

Effectiveness of Regulation: Literature Review and Analysis

Report - SC090028

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It's our job to make sure that air, land and water are looked after by everyone in today's society, so that tomorrow's generations inherit a cleaner, healthier world.

Our work includes tackling flooding and pollution incidents, reducing industry's impacts on the environment, cleaning up rivers, coastal waters and contaminated land, and improving wildlife habitats.

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Miranda Kavanagh

Director of Evidence

Executive Summary

Seeking to be a better and more efficient regulator, the Environment Agency is increasingly using a range of regulatory interventions to complement traditional inspection-based regulation. This project reviewed literature on the effectiveness of four such interventions to identify insights that could inform Environment Agency regulatory practice, namely:

- advice and guidance given by regulator to operators;
- actions taken by the regulator in the boardrooms of operators;
- approaches to regulating ‘good performers’;
- actions by third-parties to deliver regulatory objectives.

This study involved a literature search, contacting a number of regulators and other bodies for their material in these areas, and holding a workshop with Environment Agency staff to review the information found. Overall we found relatively little literature providing rigorous assessments of the effectiveness of the different regulatory interventions that we were looking at. Even fewer studies have examined relative cost-effectiveness, a vital assessment if cost-effective choices are to be made. However a number of general findings emerged from the study.

a) There is a strong consensus that a mix of interventions is needed to ensure compliance and optimise environmental outcomes.

b) An intervention can be seen in simple terms as having three key elements – Messenger (the regulator or third party), Message, and Recipient (the regulated). Effectiveness can be enhanced by optimising each element, and the interactions between them. Often it depends as much on the individual(s) involved as it does on organisation level policy and practice. Here again trust is a key factor but it needs to be recognised that building trust, understanding and then changing behaviour and maintaining positive behaviour change takes time.

c) There is recent growing acceptance of the need to undertake more evaluation of intervention effectiveness and to be able to categorise operators in order to be able to optimise the selection, design and application of interventions. Understanding the desired outcomes (from both regulator and regulated perspectives) and how to assess progress against these outcomes is an essential part of running a successful process and of evaluating it.

d) To improve the evidence base, we recommend (i) undertaking structured comparative trials and (ii) developing a consistent, logical and linked evaluation framework for evaluating regulation embedded into working practices.

Keeping the methodological issues and general findings above in mind, the specific findings from the research for each regulatory intervention in turn were:

1. The effectiveness of advice and guidance given by regulator to operators

Advice and guidance are recommended as 'the first and preferable way to induce compliance', and seen by businesses as the most important approach for reducing administrative burden on businesses. Advice and guidance covers a broad range of activities and is used widely in a range of forms by all regulators studied. There is useful evidence of how to make advice and guidance effective and when and how to use it. Of particular note is the evidence that the experience-level of the regulator's representative (inspector), including in relation to the particular industry being regulated, is critical to ensuring advice and guidance are effective. However some argue that too much advice and guidance decreases the accountability of the operators to find solutions to their own problems. There is also some consensus that advice and guidance should be used to complement rather than replace a regulatory and enforcement role which businesses see as essential to maintain standards and ensure the delivery of a level playing field.

2. The effectiveness of actions taken by the regulator in the boardrooms of operators

There is widespread acceptance that commitment at the highest level in a company is a key factor determining compliance levels. In recent years regulators have adopted a variety of approaches to gain this commitment to environmental compliance, including account management, director level sign-off and targeted training and communication. Of the interventions studied, there was the least information about boardroom interventions and important questions remain about when, how and why boardroom interventions work best. Early positive outcomes have been reported from account management approaches adopted by the Environment Agency, namely closer relationships enabling solutions to be identified before wider problems occur, enhanced consistency across sites, and improved efficiencies on both sides. There is some concern that this type of boardroom level intervention can lead to actual or perceived regulatory capture and also about the considerable demands placed on limited senior staff resources. By contrast, the Australian system of Annual Performance reporting and CEO sign-off is aimed at enhancing transparency and increasing public attention to environmental performance and does not require greater senior regulatory input.

3. The effectiveness of approaches to regulating 'good performers'

There is some evidence of improved compliance associated with good performer schemes. The key to success is to link good performance to rewards which motivate the operators concerned. Identifying motivational factors can be difficult as operators exhibit widely differing characteristics and commitment to environmental compliance so that what motivates one company will not necessarily motivate another. What motivates operators isn't always tangible. Avoidance of a negative e.g. loss of reputation, loss of other benefits, or increased charges) can have more impact than achievement of a positive. Performance awards should be used to encourage operators to go beyond basic compliance and should be fully transparent, in order to ensure a level playing field and avoid potential criticism about 'unfairness' and concerns about regulatory capture.

4. The effectiveness of actions by third-parties to deliver regulatory objectives

Third parties have been taken to include other regulators, trade associations, professional advisors, supply chain, or civil society groups, investors, the media and insurance companies. There is a strong consensus that third party actions can be beneficial and can potentially have a greater impact than actions taken directly by the regulator. There are a range of models, such as: third parties acting totally independently from a regulator, regulator endorsed third party actions, to formal explicit partnerships with a regulator. A key feature of such actions is the element of trust, in that for various reasons operators often feel more comfortable with and trust a particular third party than they do the regulator. It is also considered that third party actions could help reduce regulatory effort by sharing activities which have a common interest.

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1 Introduction

1.1 Purpose and scope of the study

The overall objective of the project was to review the effectiveness of specific regulatory interventions and identify theoretical and empirical insights that could inform Environment Agency regulatory practice. Specifically the study focused on literature relating to the effectiveness of four types of intervention:

- advice and guidance given by regulator to operators;
- actions taken by the regulator in the boardrooms of operators;
- approaches to regulating 'good performers';
- actions by third-parties to deliver regulatory objectives.

1.2 Approaches

We undertook a literature review to identify, analyse and report on the effectiveness of the four interventions identified above. We were looking for both empirical evidence and theoretical insights. The review drew upon environmental, wider regulatory and management literature from both academic and practitioner sources. Key regulators in England and Wales and a number of other organisations were contacted directly to uncover unpublished material that could be added to the evidence base. Further details of the review methods used are given in Appendix A.

We presented and discussed the information gained from the review at two one-day team meetings. The discussion was structured around a number of key questions:

1. How are these interventions defined?
2. To what extent have these interventions been used (how widely, when, how, why and by whom, what issues have they been used to address and which target groups have they been used with)?
3. Are these interventions effective (in terms of improving compliance, instilling positive behaviour change, or other positive outcomes)?
4. What possible negative effects might result from using them?
5. When are they, and when are they not, effective?
6. How much regulatory effort and resources would be needed to implement them properly?
7. How would they impact in terms of administrative burden?

At these team meetings we also discussed (a) how these interventions should be considered by the Environment Agency when assessing the overall effectiveness of the regulatory system; (b) the strength of the evidence to support the findings; and (c) to recommend actions to fill evidence gaps.

Additional material was added from a number of recent Environment Agency studies and combined to produce an initial draft report. The findings at that stage were

presented at a workshop of experienced Environment Agency staff working in, or contributing to, the area of regulatory policy and practice. They were asked to comment on the findings and to add their own views, ideas and experiences to provide a practitioners understanding.

We have combined the findings from the literature review, recent Environment Agency studies and from the practitioner's workshop to produce this report.

1.3 Report structure

Following on from this introduction, the report contains seven further sections as follows:

- Section 2 attempts to define regulation and effectiveness. It summarises some general findings about assessing the effectiveness of regulation and factors which enhance effectiveness including motivating behaviour change and building trust;
- Sections 3-6 provide the key findings for the four delivery approaches of (further detailed reporting is provided in the Appendices):
 - Provision of Advice and Guidance
 - Actions in Board Rooms
 - Dealing with Good Performers
 - Actions of Third Parties
- Section 7 discusses the weight of evidence on the effectiveness of the four interventions, identifies evidence gaps and makes suggestions as to how these might be filled to enable further analysis.
- Section 8 makes conclusions on the findings and suggests some ways forward.

Further details on the study and its findings, which support the evidence and discussions in the main report, are provided in Appendices A – F and an executive summary captures the key findings.

