promotion was launched in 1994. A number of studies have been carried out documenting numerous breaches of the code.[107] An inquiry conducted by the Health Select Committee in 2000, concluded that *"the current regulation applying to tobacco products is entirely inadequate".* The evidence obtained by the Committee was considered to *"thoroughly discredit"* the voluntary approach. The Committee documented numerous examples of industry attempts to circumvent the requirements of the voluntary code(s), concluding that *"...once more, voluntary agreements have served the industry well and the public badly"* **[low level of target achievement]**.

The Committee stated that: *"...advertising agencies have connived in promoting tobacco consumption, have shamelessly exploited smoking as an aspirational pursuit in ways which inevitably make it attractive to children, and have attempted to use their creative talents to undermine Government policy and evade regulation. We welcome the Government's commitment to end all forms of tobacco advertising and sponsorship."*[108]

Legislation was passed in 2002 banning most remaining forms of tobacco advertising.

32. Voluntary Code of Practice on Broadband Speeds (UK, 2008)

Target achievement	Target ambition	Level of uptake	APS	SIS
*		***	0.50	0.00

The industry regulator Ofcom introduced the Voluntary Code of Practice on Broadband Speeds in December 2008 with the aim of improving the overall standard of information on broadband speeds available to consumers.[109] The Code was introduced in order to prevent the mis-selling of broadband products after the regulator found that many customers could not achieve the headline broadband speeds advertised by some companies.

Research conducted in 2009 found that compliance with the principles of the code was mixed, leading Ofcom to threaten mandatory regulation.[110] A revised code came into force in 2011.[111] Research conducted in 2013 to check the compliance of participating internet service providers (ISPs) with the revised code found that levels of non-compliance with several of the key principles that were assessed was high. In particular, the majority of mystery shoppers were not told that the actual speed may be lower than the headline speed and/or were not provided with information regarding the factors that can affect broadband speed **[low level of target achievement]**. [112] All the UK's largest ISPs, representing over 95% of UK broadband customers, signed up to the Code **[high level of uptake]**.

33. Voluntary Emissions Reporting (UK, 2008)

Target achievement	Target ambition	Level of uptake	APS	SIS
*		*	0.00	0.00

From October 2013, all UK quoted companies were required to report on their greenhouse gas (GHG) emissions.[113] A mandatory approach was deemed necessary as the voluntary approach that had been in place since 2008 was not working, despite the clear background threat of mandatory regulation being introduced (Section 85 of the Climate Change Act required the Government to make regulations, under the Companies Act 2006, by 6 April 2012 requiring the directors' report of a company to include information about GHG emissions as is specified in regulations, or to lay a report before Parliament explaining why no such regulations had been made).[114]

The weight of evidence suggested that the voluntary approach was not working. There were an insufficient number of companies reporting their emissions, a lack of comparability between reporting methodologies, and a general failure to comply with recommended guidelines or obtain independent (external) verification **[low level of target achievement; low level of uptake]**. Reports under the voluntary approach were accused of being restricted to positive performance or information that helped a company's self interest.[115] For example, although 62% of FTSE All-Share companies made quantitative disclosures on GHG emissions in 2009/2010, only 22% reported their emissions in line with 2006 government guidance, and only 36% included environmental disclosures in the audited sections of their annual reports.[116]

New DEFRA reporting guidance was introduced in September 2009. However, research carried out by Deloitte in 2010 showed that less than 10% of listed companies reported their emissions in line with this new official DEFRA guidance (9%) or obtained third-party assurance (8%).[117] Similarly, another review found that only 27% of FTSE 350 companies obtained independent verification of any portion of their emissions data in 2010, down from 32% in 2009.[118] Research by environmental consultancy Carbon Smart revealed that the vast majority of the carbon and environmental claims made by FTSE 350 companies lacked sufficient credibility and verification and that sustainability assurances often did not meet the needs of the reporting companies or the stakeholders.[119]

2.2. Non-UK Schemes: Europe

1. Agreement on the Collection and Recycling of Batteries (Belgium, 1997)

Target achievement	Target ambition	Level of uptake	APS	SIS
*	***	***	0.67	0.00

In 1993, the Belgian government imposed a tax on the sale of all batteries as part of a general ecotax law that aimed to discourage the use of certain products in favour of less polluting substitutes. The battery industry did not support this law and proposed a voluntary collection and recycling scheme. Following prolonged negotiations, the ecotax law was changed in 1996 to exempt batteries from the tax; in return, the industry was required to finance a new collection and recycling scheme. The scheme also required the industry to achieve certain collection targets that were identical to those in the ecotax law **[high level of target ambition]**. It was agreed that if these conditions were not met then the tax would be levied on all household batteries sold in Belgium.

The voluntary agreement was signed in June 1997 by representatives accounting for 95% of battery sales in Belgium **[high level of uptake]**. Explicit, quantified targets were set for the scheme with interim milestones for each year. The agreement was signed for a five-year period, with yearly evaluations. Despite a significant increase in collection levels, the collection target for the year 2000 was missed by more than 10% **[low level of target achievement]**.[120]

2. Agreement on the Gradual Lowering of the Environmental Impact of Washing Powders (Czech Republic, 1995)

Target achievement	Target ambition	Level of uptake	APS	SIS
***	*	*	0.33	0.00

A voluntary agreement targeting the negative environmental impacts associated with detergents was concluded in 1995 between the Czech Association of Producers of Soaps, Cleaning Agents and Detergents (CSDPA) and the Ministry of the Environment. The aim of the agreement was to achieve a gradual reduction in the amount of phosphates and other toxic substances in water. At the time, the contribution made by detergents to surface-water phosphate pollution in the Czech Republic was estimated to be between 20% and 25% of the total phosphate input to surface-water.

In signing the agreement, the main goal of the CSPDA members was to use the agreement as an alternative to a proposed draft law. However, the targets set under the agreement were not particularly stringent and no timeframe was set for achieving them [**low level of target ambition]**. Nevertheless, almost 40% of the detergents produced by members of the CSDPA were phosphate-free by 2003, and by 2005 members of the association were no longer selling laundry detergents containing phosphates **[high level of target achievement]**.

Despite this apparent success, the market share of non-members started to increase following the signing of the agreement. At the time the agreement was signed, almost 90% of producers were members of the CSDPA. However, this had fallen to only 50% by 2005 **[low level of uptake]**. Due to concomitant increase in the number of phosphate-containing detergents on the market from producers not part of the agreement, the government chose to introduce new mandatory controls limiting the phosphorus content of detergents.[121]

3. Agreement Regarding the Use of PVC (Denmark, 1991)

Target achievement	Target ambition	Level of uptake	APS	SIS
* *	*	* *	0.33	0.00

The agreement regarding the use of PVC was launched in 1991 by the Danish Ministry of the Environment in partnership with the Danish Employers' Confederation, the Industrial Council, and the Danish Plastics Federation. Prior to this, the Environment Minister had threatened the industry with a PVC ban. However, following lobbying from the industry a voluntary agreement was negotiated. According to Lauber and Ingram (2000), *"the result of the politically sensitive negotiations was arguably a minimalist agreement with the original total ban watered down to the most pressing problems of incineration, landfill and substitution for packaging PVCs and lenient waste reduction goals for other PVCs"* **[low level of target ambition]**. The agreement covered approximately 40% of the relevant companies, representing 75% of the PVC market share **[medium level of uptake].**

The objective of the PVC Agreement was to keep PVC away from incineration plants by reducing the use of PVC in packaging and other products, and by increasing recycling of building products. It also aimed to reduce the use of additives, such as lead and chloro-paraffins. Specific objectives were set for building and construction products, packaging, and fire-inhibiting substances.