2 Regulation and effectiveness

2.1 Regulation

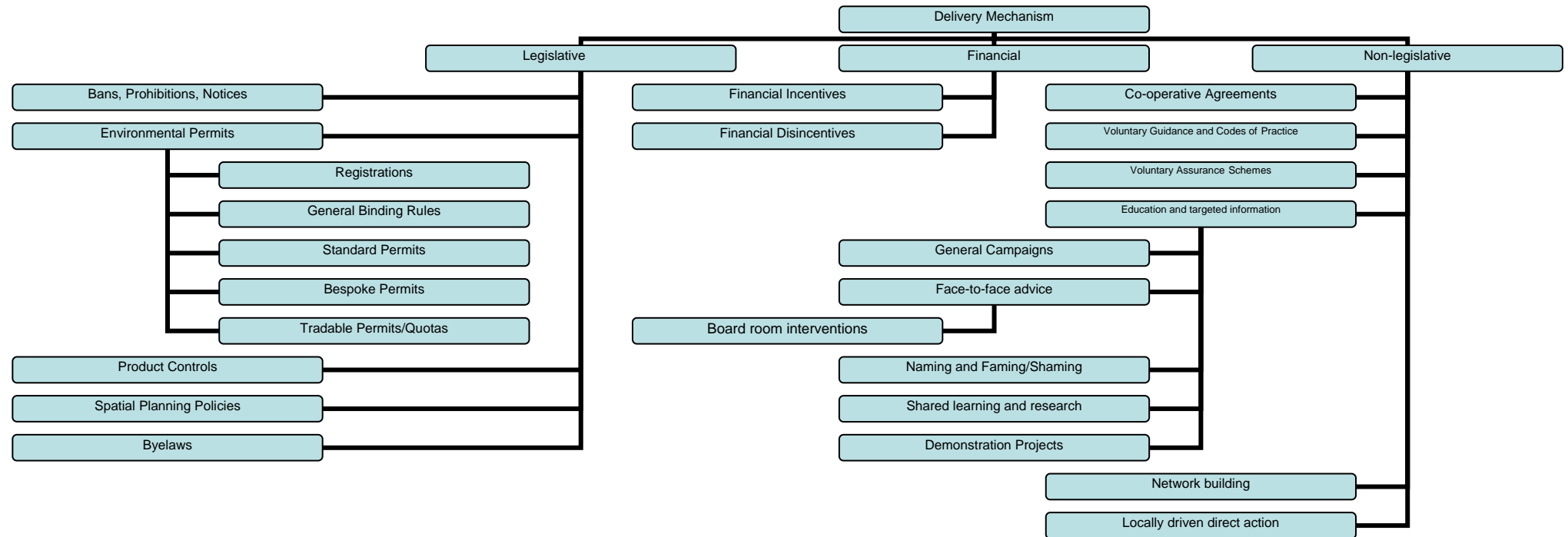
The term 'regulation' is used in various ways. In a narrow sense it can refer to a set of authoritative rules used alongside processes for monitoring and promoting compliance often referred to as traditional 'command and control' approaches. A broader interpretation of 'regulation' includes a range of interventions including market based instruments, etc, i.e. 'all mechanisms of social control – including unintentional and non-state processes' (Baldwin et.al. 1988). This interpretation means that regulation can be carried out by governmental and non-governmental entities (Farmer, 2008). The interventions covered by this review are captured by this wider interpretation. The interventions may be used as alternatives, but more commonly and preferably as complementary activities, to traditional 'command and control' approaches. The latter point is important because evidence suggests that SMEs for example "*will only act when there is a specific requirement to do so*" (Williamson et al 2006). Regulation bridges the gap between an operator's self-interest and the interests of society (Williamson et al 2006).

Figure 2.1 is based on the Environment Agency's categorisation of regulatory interventions used in the recent River Basin Management Planning exercise and has been adapted to show where the interventions discussed in this report might be situated within the overall 'regulatory tool box'. The interventions covered specifically in this study are not mutually exclusive. For example it is possible to consider a specific intervention which provides advice and guidance through third parties to good performers via the board room (see Section 2.2).

2.2 Effectiveness

There is a 'wide diversity of views on what is meant by the effectiveness of regulation' and different approaches have been taken to answer the question, "what effect are regulatory interventions having?" For many years, organisations such as DfID have been using logical approaches to show the connections between interventions and outcomes. White (2009) usefully presents an example of how one of these approaches, a 'Logic chain' approach, has been used in a project assessing the effectiveness of inspection work.

Figure 2.1 The Box of Tools - Types of Intervention



Actions by third-parties to deliver regulatory objectives cut across many of the non-legislative intervention types, typically involving assurance schemes, education and information, voluntary guidance and codes of practice.

Board room interventions often take the form of face-to-face advice and could be considered a subset of this, but also include special services for directors, and heightened director responsibility

Actions to reward good performers include naming and faming, but also charging or streamlining.

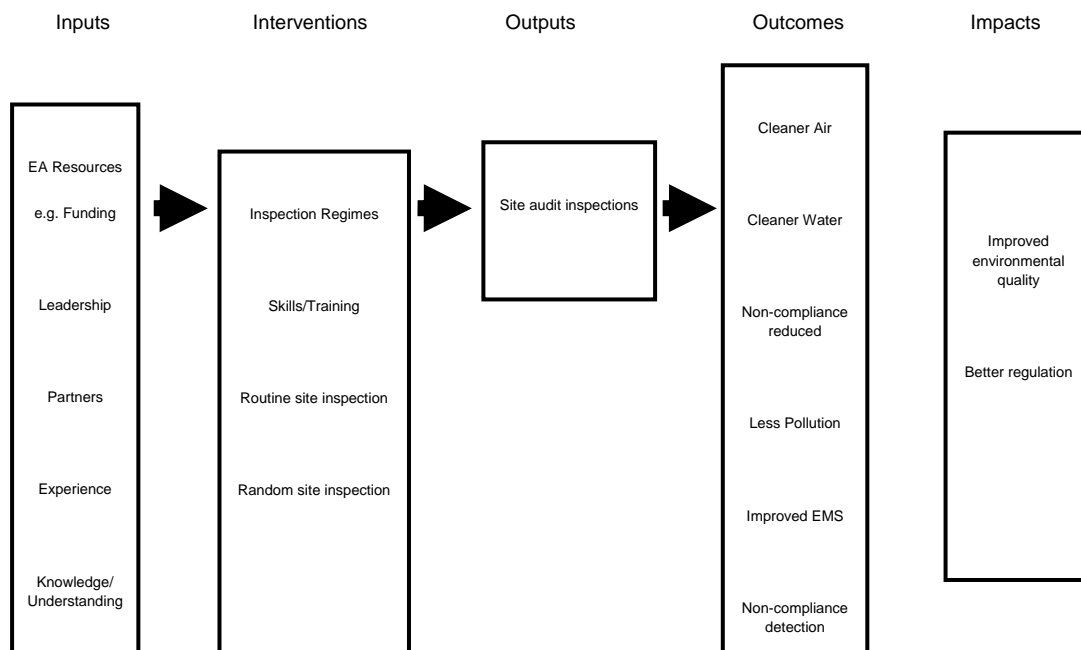


Figure 2.2 Example of a logic chain approach for assessing the effectiveness of inspections

As declared in the introductions to many pieces of legislation, the clear aim of environmental regulation is to improve environmental quality and research has found evidence of links between environmental outcomes attributable to individual policies. However, it can sometimes be difficult to pinpoint direct causality (Farmer, 2008), a point well demonstrated by studies such as the England Catchment Sensitive Farming Delivery Initiative (ECSFDI) (Defra, 2008) which seeks to reduce diffuse pollution from farms in sensitive catchments using advice and guidance and grant schemes. In the ECSFDI £1M per annum was invested into a monitoring and evaluation programme (15% of the budget) to assess effectiveness of the actions taken. The study concluded *“the current regime will struggle to demonstrate with confidence that the ECSFDI has been effective in improving Water Quality!”*. However it should be noted that the scheme has been operating and evaluated over a relatively short time compared to the time taken for effects to emerge. For such a complex system there will be other complicating factors. Therefore non-environmental outcomes will provide a more practical measure of effectiveness in the medium term.

2.2.1 Assessing or measuring effectiveness

In the Environment Agency’s specification for this work “effectiveness” was defined in terms of *“whether the desired outcomes are achieved”* (EA, 2010) However the ‘desired outcomes’ are not always obvious or stated. White (2010) identifies *‘limited perception of what constitutes an outcome’* and *‘lack of a direct link between interventions and outcomes’* as key factors potentially limiting evidence that risk based

decision making delivers improved environmental outcomes. Getting a good understanding of the desired outcomes, and how to assess progress against them, is therefore an essential part of running a successful process and of evaluating it.

Views of the 'desired outcomes' are likely to vary depending on perspective since interpretation of the role of regulation and of compliance may differ between the regulated and the regulator and even within the regulated body (Yapp and Fairman, 2004; Hempling, 2009; Petts, 2000). These differences between the regulated and the regulator also appear when presenting environmental performance. Lyndhurst (2010), in a survey of industry, concluded that large companies, in particular, often seek to ensure they have leading environmental performance and management practices, and report environmental performance at a high level, since it is of interest to consumers, shareholders and insurers. Environmental performance is reported in terms of their own indicators and those required by the Environment Agency. One large company identified a difference in the type of indicators in that their own indicators are 'leading' indicators i.e. performance in terms of prevention or reduction of environmental impact. Whereas indicators required by the Environment Agency are 'lagging indicators' referring to the number, frequency and nature (according to the Environment Agency categorisation of significance) of environmental incidents (Lyndhurst, 2010). Getting a shared understanding (regulator to regulated) of desirable outcomes can contribute to the development of win-win situations and better design of incentives.

Figure 2.3 summarises some of the generic 'desired outcomes' of regulation noted in the studies captured in this review, particularly in White et al 2010 and 100% Cotton, 2010. Regulatory outcomes include compliance, 'going beyond compliance' and 'increased public confidence'. For example, in the nuclear industry operators are keen to report that they are regularly inspected to provide public confidence that they are operating safely (McHugh and Rees, 2006). Interim outcomes or changes contributing to regulatory outcomes, for example behaviour change, enhanced competencies (i.e. enhanced knowledge or capacities) are also reported.

Each of the four interventions discussed in this report are assessed against these outcomes and considered in terms of the five principles of good regulation, (that it should be transparent, accountable, consistent, proportionate (or risk-based), targeted (or outcome-focused) (BIS, 2009)) at the end of Sections 3-6. Further discussion of the specific outcomes reported in the studies captured by this review is given in Section 7.

In discussing effectiveness we need to distinguish between measuring effectiveness and influencing effectiveness. As discussed above we can try and measure effectiveness by measuring outcomes, although this is not easy. Ideally we seek to identify comparative effectiveness, often in terms of cost-effectiveness, in order to help choose the most appropriate intervention. However it was recognised, in the project workshop sessions by several practitioners, that evaluation of effectiveness has not been undertaken or not undertaken rigorously. This was considered to be due to lack of perceived need and lack of resources. It was further recognised that perhaps the move towards specialist skills and teams needs to be developed, along with an evaluation toolkit. In this regard the recently developed LBRO tool kit may be a useful example to work with (LBRO 2010c) to define which type of intervention to use. The factors influencing the effectiveness of an intervention will define the rules that need to be observed when selecting, designing and applying interventions to make them as

effective as possible for a given situation. Ongoing monitoring of effectiveness, even at the very early stages was recognised, at the workshop, as an important exercise, allowing further understanding of what influences effectiveness.

Figure 2.3 Outcomes noted in the studies captured in this review

Regulator	Regulated	The public
Going beyond compliance (improved standards) ¹	Positive publicity, improved reputation	Confidence in the safety of operations ⁸
Increased compliance (e.g. improved H&S record, CCS scores) ²	Increased sales, maintain reputation	
Reduced incidents/accidents (e.g. pollution incidents) ^{2,3,4}	Reduced fees to the regulated	
Reduced complaints (e.g. odour complaints) ²	Lighter inspection regime ^{6,9}	
Reduced riskiness of the activity (e.g. decreased OPRA scores)	Fast-track regulation, streamlining of the process ⁶	
Positive behaviour change (e.g. resiting damaging activities To somewhere which will cause less environmental damage, reductions in use of dangerous chemicals or activities) ^{2,3,5}	Reducing administrative burden for the regulated ⁶	
Efficiency improvements for the regulator	Increased business effectiveness /operation efficiencies ^{6,7}	
	Self-regulation ⁶	
Improved relationship/trust/openness ^{2,6}		
Information sharing ⁶		
Strategic planning ⁶		
Shared (regulator/regulated) understanding of the problem ⁶ .		
Shared training/secondments ⁶		
Increased competency (awareness, knowledge, capacity)		
Identifying solutions before problems occur ⁶		

Studies quoting these outcomes:

- 1 Worsfold, 2005
- 2 White et al, 2010
- 3 WRc, 2006
- 4 HSE, 2009
- 5 Karmann, 2009
- 6 100%Cotton, 2010
- 7 LBRO, 2009
- 8 Rees and McHugh, 2008
- 9 SEARS 2010

The literature search uncovered limited evidence on the effectiveness of the specific interventions being studied, with the exception of third party interventions. This conclusion is in line with other commentators over time, such as Gunningham & Grabosky (1998), Macrory (2010), Parker et.al (2009), and Gunningham (2009) who when posing the question about what works best in terms of effectiveness and

efficiency?, answered “*Unfortunately, the general answer to such questions is it all depends.*”.

Case-study analysis provided by the Environment Agency in recent reports (White et al, 2010, and 100% Cotton 2010) show that specific interventions (advice, and board room interventions) are considered to be effective by both regulators and operators but also note the lack of evidence to enable a comparative analysis.

This is not an unusual position as Farmer (2008) in a European Review of the effectiveness of regulation points out ‘*there is concern in Europe over a lack of knowledge about the effectiveness of policies*’. Farmer (2009) also talks about the different perspectives of what effectiveness means identifying four key aspects:

- Effectiveness – how far does measure achieve intended outcomes?
- Relevance – do objectives address ‘needs’ of issue?
- Efficiency – are objectives achieved at low cost?
- Utility – do effects contribute to net increase in social welfare?

A review of some socio-legal publications (e.g. by authors such as Braithwaite, Gunningham, Hutter) has provided some information on the elements and principles of regulatory processes but this does not necessarily help to distinguish the interventions under consideration.

Probably one of the most useful studies on comparative assessment was undertaken by Parker et al (2009). They looked at interventions to encourage SMEs to make environmental improvements. They noted that “*Various government-level interventionshave been introduced, but there appears to be no research which systematically compares their effectiveness*”

However from a review of nearly 50 journal articles Parker et al reached some conclusions relevant to this study. Firstly they concluded that “*..a holistic mixture of interventions is necessary to achieve maximum engagement and environmental improvement by all SMEs.*” - because SMEs exhibit widely differing characteristics and levels of commitment.

The paper advocates categorising SMEs into 4 extreme types: profit driven; compliance driven, advantage driven and environment driven, for the purpose of helping to target the most appropriate interventions for each category, because these different types “*..are likely to respond to various interventions in quite different ways*”. It lists the various drivers and barriers to SME environmental performance improvement as: regulations, environmental commitment, business performance commitment, financial incentives, external demand, environmental knowledge and assistance/education.

The basis of categorisation is illustrated in this diagram taken directly from the paper (Parker et al 2009)

Degree of business performance commitment	High	Profit driven	Advantage driven
	Low	Compliance driven	Environment driven
		Low	High
		Degree of environmental commitment	

Trust between messenger and recipient is a key feature suggesting that trust and positive relationships need to be developed and that *“the best facilitator will be an affordable, independent trusted expert who can interpret the individual needs of SMEs”*. They further state that *“SMEs prefer to obtain advice/support from existing parties (often third parties) they trust and deal with.”*

They have produced a table of interventions indicating when they would or would not be effective and which category they would be most effective for. e.g. advice and guidance is most effective for environment driven and advantage driven SMEs and less so for the other categories

2.2.2 Factors influencing effectiveness

The difficulties associated with measuring the performance of regulation in the face of multiple objectives are widely discussed (for example Clarkson et al. (2009), Snyder et al (2005), and Hartling et al. (2004)). More commonly we have found studies which have assessed interventions, returning to first principles about intervention design.