The initial results published by the industry in 1997 demonstrated that good progress was being made. However, following independent scrutiny, these results were subsequently found to be based on incorrect calculations. In 1999, the Environment Ministry published a status report and a new PVC strategy. Performance against the targets of the agreement was found to be mixed **[medium level of target achievement]**. The report concluded that, although the PVC Agreement resulted in a number of positive developments, it had failed to achieve the agreed results. In particular, the industry failed to live up to their commitment to financing collection schemes for all building products, such that large amounts continued to end up in incineration plants rather than being recycled. In addition, with the exception of packaging, use continued to increase. It was judged that results were *"not satisfactory"* and that the agreement was *"inadequate"* for dealing with the problems associated with PVC use, such that there was a need for supplementary measures including new regulations and taxes.[122]

4. Agreement Scheme on Industrial Energy Efficiency (Denmark, 1996)

Target achievement	Target ambition	Level of uptake	APS	SIS
* *		* *	0.50	0.25

The Danish Agreement Scheme on Industrial Energy Efficiency was launched in 1996 as part of a green tax package aiming to reduce CO_2 emissions by Danish trade and industry. Participants in the voluntary scheme received a rebate on the CO_2 tax applicable to all fossil fuel-based energy sources. Failure to comply with the requirements of the scheme resulted in termination of the agreement and retransfer of the tax rebate. Subsidies were also granted to industry if it changed to more effective energy technologies and methods of production. When the scheme was introduced, no specific target was set for the outcome. However, the design of the scheme helped to ensure that individual plants had strong incentives to comply, and also helped minimise the risk of free-riding.

Most evaluations indicate that the scheme reduced the energy use and CO_2 emissions of the participating companies **[medium level of target achievement]**. There are, however, no truly reliable estimates of the net impact.[123] For many companies in Denmark, the main benefit of signing the voluntary agreement was the tax rebate. In 1997, about 45% of the industrial energy consumption was covered by agreements (65% by 2005) **[medium level of uptake]**.[124]

5. Code of Good Environmental Practice for Household Laundry Detergents (EU, 1996)

Target achievement	Target ambition	Level of uptake	APS	SIS
*		***	0.50	0.00

In 1996, the European detergent industry signed a voluntary agreement to reduce the environmental impact of household laundry detergents. The Code of Good Environmental Practice for Household Laundry Detergents was formally adopted by a European Commission Recommendation in 1998. More than 170 companies took up the Code, accounting for around 90% of the market **[high level of uptake]**.

Target	Evaluation	Target Achieved?
1. Reduce energy consumption by 5% per wash.	6.4%	Yes
2. Reduce laundry detergent use by 10% per capita.	7.9%	No
3. Reduce packaging use by 10% per capita.	6.7%	No
4. Reduce poorly biodegradable ingredients by 10% per capita.	23.7%	Yes

Set against a 1996 baseline, specific reduction targets were set in four areas and covered a five-year period ending in December 2001. Data collection and auditing was done by independent auditors, who reported separately to the European Commission. The industry met two of the Code's four reduction targets. However, two targets were missed **[low level of target achievement]**.[125]

6. Declaration of German Industry on Global Warming Prevention (Germany, 1995)

Target achievement	Target ambition	Level of uptake	APS	SIS
***	*	**	0.50	0.00

The Declaration of German Industry on Global Warming Prevention was made in 1995. The overall target of the agreement was for up to a 20% reduction in total industry specific energy consumption and/or CO_2 emissions by 2005 (base year 1990), although separate targets were also set at the sector/firm level. The scheme covered approximately 70% of industrial energy consumption **[medium level of uptake]**. The main motivation for the German industries to undertake voluntary reductions was the desire to avoid a potential carbon/energy tax that the government had been threatening to impose.

According to Ramesohl and Kristof (2001), the evidence available in 1997 already suggested that the scheme would easily reach most of its self-defined quantitative targets **[high level of target achievement]**, although this was based on self-reported industry data that had not been independently verified. Ramesohl and Kristof (2001) state that "*most of the progress reports were characterised by substantial deficiencies concerning completeness, transparency and credibility...*"[126] A further problem relates to the targets themselves which were *"often set with the express intention of being easily achievable"* and as such were very much in line with historical trends in energy efficiency improvements and CO_2 reductions **[low level of target ambition]**. In fact, many of the targets had already been achieved prior to the introduction of the scheme, such that the overall impact of the scheme was rather limited.[127]

7. EKO-Energi Program (Sweden, 1994)

Target achievement	Target ambition	Level of uptake	APS	SIS
		*	0.00	0.00

The Swedish EKO-Energi Program was a public voluntary programme launched in 1994 that offered free energy audits and the promotion of a label to participants. The objectives of the programme included improving the efficiency of electricity use in industry and reducing CO_2 emissions. The total energy consumption of the participating firms amounted to some 10–15% of industrial energy consumption in Sweden; a large part of Swedish energy-intensive industry chose not to participate **[low level of uptake]**.

Based on the available data, it was not possible to disentangle the effects of the EKO-Energi Program from the effects of simultaneous initiatives. However, as only a limited segment of firms were participating, the direct effects on total industrial energy consumption were inevitably very small. The scheme was criticised for its unclear programme purpose, lack of administrative continuity, weak follow-up in the later years of the programme, unfulfilled promises concerning publicity, and extremely low standards of record-keeping and documentation. The most clearly observed results were knowledge diffusion and the inclusion of energy efficiency in the environmental policy of some participating firms.[128]

8. Environmental Protocol between the Ministries of Environment and Industry and the Pulp Paper Industry (Portugal, 1988)

Target achievement	Target ambition	Level of uptake	APS	SIS
*	***	***	0.67	0.00

This scheme was established in 1988 following industry negotiations with the government. The agreement covered 100% of the pulp paper industry **[high level of uptake]**. Nevertheless, not all of the mills made the required investments to reduce their environmental impacts. The targets of the agreement have been described as *"quite demanding"* **[high level of target ambition]**.

Companies that did not comply with the standards were liable to be fined. However, of the four companies involved, only one had met the standards by the 1991 deadline **[low level of target achievement]**. Regulations were proposed in 1992. However, following negotiations with the industry, the government extended the deadline of the voluntary agreement until 1995 when a number of the standards were due to become binding. All of the targets had been achieved by 1995, and in some cases surpassed.[129]

9. European Declaration on Paper Recovery (EU, 2000)

Target achievement	Target ambition	Level of uptake	APS	SIS
***	*		0.50	0.00

The European Declaration on Paper Recovery, launched in 2000, established a target to ensure that at least 56% of the paper and board products consumed in Europe would be recycled by 2005. A second declaration was launched in 2006, setting a target of 66% by 2010.[130] In 2010, the recycling rate reached 69% **[high level of target achievement]**.[131] A third declaration in 2011 set a target for the 2011–2015 period of 70%.[132]

Despite this positive progress, the targets of these declarations have frequently been accused of lacking ambition. When the original target of 56% was set, the German industry had already achieved a recovery rate of over 60% and was aiming much higher. The agreement was not recognized by the European Commission.[133] Similarly, the most recent target of 70% by 2015 could hardly be called ambitious, given that the rate achieved in 2010 was already 69%.[134] This target had already been achieved by 2012 **[low level of target ambition]**.[135]

The industry has been keen to point out that there is still potential for big improvements in some countries. In 2012, the European Recovered Paper Council stated that it would welcome harmonised collection targets at an EU level, which would oblige lagging countries to improve performance, alongside a ban on paper waste going to landfill.[136] Parties to the declaration have made it clear that achieving more ambitious targets requires the appropriate implementation and enforcement of complementary policies.[137]

10. Long Term Agreements (Netherlands, 1992)

Target achievement	Target ambition	Level of uptake	APS	SIS
***		**	0.75	0.50

Starting in 1992, a number of voluntary Long Term Agreements (LTAs) on energy efficiency improvement were negotiated between government and industry in The Netherlands. In total, approximately 72–75% of industrial energy consumption (in the base-year 1989) was covered by the LTAs; although LTAs covered sectors that together accounted for approximately 90% of industrial energy consumption, not all of the firms in these sectors participated **[medium level of uptake]**.

The overarching policy target was to decrease energy intensity in the manufacturing industry by 20% over the period 1989–2000. This target was translated into individual agreements with each sector during the negotiation phase, most of which were in line with the overarching policy target. However, according to Neelis et al. (2007), energy efficiency improvements over the full time period 1980–2003 were about 1% a year (excluding the chemical industry for which no reliable data are available), which is arguably rather low relative to the goal of 2.7% efficiency improvement called for by the European Commission.[138]

A number of evaluations have been carried out assessing the extent to which these agreements achieved their targets. Results in 1997 showed that more than half of the LTAs were substantially lagging behind the agreed annual rate of energy intensity decrease. However, energy-weighted goal achievement was close to 100%, as those lagging behind accounted for a relatively small part of industrial energy consumption **[high level of target achievement]**. A caveat to this is that the monitoring arrangements put in place for the LTAs were judged to be *"insufficiently transparent"* and lacking in objectivity; Farla and Blok (2002) called for independent supervision and verification of the LTA monitoring results.[139] Further studies have demonstrated that between a quarter and a half of the documented energy savings could be attributed to the policy mix of long-term agreements and supporting measures (e.g. subsidies and fiscal incentives) in place over the period.[140]

11. PAOS Code (Spain, 2005)

Target achievement	Target ambition	Level of uptake	APS	SIS
*		***	0.50	0.00

Child obesity is an important public health problem due to its high and growing frequency and serious health consequences. In 2005, the self-regulatory PAOS Code was agreed by 36 companies representing more than 75% of the food and beverage market in Spain **[high level of uptake]**. This code established a series of ethical principles and standards for the design and dissemination of advertising messages, particularly those aimed at children. It also established a range of sanctions for infractions of the Code, including fines and temporary or permanent exclusion from the code agreement.

In evaluating overall compliance with the PAOS Code, a report was carried out which judged an advertisement to be compliant if it met all the code standards, non-compliant when it contravened one or more of the code standards, and of uncertain compliance in all other cases. This assessment found that non-compliance with the PAOS Code was very high (50%) and was similar for companies that did and did not agree to the Code, casting doubt on the Code's effectiveness and oversight system. In 20% of cases compliance was uncertain **[low level of target achievement]**. The proportion of TV food advertising broadcast during the children's time slot increased from 48% in 2005 to 56% in 2007, such that Spanish children now watch an average of 22 food and beverage advertisements per day. Overall, these results suggest that the code is of limited effectiveness.[141]

12. Pharmaceutical Industry Self-regulatory Code (Sweden, 2011)

Target achievement	Target ambition	Level of uptake	APS	SIS
*			0.00	0.00

In Sweden, promotional activity targeting health professionals is governed by a voluntary code of practice administered by the pharmaceutical industry. In the most recent version of the code, launched in 2011, the section relating to printed promotional information targeting healthcare personnel comprises 20 articles. Article 1 states that printed information should include *"accurate, objective, meaningful and balanced particulars dealing adequately with the favourable and unfavourable properties of the drugs"*, while Article 4 states that information *"must be truthful and may not contain any presentation in words or pictures that directly or indirectly – by implication, omission, distortion, exaggeration or ambiguity – is intended to mislead"*.

A review of the code found that the system suffers from lax oversight and that almost 40% of all unique antidepressant advertisements printed in the Swedish Medical Journal between 1994 and 2003 violated at least one article of the code, with most violating more than one article. 32% of unique advertisements breached key code principles (Article 4). The review concluded that the Swedish self-regulatory system has *"...largely failed to motivate industry into providing truthful information..."* **[low level of target achievement].**[142]

13. Programme for Improving Energy Efficiency in Energy Intensive Industries (Sweden, 2005)

Target achievement	Target ambition	Level of uptake	APS	SIS
	***	***	1.00	1.00

The Swedish Programme for Improving Energy Efficiency in Energy-intensive Industries (PFE) began in 2005 in conjunction with an energy tax. Companies were incentivised to join the scheme by a tax rebate permitted under the EU Energy Tax Directive. During the first two years of the scheme, participants were required to introduce and obtain certification for a standardized energy management system and carry out an energy audit and analysis. The identified electricity saving measures then had to be implemented by the participants, with

the exception of those measures with low-rates of return, which could be implemented on a voluntary basis. Companies' reports were reviewed by the Swedish Environment Agency and companies were subject to compliance checks. In the case of non-compliance, companies were liable to the regulations and tax repayments.

A review of the first five-year period, which concluded in 2009, found that less than 10% of eligible companies were participating in PFE. However, these companies accounted for 85% of the eligible electricity demand **[high level of uptake]**. Each company was required to achieve an improvement in efficiency equivalent to the improvement that would have been achieved if they had been subject to the energy tax. Evidence suggests that the gross annual impact of the scheme greatly exceeded the estimated annual impact of a minimum tax **[high level of target ambition]**. Nevertheless, many of the improvements that were made represented the *"low hanging fruit"* such that future improvements will inevitably be more challenging to achieve.[143]

14. Protection of Pedestrians and Cyclists (EU, 2001)

Target achievement	Target ambition	Level of uptake	APS	SIS
*	*		0.00	0.00

Road traffic accidents are the leading cause of deaths and hospital admissions for people under the age of 45 in the EU.[144] In fact, each year around 9,000 pedestrians and cyclists die on EU roads, most of which are children and elderly road users hit by the fronts of cars in urban and residential areas.[145] In the early 1990s, the European Enhanced Vehicle Safety Committee (EEVC) developed a series of four tests which, if adopted universally, were estimated to have the potential to save up to 2,000 lives and prevent around 17,000 serious injuries annually across the European Union at an additional development cost of only €30 a car.[146] These tests related to a range of changes that could be made to the front of cars to protect pedestrians and cyclists. Estimates suggest that the figures for road crash deaths could drop by as much as 20% if vehicles complied with the recommendations of the EEVC.[147]

The European Commission conducted a cost-benefit analysis of safer car fronts for vulnerable road users and concluded in its 2000 Communication *Priorities in EU Road Safety* that making car fronts safer was one of its top six cost-effective actions.[148] In 2001, under pressure from the European Commission (who were preparing legislation on the issue), the European Automobile Manufacturers Association (ACEA) signed a voluntary agreement. This aimed to improve the protection of pedestrians and other road users from injury stemming from a collision with motor vehicles, by setting new standards for all new types of motor vehicles concerning bumpers, anti-lock brake systems and daytime running lights.