Intervention design considers:

- what is the message;
- how will it be delivered;
- who will deliver it;
- who will it be delivered to?

There are design options for each of these components and the combinations are considerable.

Factors influencing effectiveness can be divided into two categories:

- Situation factors – for example the nature of the behaviour change that is desired, the characteristics of the target audience whose behaviour needs to change, and the relationship that the regulator has with that target audience.
- Design factors – for example what is the message; how will it be delivered; who will deliver it; how will it be delivered?

Most interventions involve direct engagement between the regulator and the regulated. The process of engagement can be simplified into three components – the message, the messenger (the regulator) and the recipient (the regulated). For an intervention to be effective all of these elements need to be fully understood and fit for purpose.

An intervention may be good in principle but its effectiveness will depend on the attitude, perception, motivation, capacity, etc. of both the regulator and the regulated. Lopez-Gamero, et al. (2010) in a survey of over 200 firms in Spain concluded that voluntary, rather than mandatory, approaches had a more significant (positive) influence on management behaviour towards more proactive environmental management.

Both the regulator and the regulated need to understand the other so that their interpretation and understanding of the message is correct. Context and individual / institutional elements (culture, attitudes and perceptions) play a part and, as with the other elements, everything has to be right in order to maximise effectiveness.

Nielsen (2006), for example, has looked at regulator attitudes and behaviour, while Braithwaite (1995), in her study of the regulation of nursing homes in Australia has looked at those of the regulated.

Braithwaite uses 4 categories to describe the different attitudes or postures that the regulated can adopt:

COMPLIANT	NON-COMPLIANT
managerial accommodation	resistance
capture	disengagement

Of the two compliant postures:

managerial accommodation = operational staff incorporate regulatory standard within their management plan, with the support of senior management / the owner; evidence of professional pride in aiming to achieve highest standards in all aspects of their work.

capture = capture of the regulator by the regulated, who portray themselves as being fully engaged in or part of the whole regulatory process, perhaps to such an extent that they believe that any breaches would not be criticised because of their 'cosy' relationship with the regulator.

Of the two non-compliant postures:

Resistance = adoption of a negative and confrontational approach to regulations and regulators, who are seen as oppressive and unhelpful.

Disengagement = adoption of a defensive / denial posture, with withdrawal from the regulatory process and no engagement with regulator

It should be noted that attitudes can vary over time and in reaction to specific events or people. In all the above, (a) trust and respect and (b) perceptions and common understanding, play a key role.

The interventions being discussed in this study focus on different components of intervention design and are not mutually exclusive. For example, it is possible to consider a specific intervention which provides advice and guidance through third parties to good performers via the board room. This means that although we have looked at the interventions separately there are a basic set of rules about design that apply in all cases, for all compliance support tools.

1. **The message must be developed and delivered by a credible, trusted source** (Weyman et al., 2006; Kilpatrick and Lapsley, 1996; Atkinson 1994);
2. **The target audience must be properly engaged** by expressing messages in terms of the values they hold. It must be compelling (Hempling, 2009; Keyworth and Yarrow, 2005);
3. **The message must be effectively disseminated** (Boyne et al. 2002; Redmond and Griffith, 2005);
4. **The message must be consistent and up to date** (Yarrow, 2007).

The four general design rules identified above are discussed below as they specifically apply to the interventions studied.

A review of European Best Practices (EC, 2006) provides lessons on compliance support tools generally that are also of relevance to all of the interventions discussed.

Lessons in providing compliance support tools

Significant financial and staff investment is required to establish such tools. Also significant investment is required to maintain the tools (out of date information can be worse than useless because businesses incur unnecessary costs by following incorrect advice);

A commitment is necessary to finish the job – complete information on half of the regulations affecting industry is of little use;

It is important to have effective managers for such tools, given their complexity and resource use;

Involvement with business is necessary at the start and during the entire process – it is useful to set up a tool for business communication that must identify the best mechanisms for communication;

Simply creating the tool is not enough – there needs to be an effective and ongoing communication strategy to ensure that businesses use and benefit from the tool;

Such tools can be supplemented by other activities (such as workshops) which can add significant value to tool; and

The tools can be used by regulators in their wider dealings with industry, ensuring that they are clearly linked to all elements of regulatory activity.

From Best Review (EC, 2006).

All of this must bear in mind the old adage '*where there is a will there is a way*', but conversely if there is no will then there is no way. The rules above focus on the 'way' to increase compliance. To increase the will to comply, the benefits of complying (as understood by the target audience) must significantly outweigh those of not complying.

For businesses in general a key driver is the impact of any activity, including compliance with regulation, on their bottom line financial performance. This is because this will affect their ability to secure the continuation or increase of funding from shareholders and financial institutions (Keyworth and Yarrow, 2005; CBI Corporate Affairs Group, 2005, SAI Global - personal communication). It is therefore essential to create an environment where compliance is financially beneficial. Time and resources to deal with regulation have a direct financial impact. Furthermore, damage to reputation from failure to comply can affect sales, which in turn affects revenue generation.

A key design consideration of any regulatory intervention therefore is the link between behaviour and either the realisation of financial benefits or the avoidance of financial disbenefits. These can be direct (e.g. reduced charges or avoidance of fines or business closure), or indirect (e.g. enhanced reputation or avoiding loss of reputation). Environmental Management Schemes provide a vehicle to achieve the right balance between business and environmental priorities. Supermarket chains that encourage

their suppliers to be accredited through schemes can recover their implementation costs, often in the order of millions of pounds, through being able to guarantee quality to the consumer and hence increase prices, or as with the Dutch covenant schemes through increased business. In other cases, those investing for example in best practice decide to absorb the costs of the measure because they can see that this investment may avoid enforced larger investment to meet with changes in statutory regulation e.g. Safe Sludge Matrix. In all cases, the intervention has to make 'good business sense' (WRc, 2006).

Another important factor in all of this is the role of the individual. White (et al, 2010) specifically mentions the importance of regulator expertise both in terms of subject area knowledge, the ability to influence the behaviour of those regulated and the knowledge of risk based decision making approaches. This cannot be underestimated.

Experienced regulators give credibility and will enhance compliance levels whether they are providing advice or working in the boardroom. Linked to this, undoubtedly trust is a key factor supporting compliance (Braithwaite 1995; Braithwaite & Levi 1998, Atkinson 1994). The evidence is however that building trust, understanding and then changing behaviour and maintaining positive behaviour change does takes time.

Nielsen (2006) talks of the importance of responsiveness to operator behaviour on the part of the regulator and the kind of institutional settings that promote the right form of responsiveness. May & Winter (1999) also examined responsiveness in the context of agro-environmental regulation in Denmark and remind us of the need to get the balance right between tough and sympathetic responses. Having too tough a response can be counterproductive and not being tough enough raises the problem of regulatory capture.

On the operators' side too, a compliant operator reflects the capabilities and beliefs of the operations manager and director which will be reflected in their staff. Changes in these positions may be a key factor in determining compliance. On both sides, whilst good guidance can help improve consistency – in terms of developing good criteria scales, for example, it does not substitute for the good judgement of those involved (White et al, 2010). The role of the messenger is important.

As has been mentioned previously, understanding both the regulator and the regulated is critical to effective communication. However as Handy (1985) and others, who have delved into organisational behaviour, explain there are many factors to take into account. Such factors include history, standards, size, goals, style, skill & knowledge, age, type of people, personality, relationships, cohesion, leadership and motivation.

In a survey of businesses perceptions of regulatory services IPSOS MORI (2008), whilst noting an overall good level of satisfaction found that "*local authority regulatory services' understanding of business is the weakest aspect of their service*".

Gunningham and Sinclair (2002) while emphasising the need to understand the different characteristics and motivations of businesses also admitted that gaining that understanding is difficult - quoting a response rate of only 15 out of the 875 SMEs surveyed.

As regards specific types of business behaviour or boardroom culture, Lyons & Maxwell (2004) talk about corporate environmentalism – i.e. behaviour over a policy life-cycle which includes regulation. Initially a business may attempt to pre-empt new

laws and regulations; then a business might aim to influence the actual regulations; then a business might aim to deflect enforcement of the regulations. Recognising such behaviour should enable the regulator to more effectively target its efforts and choice and application of intervention. The PESTLE analysis might be a suitable tool for assessing and understanding such behaviour (CIPD 2010).). A PESTLE analysis involves consideration of Political, Economic, Sociological, Technological, Legal and Environmental factors when auditing an organisation's position in the wider environment. Done internally it helps the organisation assess the environment in which it operates and to identify potential changes need to respond to that environment. The analysis is used "to guide strategic decision making". Done externally it would help to determine and understand the likely behaviour of an organisation. This would in turn provide a means of categorisation and thereby enable the targeting of interventions.

While the regulated and the regulator are key players in this study it is important not to forget the contribution of the public and the wider civil society and their contribution to 'environmental governance' (Gunningham, 2009 – "*For example large, reputation sensitive companies, which are regularly scrutinised by ... and local communities, will be particularly driven to go beyond compliance by the conditions of their 'social licence'.*"). This 'civil regulation', usually exercised by civil society (e.g. by NGOs) can be regarded as filling a vacuum left by the regulatory system which is "*starved of resources, lacking in political will and incapable of reaching many businesses.*"

One key theme which emerged from the literature and from the workshop was the need to categorise the regulated in order to optimise intervention selection and design. The work of Parker et al. (2009) discussed above shows that it can be done but as yet we do not know how effective it is. Whilst large enterprises do have recognised characteristics which distinguish them from SMEs, variation in size within SMEs is less of a distinguishing factor. In practice operational staff tend to categorise operators based on expert judgement (or 'gut feel') rather on objective evidence or a well informed categorisation process. In other sectors these have been developed more rigorously. For example in the Judicial system, when trying to decide on the most appropriate sentence for each defendant, magistrates often rely for the more serious offences, on detailed assessments of the offender undertaken by the Probation Service. The assessment (OASys) uses a system of categorising the offender based on accumulated knowledge about a number of factors such as behaviour and what influences behaviour. However it is recognised that any such categorisation is only suitable for a moment in time, since both individuals and organisations change with time (OASys assessments for example are only considered valid for up to 6 months).

Another key point which emerged from both the literature and the workshop, which is important in the messenger-message-recipient story, is motivation: the motivation of both the messenger and the recipient; and perhaps more importantly the need for both parties to understand the motivation of the other. It is also recognised that motivation, and therefore behaviour, will vary between individuals within an organisation, as well as between organisations in a particular category. While it is commonly considered that money (costs, profits, etc) is a primary motivator, the work of Parker et. al. (2009) suggests that this is not always the case. While the messenger and message are important, so is the way or manner in which it is communicated. The use of humour and shock are two examples.

For example CPRE are currently (2010) leading an anti-litter campaign. One of the elements of the campaign is a short radio advert. The advert has been designed to present a humorous image of the 'lovely English countryside' dotted with litter. The humorous message is backed up with key facts about the tonnes of litter dropped each day and the millions of pounds spent clearing it up. The approach was chosen because the advertising company felt that the audience couldn't be 'shocked' into changing their behaviour on the environment so chose humour to communicate that message.

However one of the most powerful ways of communicating health and safety information is through 'shock'. Operators of machinery, as part of their early training, are shown safety videos demonstrating 'what could happen' if a careful approach is not adopted. The key here is that the people receiving the training have a high level of personal control over the outcome (i.e. how they operate the machine) and a lot to lose personally if the outcome is not good. This principle of 'shocking' the audience into behaviour change, however, does not always work. For example with the SARS outbreak, the HPA was heavily criticised for 'scaring' the public. The difference here is that the public had little control over how they were affected.

3 Advice and guidance given by regulator to operators

3.1 Definition

Advice and guidance are two forms of information provision and have an **enabling** effect.

Advice is considered to be giving recommendations about actions or formal information about something, by the regulator to the regulated. As such 'advice' is a direct and active engagement between the regulator and the regulated. Activities classified as 'advice' include: information given during visits, telephone advice lines or website help requests (here it is the regulated that seeks the contact with the regulator). Advice may be:

- formal advice, for example as given in advisory notices, and must be followed; or
- informal advice given as a warning before formal procedures are followed or in many cases in a response to a request from the operator aimed at facilitating improvement.

Guidance is the passive provision of information to the regulated, typically in the written (printed or electronic) form. In contrast to advice, 'guidance' is an indirect engagement between the regulator and the regulated. Activities classified as 'guidance' include website free-access guidance pages (for example NetRegs provided by the Environment Agency), leaflets, brochures and other publications, campaigns, videos and case studies. In most cases, guidance is non-statutory and it is up to the operators whether or not to follow the recommendations made and is usually qualified by statements to ensure responsibility for compliance remains with the operator. Where guidance is statutory, i.e. where legislation places a duty on a regulator to produce such guidance and a duty on the regulated to comply with or have proper regard to that guidance, the recommendations must be followed.

3.2 Effectiveness

Does it work?

The review found considerable evidence to support the conclusion that advice and guidance is effective (see below) but little or no evidence on effectiveness of advice and guidance relative to other approaches or on the cost-effectiveness of advice and guidance. A recent trial with waste management companies (Brooke Lyndhurst, 2010) indicated that compliance increased more in poor performing companies where 80% of time was spent on inspection/audit and 20% on guidance compared to better performing companies where the split in approaches was 50:50. The study concluded that advice and guidance was better focussed on poor performing sites, but the

findings could equally well support the conclusion that inspection/audit approaches improve compliance more than advice and guidance.

Macrory (2010) states that “*Advice and guidance are generally the first and preferable way to induce compliance*”. Hampton (2006) endorsed the provision of “*authoritative accessible advice*”. Advice and guidance is used widely by all the regulators surveyed implying that it is effective though effectiveness is rarely measured. The degree of effectiveness will depend on the approach used, for example Yapp and Fairman (2004) found that information provided in leaflets was often misunderstood, insufficiently specific, or detailed, and did not improve knowledge or motivation to comply, whereas firms believe detailed manuals help them to stay compliant (LBRO, 2009, Worsfold, 2006). Leather (2004) noted that targeted, tailor-made information and guidance was regarded as particularly useful.

Specifically:

- *What do we think the effects on compliance would be? - Where lack of knowledge and understanding is the main barrier preventing compliance, advice and guidance would be expected to have a major affect (Yapp and Fairman, 2004). Numerous specific case-studies are available, from a range of advice and guidance approaches from focussed site specific advice (White et al, 2010) to wider campaigns such as Oil-Care (WRc, 2006) and advisory systems such as NetRegs (EA, 2010b), linking good advice and guidance (with a regulatory backstop) to improved compliance and reduced negative incidents (HSE, 2009). Though there are also studies where this link was not made, possibly due to the short length of the studies (White et al, 2010). Many case-studies are reported on the Environment Agency’s catalogue of good practice (EA, 2010b). Regulatory support is important, repeated guidance visits become less effective if not backed up with formal enforcement activity (Yapp and Fairman, 2004).*
- *How would they impact in terms of admin burden? - Surveys have shown that businesses deem advice and guidance, if in line with business needs, to have potentially very beneficial effects in terms of improving the environmental business performance (Brook Lyndhurst, 2010), and to increasing business effectiveness (LBRO, 2009). Improved information for regulated entities was noted as the most important factor for reducing the administrative burden on businesses by respondents in a recent global survey of regulatory modernisation (Deloitte, Wishart, 2009). Specific figures are in some cases available, for example, the NetRegs service enables UK SMEs to save an estimated £58 million each year, on average £2,400 per business (Independent business survey by Eftec, March 2008).*
- *What other effects would they have, good and bad? – Other key positive effects are ‘Better working relationships’ (Brook Lyndhurst, 2010, White et al, 2010), associated with better awareness, management control and changed behaviour (Taylor, 2008). Positive effects might be to improve consistency and transparency in the way in which regulatory requirements are implemented. On the negative side, too much advice and guidance may restrict innovation in finding solutions that are cost-effective for the specific circumstances of the operator. It may also take away the responsibility and accountability of the*

operator to manage their sites in an environmentally responsible way. This could eventually lessen their ability and/or motivation to solve their own problems. Whereas boardroom approaches tend to seek to heighten these aspects (Australian EPA 2010). There may also be concerns about a level playing field, as operators performing responsibly could resent the extra time and advice given to poor performers. Certainly businesses are strongly of the view that advice and guidance should not be at the expense of the Environment Agency's regulatory and enforcement role which ensures standards and delivery of a level playing field (Brook Lyndhurst, 2010; Williamson et al 2006).