However, the proposals were *"roundly criticised by experts as non-scientific"* and were estimated to offer a 75% lower level of protection against fatal injury than the EEVC's recommendations **[low level of target ambition]**. The proposals also failed to implement existing best practice; one car already on the market at the time fulfilled over 70% of the safety committee's requirements at an additional cost of only €10. This was equivalent to three times the level of protection that the industry had offered to fully implement voluntarily over a period of 11 years.[149] According to the European Transport Safety Council (ETSC), the agreement *"... fails to deliver the high level of protection expected...on a very important matter of public safety..."* On that basis the ETSC chose to "*strongly disagree with the industrys opinion that the voluntary agreement will deliver more safety to pedestrians and cyclists more quickly."*[150]

A year after the agreement was signed, tests by the European New Car Assessment Programme showed that new cars continued to perform badly in pedestrian protection tests **[low level of target achievement]**[151] The European Parliament and Council decided that, in most of its substance, the voluntary agreement(s) were not sufficient and invited the Commission to submit legislative proposals.[152]

15. Vehicle Fuel Efficiency (EU, 1998)

Target achievement	Target ambition	Level of uptake	APS	SIS
*			0.00	0.00

In 1998, a voluntary agreement was reached between the European Commission and the European Car Manufacturers Association under which the industry committed to reducing average CO_2 emission figures from all new cars to 140 g/km by 2008 (a 25% reduction).[153] The target was less ambitious than the Commission had initially hoped.[154]

A review conducted by the Commission in 2007 concluded that, although some improvements had been made, the voluntary agreement had not been successful in achieving its targets **[low level of target achievement]**. The Commission therefore deemed it necessary to resort to a legislative approach.[155] In 2009, a new binding limit on CO_2 emissions from cars was set to be achieved by a phase-in of annual emission targets alongside sanctions for non-compliance.

In its 2008 report on international policies for vehicle fuel efficiency, the International Energy Agency (IEA) noted that: *"...voluntary programs have generally fallen short of their targets... as a result of the general ineffectiveness of voluntary programs to constrain vehicle energy efficiency, there is a general trend away from them...in order to achieve significant energy savings in this sector, governments should introduce regulatory fuel efficiency standards."*[156]

16. Vinyl2010 (EU, 2000)

Target achievement	Target ambition	Level of uptake	APS	SIS
***	**	***	0.83	0.50

In March 2000, the European PVC industry, including producers and converters, signed a voluntary agreement aimed at minimizing the environmental impact of PVC. The industry committed itself to a 10-year plan comprising targets and deadlines to improve production processes and products, minimize emissions and waste, and boost collection and recycling.[157] It was described by members of the industry as a *"pre-empted strike to prevent legislation... there was a very real threat there and the industry needed to react...the PVC industry decided to take the 'bull by the horns' and proposed to the Commission that it engages in the voluntary commitment."*[158] According to Héritier and Eckert (2009), this is a case that clearly demonstrates *"...how an explicit legislative threat builds up over time, and how the industry responds to this by initiating self-regulation."*[159]

The scheme achieved the majority of its targets by the 2010 deadline **[high level of target achievement]**, most of which have been described as reasonably ambitious **[medium level of target achievement].** It was signed *"...by all major associations representing the entire PVC value chain"* **[high level of uptake]**.[160]

According to one review, the success of this voluntary approach relied, to a large extent, on *"the close co-operation of the entire value chain...clear, verifiable targets and deadlines allowing transparent monitoring."*[161] A follow-up programme called VinylPlus was launched in 2011.

17. Voluntary Agreements for the Reduction of Industrial GHG Emissions (France, 1996)

Target achievement	Target ambition	Level of uptake	APS	SIS
**	*	*	0.17	0.00

A total of seven voluntary GHG reduction agreements were negotiated between industry and government in France in the 1990s. Evidence from a preliminary assessment of two of these agreements with energy-intensive industries (aluminium and packaging glass) suggests that most of the targets regarding specific emissions objectives were likely to have been attained, although

the same was not true for the absolute emissions targets due to higher than expected production levels **[medium level of target achievement]**. According to this assessment, the targets of both agreements did not require much effort over-and-above the business-as-usual behaviour of firms. A comparison between the estimated potential for carbon dioxide reduction and the actual targets, showed that the targets only involved 29% of the estimated savings potential **[low level of target ambition].** Analysis also suggests that the reductions in emissions cannot be seen as a direct consequence of the voluntary agreements. On-going negotiations concerning other environmental regulations were likely key incentives for industry participation in these programs.

Coverage for the glass sector was just under 75% (in terms of sales). The aluminium sector agreement was signed by the largest aluminium company in France, accounting for approximately 70% of primary and secondary aluminium production in the country. However, for the programme as a whole (all seven agreements), total coverage was less than 40% of industrial energy consumption **[low level of uptake]**. [162]

18. Voluntary Agreements on Energy Efficiency in Household Appliances (EU, 2007)

Target achievement	Target ambition	Level of uptake	APS	SIS
***		***	1.00	1.00

In 2007, the EU household appliance industry association CECED called for new government mandated energy efficiency standards for large household appliances to be set through binding legislation. Despite meeting the targets of several energy-efficiency voluntary agreements for washing machines, dishwashers, and refrigerators **[high level of target achievement]**, the members of CECED repeatedly called for new government mandated energy efficiency labelling, arguing that any further improvements in efficiency needed to be driven by legislation that *"applies to all and is enforced on all"*. The move was driven by frustration over the failure of national authorities to enforce European energy labelling laws and the growing share of the market for non-CECED importers (free-riders). Despite 90% coverage **[high level of uptake]**, the industry declared in 2007 that it would not renew its agreements. The increased incidence of free-riding, coupled with requirements for further improvements in energy efficiency, might have resulted in an agreement that would no longer be profitable for participants, thereby causing the industry to abandon the agreement and call for further improvements through mandatory standards.[163]

19. Voluntary Agreement to Reduce Standby Consumption in TVs and VCRs (EU, 1997)

Target achievement	Target ambition	Level of uptake	APS	SIS
***	*	**	0.50	0.00

The combined power use of TVs and VCRs in standby mode represents a significant consumption of energy, which could be substantially reduced by changes in their design. In 1997, the European Association for Consumer Electronics Manufacturers (EACEM) negotiated a voluntary agreement with DG Transport and Energy that set limits for the standby power consumption of TVs and VCRs. The 16 members of EACEM that signed the agreement represented 64% of the European market for TVs and VCRs by volume **[medium level of uptake]**.

Participants committed to reducing the average standby power consumption of all units sold to less than or equal to 6W by January 2000. On average, the industry easily achieved this target several years in advance **[high level of target achievement]**. However, the targets that were set were relatively unambitious. According to one report, *"if mandatory standards had been proposed they would probably have been at 1W by 2000, so, in comparison, the voluntary agreement represents a weak commitment."* When the agreement was set up, some manufacturers had already reached a level of standby consumption significantly below 6W **[low level of target ambition].**[164]

20. Voluntary Code of Conduct on Pre-contractual Information for Home Loans (EU, 2001)

Target achievement	Target ambition	Level of uptake	APS	SIS
*		**	0.25	0.00

In 2001, on the initiative of the European Commission, a voluntary code of conduct on home loans was drawn up and negotiated by the European Credit Sector Associations and a range of European consumer organisations. The aim of the Code was to make it easier for consumers to compare loan products available from different lenders by helping to ensure transparency of information and comparability.

In 2003, the Commission initiated an external review of the code, which indicated that implementation was not satisfactory. In relation to the first requirement of the code, over 50% of the tests conducted failed entirely; in only 6.5% of cases did interviewers receive correct and complete general information as described in the Code of Conduct. In relation to the second requirement, interviewers were given a European Standardised Information Sheet in only 50% of cases. This information was correct and complete only in 5% of the tests carried out **[low level of target achievement]**.

Code requirement	Evaluation
1. Provide general information about home loans on offer	Interviewers did not get the information in **53%** of cases; this information was correct and complete in only **6.5%** of cases.
2. Provide personalised information at a pre-contractual stage to be presented in a "European Standardised Information Sheet"	Interviewers did not get the information in **50%** of cases; this information was correct and complete in only **5%** of cases.