Why does it work?

Advice and guidance are compliance support tools used to provide information to operators to enhance their understanding and capability to take action and become compliant. Advice and Guidance are enabling interventions and work because often, particularly with new regulations, operators are not clear of what needs to be done (WRc, 2006).

When does it work?

Again there is considerable evidence identifying the factors contributing to successful advice and guidance. Much of this has been incorporated into practical tools by the Environment Agency (e.g. Is your guidance right checklist, EA, 2010c). Advice and guidance works when:

It is developed and delivered by a credible, trusted source (WRc, 2006; Atkinson, 1994), particularly people with a similar background, who are familiar with the problems of the target audience (Taylor, 2008). Advice from experienced inspectors is likely to be considered of greater value than from inexperienced ones, particularly if their experience relates to the activities being regulated and technical experts may need to be bought in (Brook Lyndhurst, 2010). If the messenger or the message lacks credibility this can give lead to reputational damage. Personal relationships are important (White et al, 2010) and this is something that takes time to develop. Continuity of staffing is therefore an important consideration (Brook Lyndhurst, 2010). Working in partnership with third parties can be particularly useful here (WRc, 2006) – see Section 6 – as some SME's will not approach the regulator nor respond to awareness raising activities due to fear (Wright et al, 2004). Knowledge of ongoing third party schemes to support operators such as The Knowledge Transfer Partnerships Initiative¹ (KTP, 2010) can be an effective way of directing operators to good advice that will secure environmental improvements at little cost to the regulator (Pers Comm, Jon Foreman, 2010).

Guidance is more successful if stakeholders are involved in its creation (WRc, 2006, EA, 2010c). Good examples are guidance from CIRIA, and PEPFFA - a code for farmers developed with a user group. These approaches help to build ownership and

¹ The KTP scheme lead by Defra, employs new graduates to facilitate partnerships between businesses and academia to address specific business problems, including improving environmental performance.

ensure the guidance is practical. But there are time and resource implications of adopting such an approach.

The target audience is properly engaged. Information needs to be framed in the values of the target audience (WRc, 2006, EA, 2010c), whether it is time, money, status or 'an easy life'. Different target audiences have different value sets (see below for discussion on board room interventions). Involvement with business is necessary at the start and during the entire process – it is useful to set up a tool for business communication that must identify the best mechanisms for communication (EC, 2006). Generic written information is often not understood (Yapp and Fairman, 2004).

Approaches need to be developed that are adaptable to different sites, and get buy-in from the operator by taking account of their own management values, knowledge and processes; this involves contact with operators face-to-face (Brook Lyndhurst, 2010). For any operator having the right point of contact is very important if advice is to have an impact. Information should be provided on new techniques and best practice (Brook Lyndhurst, 2010) but it is particularly important to frame the advice by giving information about the background to and detail of regulation (EA, 2010e based on business feedback from HMRC events). Another way of engaging people is through using a hard hitting /shock message (see above).

The message is effectively disseminated. Simply creating the advice or tool is not enough – there needs to be an effective and ongoing communication strategy to ensure that businesses continue to use and benefit from it (EC, 2006). Such tools can be supplemented by other activities (such as workshops) which can add significant value (EC, 2006). The appropriate dissemination methods and channels depend on the target audience as well as the subject matter and should be chosen to match their needs, as reflected by factors such as the sector, scale, ethnicity (EA Workshop, 2010). A number of questions need to be addressed.

- Does the guidance need to be short or detailed?
- Is the target audience wide or narrow?

It is important to make use of networks to ensure the information gets to the right places. Third parties can be useful here and the media may have a role to play. For example, the Archers radio programme has traditionally been used as a media to share messages with the farming community (see later). Information must be timely and consistent (Brook Lyndhurst, 2010). Prompt readily accessible (ideally web-based) information with adequate staffing to respond to surges in enquiries was essential in the SARS outbreak (Goddard et al 2006). Inspection visits provide a good mechanism for bringing knowledgeable inspection staff face-to-face with operators (White et al, 2010).

In 2007 Sarah Anderson reviewed how government departments and regulators give guidance to businesses. Anderson said that "*Businesses don't have a lot of time to gain information about regulations and open days are an easily accessible way for them to do so locally*". Her report, [The Good Guidance Guide – taking the uncertainty out of regulation](#), said that government and regulators should: make their guidance more accessible, and take part in HMRC Business Advice Open Days (something the Environment Agency has responded to with positive results EA, 2010e.)

The message is consistent and up to date (Yarrow, 2007, LBRO, 2009, Worsfold, 2006, WRc 2006, Brook Lyndhurst, 2010). The message must also be clear, reasonable, practical, targeted, dynamic and backed-up by evidence (WRc, 2006). Compliance assessment information can provide a strong evidence base for discussion (White et al, 2010).

Other factors highlighted are:

- the importance of regulatory support in terms of having a regulatory back-up (White et al, 2010). Repeated guidance visits become less effective if not backed up with formal enforcement activity (Yapp and Fairman, 2004) and businesses are strongly of the view that the Environment Agency's regulatory and enforcement role must be maintained to ensure standards and the delivery of a level playing field;
- using a balanced combination of methods tailored to suit different target audiences recognising the diversity of businesses (Wright et al, 2004, HSE, 2005, Worsfold, 2006, LBRO, 2009, EA, 2010c);
- that small firms prefer specific advice (Wright et al, 2004);
- that advice and guidance must take into consideration past experience and future intentions (HSE, 2005).
- guidance and advice are likely to be more effective when combined with measures designed to increase the ability of stakeholders to apply the information (WRc, 2006).

When would we not apply them?

Examples of when advice and guidance are not appropriate include:

- when operators are already familiar with what actions need to be taken and non-compliance is being driven by other reasons;
- where they could be seen to be barriers to innovation;
- when the individual officer, or the Environment Agency in general, is not best placed to provide the advice or guidance, in this case the operator should be referred elsewhere (EA, 2010b);
- where non-compliance, or risk of non-compliance, is serious and/or purposeful, or the operator has not heeded earlier advice, in this case more formal action should be taken.

Guidance and advice are a waste of time if they are: out-of-date, misleading, confusing or worse conflicting, top-down, unclear or lack rationale (WRc, 2006).

How much regulatory effort would be needed to implement them?

Successful advice and guidance are achieved through a combination of time, skilled campaign managers and a capacity for self-reflection (WRc, 2006 on the Oil Care

campaign). Significant financial and staff investment is required to establish and maintain guidance (in complete or out of date information can be worse than useless because businesses incur unnecessary costs by following incorrect advice) (EC, 2006).

How could it be applied in the EA context?

Advice and guidance is already widely applied in the EA and there are many examples of good practice (for example NetRegs) and many Agency staff skilled in the development and implementation of advice and guidance. There is an 'Advice and Guidance to Business Project team' who have produced a case study log for advice and guidance to share success across the organisation and enable all to learn from staff who have used advice and guidance to solve problems and deliver environmental outcomes. There are also clear guidance documents on how to develop and apply guidance for example the 'is your guidance right checklist' which capture the factors described above (EA, 2010b).

4 Actions taken by the regulator in the boardrooms of operators

4.1 Definition

For the purposes of this study 'boardroom intervention' is defined as "*...a targeted means of securing, enhancing, or reporting the performance of a company - potentially for multiple sites, activities and sectors - by engagement between the Regulator and the Board of Directors of that Company.*"

There are a range of activities considered under this category including 'Account Management' whereby senior staff engage the board of directors over a period of time, information provision and training focused specifically on company boards and the use of 'Boardroom sign off' for performance reports to heighten awareness of environmental compliance. Boardroom interventions could in theory encompass discussions between a senior inspector and the operations director of a large business but for smaller companies could equate to a site visit to the operator (EA workshop, 2010).

4.2 Effectiveness

Does it work?

The review found limited information about boardroom interventions and whether they are effective in improving compliance. Indications are that positive outcomes are achieved but particularly for approaches such as account management, these can have high resource implications for the regulator (see below). There was no evidence on the effectiveness of boardroom interventions relative to other approaches.

The basis for these interventions is that commitment at the highest level is the key to ensuring the organisations culture as it sets the '*tone for the expected standards of performance and attitude*' (Day, 2004). There appears to be widespread acceptance of this principle and the need to engage with operators at the highest level. A number of regulators have adopted approaches to raise boardroom interest in compliance in recent years, recognising the importance of director level accountability, either through personal contact in discussing performance, or through signing declarations on performance in realising compliance within the organisation (Australian EPA, 2010a,b).

HSE have a specific part of their web-site targeted to appeal to Directors as Champions for Health and Safety (HSE, 2005). The NHS Sustainability Unit (2009) advocates "Board level leads and champions" in their carbon reduction policy. Research into Account Management approaches undertaken by the Environment Agency (100% Cotton) highlights strong support for senior-level Account Management amongst all parties. Account managers from the Environment Agency and operators

participating in these initiatives also had a strong perspective that it was having a positive impact and operators appeared reluctant to withdraw from such an approach once they were engaged in this way (100%Cotton 2010).

Specifically:

- *What do we think the effects on compliance would be?* – Boardroom interventions are a specific form of information giving. Where lack of knowledge and understanding is the main barrier preventing compliance, then boardroom interventions would be expected to have a major affect (Yapp and Fairman, 2004). There is no evidence to indicate that Boardroom interventions improve compliance though progress in developing relationships is expected to result in better performance (100%Cotton, 2010). CEO sign-off of performance reports being taken forward in Australia, coupled with transparent public reporting, is expected to lead to higher compliance and accountability (Australian EPA, 2010a).
- *How would they impact in terms of admin burden?* - Business appears to appreciate the high level interaction of the account management approaches adopted by the Environment Agency. Both operators and regulators can envisage a situation where as high level relationships develop, increased compliance would lead to lighter inspection regime and identified benefits as a reduction in bureaucracy and streamlining of regulatory processes (100%Cotton, 2010) and improved efficiency on both sides (100%Cotton, 2010, Brook Lyndhurst, 2010, LBRO, 2010b). In Australia, however, where Director level sign-off has been linked to self-monitoring and assessment, operators have raised concerns about increased costs (Australian EPA, 2010).
- *What other effects would they have, good and bad?* – Positive outcomes have been identified as closer relationships, and open information sharing giving the chance to identify solutions before problems occur and undertake strategic planning (100%Cotton, 2010). Operating at this level across multiple sites can enhance consistency, streamline processes and reduce admin (Brooke Lyndhurst, 2010, 100%Cotton, 2010, LBRO, 2010b). On the negative side, boardroom interventions of the account management type might be criticised as a form of regulatory capture, though by contrast the Australian system of Annual Performance reporting and CEO sign-off is aimed at enhancing transparency and increasing public attention to environmental performance.

Why does it work?

Boardroom interventions work because gaining commitment at this level in an organisation is vital for setting the tone and expected standards throughout the organisation (Whitnell, 2004, Day, 2004) and providing leadership (Leckie, 2004). Board level awareness and ownership have been identified as the most important requirement for delivering environmental improvements (Day, 2004).

When does it work?

Of all the interventions studied there was the least information available about the conditions for successful boardroom interventions and important queries remain about when boardroom interventions work, for example is this level of engagement more effective through one-off meetings or on-going contact? The context is also important. One would expect a different tone to the engagement depending on whether it is reactive (e.g. it stems a sequence of minor incidents or breaches) or proactive. In the latter case there are likely to be differences depending on who initiated the engagement (Pers Comm, Mark Kibblewhite 2010). Furthermore a key general question is how to move from 'it's good to talk' to seeing improved environmental compliance (EA Workshop, 2010).

In terms of the general rules identified earlier:

Developed and delivered by a credible, trusted source – status is of particular importance to directors and so the person delivering the message must be seen to be a worthy messenger. Recent case-studies (100%Cotton, 2010) suggest that it is not so much status, as ability to act that is actually the key. The seniority and status of the regulator's account manager is particularly important during the early stages of establishing access to and relationships with senior staff within operator companies. Not only does it provide credibility but it acts as a symbol of how committed the Environment Agency is to the process.

An important element of the seniority of the account manager is that it confers an ability to influence others and ensure actions are taken within the Environment Agency. Having the authority to make decisions and ensure actions are taken demonstrates that problems raised are taken seriously and this is a crucial step in building trust. Technical Leads should be used to add specific technical credibility to the liaising skills and authority of the account manager (100%Cotton, 2010).

Inevitably Account Management works best when the key players develop a rapport. Change may be needed where people do not work well together (100%Cotton, 2010). In terms of trust, reputational damage at this level could have a serious negative effect. It may take time to build confidence with the board and any negative experience may push the process back considerably (Pers Comm, Simon Pollard, 2010).

The target audience is properly engaged. Compliance information is a good way of '*getting the attention of senior management*' (White et al, 2010). It is the platform for both operator and regulator to take an overview and see where efforts should be focused and should be provided in a way which is simple, succinct, easy to look at and accurate (Brook Lyndhurst, 2010).

Boards (Directors) are interested in benchmarking with other companies to determine 'best in class.' Benchmarking approaches are powerful communication tools both between sites for multi-site operators and between companies within a sector (Pers Comm, Martin Cox, 2010). This information is of interest to directors in terms of business efficiency but they are also aware of its interest to shareholders, and third parties such as investors and insurance companies (EA, 2010f).

Other third parties, who provide a route to engaging boards, are customers, through supply chains, or through local communities who, for example, may object to site extensions.

All messages, and the way they are delivered, need to be 'to-the-point', in a language directors will understand, and linked to business motivations (see section on good performers). Time is a particular issue. Directors do not have time to listen to detailed or complex presentations on why and how they should comply with legislation and they are likely to be de-motivated by time-consuming activities.

The message is effectively disseminated. A key factor governing the success of account management approaches used by the Environment Agency is that messages are cascaded from senior level contacts to develop other close working relationships at many levels. These approaches can fail if there is a break in the chain of communication between senior and operational levels (100%Cotton, 2010).

When would we not apply them?

If and when there might be a strong perception or the reality of regulatory capture. When it's not efficient to do so, for example if the companies are not substantial or multi-site operators.

How much regulatory effort would be needed to implement them?

This depends on the type of boardroom intervention used. In the account management approaches used recently by the Environment Agency, considerable senior level involvement is needed to give status to the relationship particularly in the beginning and it takes a considerable investment of time to achieve a mature relationship (100%Cotton, 2010). Once relationships have been established, there is a general feeling that, for many companies, the account manager could 'move down' a level, to Area Managers, without compromising effectiveness since interpersonal skills of the staff are as important as the seniority at this stage. But senior personnel must be able to step in if problems occur. Operators once involved in this sort of relationship are reluctant to return to a standard relationship. It is therefore important to consider how the regulator can 'disengage' with organisations that are no longer deemed to pose a risk to the environment (100%Cotton, 2010).

By contrast, the Australian system of Director sign-off for annual performance statements includes an element of self-monitoring which could reduce regulatory effort, though some of the resources saved are likely to be redirected to an auditing role.

How could it be applied in the EA context?

The level of senior resource available in the Environment Agency to undertake account management is very limited so it would be important to use these approaches only where they would have a clear benefit over traditional site-level interventions. It would also be important to be clear on the objectives to be achieved (EA Workshop, 2010). A review of the account management activities undertaken by the Environment Agency within water and waste sectors 100%Cotton (2010) identified them as successful partly because they are regulated industries but also because their core business has such a

direct environmental impact. The review recommended that the Account Management process should be rolled out on the basis of the degree of environmental impact and risk posed by a sector or specific company. It identified appropriate sectors as: the construction industry; non regulated industries via a sector body for sectors that comprise many SMEs and/or who have strong trade bodies (for example agriculture/farming sector). The retail sector, however, is felt to need a different approach with for example. the large multiples requiring individual account management at head office level (such as in the LBRO Primary Authority scheme – Argos, B&Q etc).

Self-declaration at a senior level is another form of boardroom intervention which would encourage the company to take ownership of identifying potential compliance problems rather than relying on the Environment Agency to do this for them. Such an approach is used for financial accounting and is an implicit requirement for Health and Safety performance. The requirement could be introduced as a condition in a permit to make it a binding commitment (Pers Comm, Martin Cox, 2010).