In relation to uptake, the picture is mixed. The countries where the Code of Conduct has been implemented represent 58% of the European population. It has not been implemented at all in three countries **[medium level of uptake]**.[165]

2.3. Non-UK Schemes: Rest of the World

1. 33/50 Program (USA, 1991)

Target achievement	Target ambition	Level of uptake	APS	SIS
***	*	**	0.50	0.00

The U.S. Environmental Protection Agency's (EPA's) 33/50 Program was initiated in 1991 and is considered the grandfather of modern voluntary programs designed to achieve public policy goals. Its primary objective was to convince American manufacturing companies to set goals for reducing their toxic chemical emissions. It emerged shortly after the deadly chemical release from Union Carbide's plant in Bhopal, India, which killed over 3,000 people. Chemical industry leaders became concerned about the industry's license to operate, especially after survey results found that the chemical industry's reputation among the public was in the same league with the tobacco and nuclear industries, both of which were heavily regulated.[166]

The 33/50 Program targeted 17 priority chemicals and set as its goal a 33% reduction in releases and transfers of these chemicals by 1992 and a 50% reduction by 1995, measured against a 1988 baseline. The Program achieved its goal in 1994, one year ahead of schedule **[high level of target achievement].** However, of the total reduction in the releases of these chemicals during 1988–93, 40% took place before the Program was fully initiated **[low level of target ambition].**[167] In terms of uptake, 1,294 companies participated, equivalent to 13% of all eligible firms. Those participating companies were responsible for generating more than 60% of releases of 33/50 chemicals in the United States in 1988 **[medium level of uptake]**.

An initial assessment of the extent to which the scheme was successful in delivering beyond business-as-usual improvements suggested that it had been successful, but had depended in part on the presence of an effective government regulatory mechanism in the background.[168] However, a number of subsequent studies have found no impact at all from participation in the scheme.[169] Instead, it was found that most of the reported impacts came from early joiners who had already accomplished significant reductions prior to joining, and were simply free-riding on those efforts after joining the scheme. The study concluded "*the empirical evidence favouring the Program's success is extremely weak, at best*".[170]

2. Accelerated Reduction/Elimination of Toxics (Canada, 1994)

Target achievement	Target ambition	Level of uptake	APS	SIS
*	*	*	0.00	0.00

The Accelerated Reduction/Elimination of Toxics (ARET) Challenge was a voluntary program launched by the Canadian government in the early 1990s. It aimed to reduce and eliminate releases of a range of toxic substances, which have the potential to adversely impact on human health and the environment. It extended from 1994 to 2000.

Evidence suggests that participants exceeded their release reduction targets for some substances, and missed their targets for other substances. The goal of a 90% reduction in releases of 30 key toxic, persistent, and bio-accumulative substances by 2000 was not achieved. In fact, releases were reduced by only 61%, although goals for less toxic substances were achieved **[low level of target achievement]**. However, it was noted that, due to the lack of reporting protocols regarding how information should be collected or presented, and the lack of third party verification, the *"margin of error of these data is likely highly variable due to the broad spectrum of methodologies used to measure releases"*.[171]

Recent evidence suggests that ARET participants did not perform any better than non-participants.[172] Participants were allowed to select a base year (up to six years before the launch of the program) at their own discretion; as a result, in some cases more than half of the reductions had been achieved prior to the launch of the program **[low level of target ambition]**. The level of participation exceeded the original expectations of those who designed the initiative. However, by the end of 1995, action plans had been received from facilities comprising just 40% of all Canadian industrial production. The non-participation of some companies was described as a *"continuing concern"* in the final evaluation report **[low level of uptake]**.

The ARET Program was designed to complement other policy instruments in Canada such that it is not possible to attribute all of the observed reductions to the program. There were a range of other drivers that were likely to have been important, such as existing regulations, the threat of additional regulations, and market drivers. Many industry representatives claimed that they would have made environmentally beneficial technological improvements in the absence of ARET.[173]

3. Alberta Nutrition Guidelines for Children and Youth (Canada, 2008)

Target achievement	Target ambition	Level of uptake	APS	SIS
*		*	0.00	0.00

In June 2008, the Canadian province of Alberta introduced the Alberta Nutrition Guidelines for Children and Youth (ANGCY). These voluntary nutrition guidelines were developed in order to *"...ensure children and youth have access to healthy food choices within a variety of settings, including schools, childcare and recreational facilities"*.

In December 2009, a study was undertaken to assess the extent to which publicly-funded recreational facilities in Alberta were aware of, and had adopted and implemented the ANGCY, and the barriers to their adoption and implementation. Only 50% of managers in the study sample had heard of the ANGCY and only 14% of facilities had adopted the guidelines **[low level of uptake]**. Just 6% of facilities had actually implemented the guidelines **[low level of target achievement]**. The main barriers to adoption and implementation were financial in nature; managers felt that adopting the guideline would *"put them at an economic disadvantage and decrease profit."*[174]

4. Antioquia Cut Flower Agreement (Colombia, 1996)

Target achievement	Target ambition	Level of uptake	APS	SIS
**		*	0.25	0.00

Colombia is the world's second largest producer of cut flowers, the majority of which are exported. There are a number of environmental impacts associated with flower growing in Colombia, including agrochemical pollution, water use, and hazardous wastes. The Antioquia cut flower agreement was signed in December 1996, by representatives of the regulatory authority and members of an industry trade association, representing approximately 20% of all growers in Antioquia, mostly owners of large farms **[low level of uptake]**.

The key commitments of the agreement related to improving the environmental performance of the industry in relation to air, water, and solid waste pollution. Of all 33 commitments in the agreement, 61% were kept **[medium level of target achievement]**. According to an evaluation of the scheme, growers were motivated to participate as a means of building capacity for, and lowering risks associated with, the new mandatory regulatory regime introduced in 1993 i.e. as a means of minimizing regulatory compliance costs. There were also annual subsidies tied to participation to support action in relation to a number of the commitments. Reputational drivers relating to international markets may also have been important.[175]

5. California Urban Water Conservation Programme (USA, 1991)

Target achievement	Target ambition	Level of uptake	APS	SIS
*		**	0.25	0.00

In 1991, a Memorandum of Understanding (MOU) was signed by Californian water providers voluntarily committing them to implementing cost-effective best management practices (BMPs) for demand-side urban water management. The MOU was signed during a period of severe drought and was the outcome of a protracted conflict among urban water agencies, the environmental community, and state regulators. Significant regulatory measures and third party litigation were set aside because of the stated intention to achieve the water efficiency promises made by the commitment to the MOU. The number of participating agencies far exceeded the expectations of the original negotiators on both sides, but represented only around half of the large urban water agencies in the state **[medium level of uptake]**.

Evidence shows that agencies that joined the program did not conserve more water than their otherwise-similar counterparts. As the program lacked monitoring and enforcement mechanisms, it appears to have led water agencies to use the MOU for political gain without following through on implementation.[176] A review of the first ten-year reporting period found that only four water utilities successfully implemented all 14 BMPs. About 15% of water utilities did not report compliance data at all. Only 5 of 14 BMPs showed more than 75% of water utilities in compliance **[low level of target achievement]**. [177]

6. Carpet America Recovery Effort (USA, 2002)

Target achievement	Target ambition	Level of uptake	APS	SIS
*		***	0.50	0.00

In 2002, the Carpet Stewardship Memorandum of Understanding (MOU) was signed and an independent third-party organization, the Carpet America Recovery Effort (CARE), was established to facilitate the carpet industry-led initiative to meet the goals of the MOU. This voluntary partnership between government and industry was based on a series of negotiated outcomes aimed at increasing the reuse and recycling of post-consumer carpet and reducing the amount of waste carpet going to landfill. The agreement was signed by an industry body that represented over 90% of the carpet industry **[high level of uptake]**, that agreed to a number of negotiated outcome goals for 2012 as a first step toward reaching the aspirational goal of removing carpet from the national waste stream.[178]

Target	Baseline (2002)	Actual Results (2012)
Recycling Rate (20–25%)	1%	8%
Diversion Rate (27–34%)	1%	10%

In 2012, CARE produced a report detailing progress made in meeting the negotiated outcome goals. Performance against these goals was poor; despite the improvement in industry performance during the lifetime of the agreement, the key goals were missed by a substantial margin **[low level of target achievement]**. For example, the recycling rate achieved (8%) was less than half of the target recycling rate specified in the initial agreement (20–25%).[179]

7. Climate Challenge Program (USA, 1994)

Target achievement	Target ambition	Level of uptake	APS	SIS
***	*	**	0.50	0.00

The Climate Challenge Program is a voluntary scheme launched in the USA in 1994 and administered by a government agency under which participating utilities commit to reducing their CO_2 emissions. Participating utilities are allowed to set their own targets and these do not have to be specific quantitative reduction targets.

A review of the performance of the top 50 utilities (based on electricity generation) found the following results. In terms of uptake, 35 of the top 50 utilities participated in the program between 1995 and 1997, responsible for 64% of the industry's CO_2 emissions **[medium level of uptake]**. Evidence suggests that the decision to participate was related to regulatory pressure and may have been an attempt to pre-empt future regulation or influence the stringency of the mandatory regime. However, the background threat of regulation during the program was low.

Levels of pledged reductions were not significant contributors to the change in CO_2 emissions between 1995 and 1997; participants were found to perform worse in relation to emissions reductions than non-participants such that adoption of the program seems to have had no effect on CO_2 reduction levels **[low level of target ambition]**.[180]

Late joiners performed worse than early joiners, suggesting that there was an element of free-riding involved.[181] Nevertheless, on average participants reduced their emissions by more than twice the amount initially pledged **[high level of target achievement]**.

A similar program for non-utilities called Climate Wise was established in 1993 and remained in operation until 2000. Under the government-administered scheme, participants were encouraged to reduce GHG emissions by adopting energy efficient, renewable and pollution preventing technologies. Relative to the baseline, the program has been estimated to have *"statistically insignificant effects"* on participants' total emissions.[182]

8. Commercial Whale Watching Voluntary Code (USA, 1998)

Target achievement	Target ambition	Level of uptake	APS	SIS
*			0.00	0.00

In 1998, industry, government agencies, and non-governmental organizations established a voluntary conservation programme for commercial whale watching in the northeast region of the USA, consisting of a set of guidelines with the intent to avoid collisions with and harassment of endangered whales by commercial and recreational whale-watching vessels. A study of the scheme found that compliance was low and that the industry was unlikely to have achieved the goal of substantially reducing the speed of vessels within proximity to endangered and protected large whales. The evidence suggested high levels of non-compliance with the voluntary guidelines (in excess of 70% across all companies) **[low level of target achievement].** There were also indications that non-compliance was often a conscious decision on the part of operators, as demonstrated by many operators achieving speeds near their vessel's maximum capability within even the most restrictive speed zone.

The conclusion that the voluntary agreement did not work, and that industry compliance was low, was deemed particularly troubling because the commercial whale-watching industry involved in the case study was considered an ideal candidate for the successful use of the voluntary approach to management. For example, as well as focusing on charismatic federally endangered and protected species, the code related to activities carried out within a federally designated marine protected area.[183] Some operators in the scheme asserted that the study years were not indicative of normal industry operations because there were fewer whales during that period and operators were under intense time pressures to show whales to passengers. This rationale typifies one argument against voluntary conservation agreements; participants have the flexibility to ignore restrictions when they become inconvenient or interfere with business, yet it is unclear why those animals would be in less need of protection than whales in more abundant times.

9. Dairying and Clean Streams Accord (New Zealand, 2003)

Target achievement	Target ambition	Level of uptake	APS	SIS
*			0.00	0.00

The Dairying and Clean Streams Accord was an agreement between the New Zealand government and the dairy industry. It was launched in 2003 and ran for a 10-year period ending in December 2012. The aim of the agreement was *"to contribute toward clean, healthy freshwater resources including streams, rivers, lakes, groundwater, and wetlands in dairying areas"*. However, according to a review of the Accord, only one of the five main targets was achieved **[low level of target achievement]**. [184]

Code Requirements	Evaluation	Target Achieved?
1. Dairy cattle excluded from 90% of streams, rivers and lakes	An independent assessment found that only 42% of farms had achieved complete stock exclusion on their Accord-type waterways.	No
2. Regular race crossing points have bridges or culverts (90%)	99% of race crossing points have bridges or culverts.	Yes
3. All (100%) dairy farm effluent discharge to comply with resource consents and regional plans	Full compliance varied between 38% and 95%. The overall rate of compliance was 73%.	No
4. All (100%) dairy farms to have in place systems to manage nutrient inputs and outputs by 2007	Only 56% of farms had a nutrient management plan in place by 2012. There was no assessment as to what proportion of these farms had operational nutrient management systems.	No
5. 90% of regionally significant wetlands on or bordering dairy farms to be fenced	56% were fenced.	No

The Accord integrated many actions that were already underway, making it difficult to assess its direct influence. However, what is clear is that it failed to reduce the impacts of dairying on the quality of New Zealand's streams, rivers, lakes, ground water and wetlands. Where monitored, water quality in dairying areas generally continued to fall during the years of the Accord's operation.[185]

10. Dolphin Tourism Code of Conduct (New Zealand, 1999)

Target achievement	Target ambition	Level of uptake	APS	SIS
*		*	0.00	0.00

In 1999, dolphin-watching tour companies in Kaikoura, New Zealand established a voluntary code of conduct whereby participating companies agreed to avoid groups of dusky dolphins *Lagenorhynchus obscurus* between the hours of 11.30 am and 13.30 pm from 1 December to 31 March, as this is when the dolphins spend a large proportion of their time resting, and the summer period is the busiest time of the year for dolphin tourism. Prior research had demonstrated a range of behavioural changes in the dolphins in the presence of boats.[186] Private recreational vessels were encouraged to follow the initiative and avoid interacting with dusky dolphins during the two-hour rest period'.

According to one evaluation, the voluntary code of conduct was effective in some respects, but not in others. Although the overall number of visits to dolphin groups during the "rest period" was lower than other times of the day, visits still occurred and commercial traffic still made up more than half of the traffic near groups. High levels of non-compliance by private recreational vessels were documented, particularly at weekends, significantly decreasing the amount of vessel-free time for dolphin groups during the rest period **[low level of target achievement]**. The documented reductions in commercial traffic were almost completely a result of the efforts of one company in avoiding dolphin groups during this time and there was a particular lack of uptake by private recreational vessels **[low level of uptake].**[187]

In 2010, new regulations were instituted which made the rest period mandatory from November through to February.

11. Garden Plants Under the Spotlight Strategy (Australia, 1999)

Target achievement	Target ambition	Level of uptake	APS	SIS
*	*	*	0.00	0.00

The Garden Plants Under the Spotlight Strategy was developed in 1999 by the Nursery & Garden Industry Australia (NGIA) to address the problems caused by plants that escape from gardens and other landscaped areas. However, the initial list of 100 plants identified as "garden thugs" was reduced to 52 through consultation with nursery and garden industry associations. As a result, the final list included mostly species that were not being traded, were traded in small volumes, or were already illegal to sell. A number of popular, widely traded, high-risk invasive plant species were excluded from the final list **[low level of ambition]**.

Although the industry association played an important role in negotiations, efforts were undermined by the fact that a number of "big players" were not members of the NGIA and had no incentive to participate. The NGIA membership represented just over one third of the relevant production businesses. This was a disincentive for participation by smaller retailers who feared losing customers to the larger stores who stocked more species **[low level of uptake]**.

Overall, the scheme failed to produce a significant reduction in the availability of invasive garden plants for sale. There was no change in the range of "garden thug" species advertised for sale between 1999 and 2002 **[low level of target achievement]**. Due to the failure of this voluntary approach and significantly growing community concern, there are now strong arguments for improved legislation.[188]

12. Industry Standard and Forest Friendly Award Scheme (New Zealand)

Target achievement	Target ambition	Level of uptake	APS	SIS
*		*	0.00	0.00

The initial preferred alternative to a legislative ban on the sale of certain invasive species in New Zealand was the development of an industry standard. Under this voluntary scheme, a nursery received an official certificate and favourable media if they complied with the standard. Approximately a third of retailers complied with the standard **[low level of target achievement]**.

A number of large retailers indicated that they wanted to comply, but didn't want to be seen as not stocking species available in other shops. Similarly, smaller retailers refused to join the scheme unless it could be guaranteed that the larger retailers would also sign up. Market research undertaken by one retailer suggested that if they were seen as the last garden plant outlet where it was still possible to get certain ornamental species, then this would create a market niche and be *"good for business"*. Thus, the scheme created a perverse incentive to stock certain invasive species. Due to concerns about the financial bottom line, and customer loyalty, the scheme failed to engage a significant % of the market **[low level of uptake]**.[189]

The failure of the voluntary approach was a catalyst for the decision to legislate, which had an immediate impact; not only was stock removed from sale, but incorrect labelling of old stock was increasingly rectified through greater vigilance by nursery staff, and increased public awareness was achieved.

13. National Landcare Program (Australia, 1992)

Target achievement	Target ambition	Level of uptake	APS	SIS
***		*	0.50	0.00

The National Landcare Program is a voluntary partnership scheme launched in 1992 and administered through the Australian Department of Agriculture, Fisheries and Forestry. It involves limited government funding and aims to encourage participating landholders to adopt a range of sustainable land management practices.

A 2003 review showed that funding of landcare groups, and other support through the programme, has been highly effective in building awareness and skills, transferring knowledge, and stimulating adoption of better farming practices **[high level of target achievement]**.[190] However, as the majority of farmers were not participating **[low level of uptake]**, its overall impacts have been limited.[191]

14. National Packaging Covenant (Australia, 1995)

Target achievement	Target ambition	Level of uptake	APS	SIS
**			0.50	0.50

The National Packaging Covenant (NPC) was launched in 1999 as a five-year program for managing the environmental impacts of consumer packaging waste in Australia, and was extended for another five-year period in 2005. It was underpinned by a regulatory framework, which was designed to deal with non-signatories and non-compliant signatories (i.e. free-riders).[192] An evaluation of NPC action plans and annual reports in late 2003 found that significant improvements were required; the review found that there was an almost universal lack of measurable targets, no indication was available regarding how data was being collected, and many organisations were failing to report against actions listed in the original plan.[193] The general lack of transparency, clear targets, and performance data made it difficult to determine the effectiveness of the covenant.[194]

NPC Mark II was launched in 2005 and included, for the first time, overarching and material-specific recovery targets, a detailed list of performance indicators, and more stringent reporting requirements. A mid-term review in 2008 concluded that considerable progress had been made, although it was difficult to know how much of this progress had been driven by the covenant. Most key stakeholders interviewed as part of this review stated that the number of signatories was adequate. However, weaknesses in coverage were identified in some sectors.[195]

The 2010 progress report showed mixed results against the quantitative targets set in the second Covenant (2005–2010), with a number of targets quite far from being achieved **[medium level of target achievement]**.[196]

		Target	Evaluation	Target Achieved?
Target 1: Increase recycling of post-consumer packaging	*Overall*	65%	62.5%	No
	Paper/Cardboard	70–80%	76%	Yes
	Glass	50–60%	47%	No
	Plastics	30–35%	35%	Yes
	Steel Cans	60–65%	30%	No
	Aluminium Cans	70–75%	67%	No
Target 2: Non-recyclable packaging	*Plastics*	25%	29%	Yes
	Paper/Cardboard	25%	–	–
Target 3: No new packaging to landfill		100%	35%	No

15. Responsible Children's Marketing Initiative (Australia, 2009)

Target achievement	Target ambition	Level of uptake	APS	SIS
*	*	*	0.00	0.00

In January 2009, the Australian Food and Grocery Council, the national body representing food and grocery manufacturers, introduced the Responsible Children's Marketing Initiative (RCMI). The aim of this voluntary initiative was to reduce children's exposure to unhealthy television food advertising. However, evidence collected in November 2011 showed that 70% of all advertisements by RCMI signatories during children's prime viewing time were for non-core (i.e. unhealthy) foods, compared with 22% for non-signatories. In fact, since the introduction of the initiative, the rate of advertising of non-core foods during children's prime viewing time has always been higher among signatories than non-signatories **[low level of target achievement].**

Aside from the rate of non-compliance, the total impact of the initiative was also limited by the extent of uptake by food companies. Of the companies advertising food products in 2009, only 34% were signatories **[low level of uptake]**. In relation to the ambition of the scheme, the commitments by participating companies in Australia have been described as being *"...highly permissive and allow continued advertising of non-core foods using persuasive techniques at times when large numbers of children are viewing television"* **[low level of target ambition]**.[197]

16. Road Transport Heavy Vehicle Accreditation (Australia, 1997)

Target achievement	Target ambition	Level of uptake	APS	SIS
**		*	0.25	0.00

"...the vast majority of industry participants face significant competitive pressures to engage in hazardous and risky behaviour...without some regulatory presence unsupervised competition is likely to intensify with significant implications for road safety."[198]

Under the National Heavy Vehicle Accreditation Scheme, a voluntary scheme approved by the Australian Transport Council in 1997, the main aim was to *"...improve road safety and transport efficiency by improving compliance with road transport law."* Under this scheme, participants that committed to meeting beyond-compliance safety standards were subject to less roadside compliance and enforcement by regulators.[199]

In 2006, the National Transport Commission carried out a review of the safety benefits of the scheme. The review found that the scheme had been limited in its reach. In 2006, just over 1% of all heavy vehicle operators in Australia participated in the scheme, representing a little over 24% of the articulated vehicles in Australia **[low level of uptake]**. The review estimated that if all non-accredited vehicles became accredited, a 50% reduction in the crash rate of articulated vehicles could be expected.

In relation to the scheme objectives, it was not possible to unequivocally say that the scheme had improved road safety. Although there was some evidence that crash rates amongst scheme members were lower than for non-members, there was no information available regarding crash severity.[200] A policy review in 2009 concluded that *"...it is not possible to say unequivocally that the introduction of the alternative compliance policy has resulted in enhanced road safety... it is probably fair to say that the policy has not led to worse road safety outcomes for accredited operators, and may well have led to better road safety outcomes for a number of those operators..."* **[medium level of target achievement]**.[201]

17. Seabird Bycatch Code of Conduct (New Zealand, 2004)

Target achievement	Target ambition	Level of uptake	APS	SIS
		*	0.00	0.00

In 2004, New Zealand implemented a new National Plan of Action to reduce the incidental bycatch of seabirds in New Zealand fisheries. A key component of the action plan was a requirement for key fisheries to adopt voluntary codes of practice. However, the plan also provided for a range of mandatory measures to be introduced if voluntary measures proved ineffective, or if there was sufficient evidence to warrant a particular measure being made mandatory.[202]

Despite the development of a number of codes of practice, high mortality events continued to be recorded in key fisheries, coincident with varying degrees of non-compliance with the mitigation measures developed within the codes. In 2005, following captures of large numbers of albatrosses in the squid trawl fishery, the Minister of Fisheries called for a review of the plan, and indicated that it should include a greater range of mandatory measures. It was discovered that up to half of all vessels were failing to implement basic mitigation measures. Speaking at the time, the Minister for Fisheries stated the following: *"We introduced voluntary codes because industry said they were willing to meaningfully co-operate in reducing the needless death of sea birds...The squid fishing industry has had every opportunity to act responsibly*

and despite some good operators the majority have chosen not to. These measures are the inevitable consequence of their poor behaviour."[203]

Further action was called for following an incident in 2007 when a large number of albatrosses were killed by a fishing vessel. In 2008, additional regulatory requirements were introduced. A review concluded that a significant proportion of the vessels that made up the New Zealand fishing fleet at the time had not initiated effective seabird mitigation measures voluntarily **[low level of uptake]**. Non-compliance by vessels covered by the voluntary code was also documented, while the sufficiency of voluntary measures was questioned for some high-risk fisheries.[204]

According to the then Minister for Fisheries, "*while some parts of the industry are working hard to develop solutions, other parts have done little or nothing and continue to kill large numbers of seabirds... I have been frustrated by recent incidents where vessels ignored voluntary codes of practice, did not take any precautions and killed significant numbers of threatened and endangered albatrosses."*[205]

18. Standard on Solaria for Cosmetic Purposes (Australia/New Zealand, 2002)

Target achievement	Target ambition	Level of uptake	APS	SIS
*			0.00	0.00

The use of sunbeds is associated with a significant increase in risk of melanoma, particularly amongst younger users.[206] The Australia/New Zealand Standard on Solaria for Cosmetic Purposes is a voluntary code of practice designed to provide solarium operators with procedures to minimise the health risks associated with indoor tanning. High rates of non-compliance with provisions of the code have been documented in both countries.[207] For example, one study found that 52% of solarium centres gave underage teenagers access to sunbeds, without written parental consent, and 90% provided sunbed access to clients with poor tanning ability (e.g. fair skin).[208] Similarly, another study found that only 16% of operators were compliant with more than 10 of the 13 code recommendations **[low level of target achievement].**[209] All Australian states and territories have now announced a total ban on commercial tanning beds.[210]

19. Sustainable Slopes Program (USA, 2000)

Target achievement	Target ambition	Level of uptake	APS	SIS
*			0.00	0.00

The Sustainable Slopes Program is a voluntary environmental initiative established in 2000 by the U.S. National Ski Areas Association in partnership with a number of government agencies. The program aims to promote *"beyond compliance"* principles that cover 21 general areas of environmental management. Participant ski areas are expected to implement annual self-assessment of their environmental performance.

An initial evaluation found that participants tended to have lower third-party environmental performance ratings than non-participants. A follow-on study found no statistical evidence to conclude that, compared to non-participants, participants have higher overall environmental performance or higher scores across a range of dimensions of environmental protection. These findings suggested that participants are displaying free-riding behaviour i.e. expecting to improve their reputation without actually implementing beyond compliance environmental management principles and practices **[low level of target achievement]**. The program does not involve specific environmental standards, lacks third-party oversight, and does not have sanctions for poor performance. Evidence suggests that participation in the program is related to pressures in the form of enhanced federal oversight and higher state environmental demands exerted by state agencies, local environmental groups, and public opinion.[211]

20. Voluntary Challenge and Registry Programme (Canada, 1994)

Target achievement	Target ambition	Level of uptake	APS	SIS
*	*	*	0.00	0.00

The Voluntary Challenge and Registry Program (VCR) was established by the Canadian government in 1994. Under this scheme, participants were encouraged to report their GHG emissions and the activities they undertook to address these emissions on an annual basis. Between 1994 and 2004, this program played an important role in Canadian climate change policy.

Evidence suggests that industrial firms, including participants in the VCR, planned to reduce emissions by some 1–2% below their 1990 level by 2010, much lower than Canada's 6% reduction target **[low level of target ambition]**. By 2004, greenhouse gas emissions were not significantly different between VCR reporters and non-reporters. Neither the degree of involvement in the VCR or the timing of VCR participation appears to have led to significant differences in the level of emissions among participants and non-participants. As of 2004, emissions in Canada were 35% higher than the target level under the Kyoto Protocol **[low level of target achievement]**. 292 firms participated at least once in the VCR program between 1995 and 2004. However, a number of sectors that represented a large share of GHG emissions did not participate **[low level of uptake]**.[212]

21. Voluntary Greenhouse Gas Reduction Agreements (Taiwan, 2005)

Target achievement	Target ambition	Level of uptake	APS	SIS
***	*	**	0.50	0.00

In 2005, six energy-intensive industry associations in Taiwan signed a voluntary energy conservation and GHG emissions reduction agreement with the government. The 182 factories that participated represented 30% of total GHG emissions in Taiwan and 63% of the manufacturing sector **[medium level of uptake]**.

The pre-set emission reduction target from 2004 to 2008 was 4.02 Mt CO_2. Actual CO_2 reductions clearly exceeded the target values for each industrial sector with a five-year total of 5.35 Mt reductions, 33% higher than the target **[high level of target achievement]**. These voluntary reductions occurred without governmental tax breaks or subsidies. However, most plants had already conserved energy before the voluntary agreements came into force. The percentage reduction required as compared to the overall level of CO_2 emissions was small (on an annual basis, the reductions required were <0.5% of total annual emissions) **[low level of target ambition]**.[213]

22. Voluntary Program to Reduce the Likelihood of Collisions with the Endangered North Atlantic Right Whale (USA, 2010)

Target achievement	Target ambition	Level of uptake	APS	SIS
*			0.00	0.00

Collisions between ships and whales are an increasing concern for endangered large whale species. Such collisions can result in serious injury or even fatality, and thus represents a serious threat to the survival and recovery of some large whale populations.

In 2010, the U.S. National Marine Fisheries Service established a voluntary program to reduce the threat of vessel collisions with the endangered North Atlantic right whale *Eubalaena glacialis* near port entrances along the U.S. east coast. The program involved the creation of temporary zones, called dynamic management areas (DMAs), which vessel operators were requested to either navigate around or to travel through at speeds of 10 knots or less.

Evidence suggests that there was very little change in vessel operations in response to the voluntary program. The mean transit speeds for cargo, tanker, and passenger vessels within the DMAs exceeded the requested maximum of 10 knots and differed little from speeds used outside DMAs. In addition, few transits appeared to involve efforts to navigate around the DMAs. In summary, the voluntary program likely had little or no impact in reducing the occurrence of ship strikes **[low level of target achievement].**[214] Given that vessel strikes are responsible for 53% of all deaths diagnosed among right-whale necropsies, if this endangered species (represented by approximately 350 individuals) is to avoid extinction, then further improvements are likely to be required.[215]

A comparable program targeting endangered blue whales *Balaenoptera musculus* off the coast of southern California has been similarly unsuccessful.[216]

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