5 Approaches to regulating ‘good performers’

5.1 Definition

A ‘good performer intervention’ is a carefully selected and specifically targeted form of intervention or non-intervention aimed at “sites, or companies, whose operational performance has been recognised by the regulator as being ‘good’”. Good performer interventions are designed to reward operators so that it is in their interest to perform at a high level. ‘Good performer interventions’ may be managed at operational level or via boardroom interventions. The OPRA scheme which reduces inspection and reporting requirements, and hence subsistence fees, for lower risk sites, is a form of ‘good performer intervention’. Other good performer interventions are ‘name and fame’ schemes which provide good publicity to good performers.

5.2 Effectiveness

Two important aspects of good performer interventions are:

- Defining good performance to ensure a level playing field (discussed under ‘developed and delivered by a trusted source’); and
- Creating a reward scheme for good performance that is motivating (discussed under ‘the target audience must be properly engaged’).

Does it work?

The review found no evidence on effectiveness of good performer schemes relative to other approaches or on the cost-effectiveness of good performer schemes. Evidence on the effectiveness of good performer schemes was limited and mixed, in part reflecting the different types of schemes that have been used and underlining the importance of finding rewards that are motivating for operators.

Looking at schemes introduced by HSE to reward good performers by reduced inspection and reporting, there is limited evidence to show it is effective (HSC, 2005). Similarly, most operators are not motivated by reduced fees as these are dwarfed by operating costs, though increased fees can attract senior level attention and form a basis for discussion (White et al, 2010).

By contrast, a ‘scores on the doors’ approach to publicising good performance in restaurants was found to be beneficial (Wright et al, 2008). Furthermore, information ranking company performance against ‘peer’ companies in the waste sector has acted as a motivator towards compliance and has been successfully used as a communication tool for a wider audience within operator companies (100% Cotton, 2010).

REMAS, an EU wide project (involving the Environment Agency, SEPA & IEMA) looked at whether regulated companies signed up to EMAS or ISO14001 could automatically

be regarded as 'good performers,' and therefore more lightly regulated (REMAS 2006). Results were inconclusive, and there was no clear correlation between breaches or prosecutions and EMS certification. For example some companies sign-up to ISO14001 for commercial supply chain benefits, do the minimum necessary to comply with the scheme requirements and do not necessarily change behaviour significantly. Furthermore, both ISO 14001 registered and non-registered companies were found to have breached licence requirements or been prosecuted for environmental offences. There was however a better correlation for businesses accredited under the much stricter EMAS regime compared to that under ISO14001.

Specifically:

- *What do we think the effects on compliance would be?* There is evidence of improved compliance associated with good performer schemes (see above). The key is to link good performance to rewards which are motivators for the operators concerned (see below). The intention of performance awards should be to promote improvements in standards (that is going beyond compliance) not merely maintenance of standards (Worsfold, 2005, EA Workshop, 2010). There is little evidence to show that self-certification schemes, seen by some as a reward for good performance, have a positive impact on compliance or indeed are highly valued by operators (Atkins, 2010).
- *How would they impact in terms of admin burden?* – The immediate costs to business of the scores on the doors scheme were minimal (Wright et al, 2008). Reduction in admin burden can be a driver for good performer reward schemes. Self-certification schemes were not listed as important in driving reduced admin burdens in an international survey of business (Deloitte-Wishart, 2009)
- *What other effects would they have, good and bad?* - An intervention which rewards good performers or conversely penalises non-compliers reflects elements of moral value/judgement. Others will consider the 'unfairness' of compliance deficits and have concerns about regulatory capture (Stallworthy, 2008, Morgan and Yeung, 2007). Care is therefore needed to avoid criticism of regulatory capture. On a one-to-one level, there is a danger that such perceptions can antagonize companies and lead to unhelpful discussions about the accuracy and validity of comparisons rather than discussions about the implications. (100% Cotton, 2010).

When & why does it work?

Developed and delivered by a trusted source - Even the best performers have accidents and may lose their position of 'good performers'. Care is needed to avoid criticism of regulatory capture in these cases, people may challenge decreased monitoring for example and transparency in decision making will be essential. Good performance can be associated with key individuals, e.g. the operations manager, and therefore both sides need to be aware of the impact of changes in staff. In other cases it is the standing of the organisation rather than the individual that is important. Worsfold (2005) found that credibility of award schemes is reinforced by the independent nature of the initiator, in this case the local authority. Transparency in

defining good/poor performance is essential and measures should be applicable across businesses (EA Workshop, 2010).

The target audience is properly engaged – The benefits of being a good performer must be aligned, that is so that the rewards of good performance are seen as real benefits to those achieving them. Identifying motivational factors can be difficult as businesses exhibit widely differing characteristics and commitment where environmental issues are concerned and what motivates one company will not necessarily motivate another. ‘Naming and shaming’ puts some businesses under pressure, but not others, reflecting the size of the company, its ownership, the reputation they want to have, where they are in the investment cycle, etc. Attitudes between companies are very different, some want to comply, others are just not interested (EA Workshop, 2010). Motivation isn’t always tangible and avoidance of a negative is often useful. It’s important to understand how businesses operate and be inventive about incentives (EA Workshop, 2010). Some motivational factors which have been identified:

- **Reputational issues** are important with the loss of reputation for firms already in compliance being a stronger driver for future compliant behaviour than any publicly declared reward or sanction (Hutter et al, 2008, Gunningham, 2002, 2009). Senior managers may be particularly motivated by reputation reports of their companies’ good performance, preferably with images of senior company members.
- **Performance relative to peers** within sector (particularly for large companies, Pers Comm, Martin Cox, 2010).
- **Visibility/promotion** is another area of key interest to boards, who may be incentivised by the promise of publicised awards for good performance, or conversely by avoiding bad publicity or poor performance.
- **Fast-track/smooth regulatory procedures** to avoid delays in regulatory approval (often a frustration at high level in companies), speed of provision of permits, streamlining processes (100% Cotton 2010). Obtaining faster authorisations can give companies a market advantage if they are bidding, for example, to make batch chemicals for others (Pers Comm, Martin Cox, 2010).
- **Economic incentives proportionate to company size.** Interestingly decreasing subsistence charges as in OPRA was not seen to be an incentive in several case-studies with landfill operators, but an increasing charge did prompt senior managers to investigate the situation (White et al, 2010). Another approach would be to make the incentive more attractive by working with others to link environmental performance to financial incentives such as insurance premiums, tax breaks, or investment potential. An example of where this has been done successfully is the OFWAT scheme for water companies where one of the performance criteria is the numbers of category 1 and 2 incidents.
- **Increased public confidence** which may keep the company below the radar of local interest groups.

- **Less risk of tough enforcement in case of incidents:** When taking enforcement action, the Environment Agency will consider public interest factors, including the attitude of companies to environmental performance in determining the actions to take (see enforcement policy).

The message is effectively disseminated – In addition to issues of transparency identified above, another consideration should be given to ‘visibility’. The incentives of being a good performer are likely to be enhanced if the good performance is well publicised, in the right form to the right people (Pers Comm, Simon Pollard, 2010). For example board members may want to see photographs in management journals. For the local authority ‘scores on the doors’ approach, it was about putting very visible signs on the doors of restaurants, and providing material via websites and in the papers.

When would we not apply them?

When there is not a good understanding of how the regulated feel towards good performance or of what motivates positive behaviour.

How much regulatory effort would be needed to implement them?

The level of resource required to implement good performer interventions will depend on the scheme but is not thought to be high. Local authorities identified significant start-up costs for the scores on the doors schemes but found that operating costs were relatively low and did not hinder other enforcement work. The resources required to operate schemes were less than expected and in most cases the costs to businesses was minimal (Wright et al, 2008).

What do we think about how it could be applied in the EA context?

One measure of performance that is currently employed as an incentive is the level of non-compliance; another is OPRA scores which look at the inherent hazard of an operation and the historical performance of the operator. OPRA assessments have been made over many years, providing information within the Environment Agency on what makes a good performer. This information could be used to benchmark within and across sectors to identify the best performers and whether there are common characteristics that determine the likelihood of good performance.

We understand that personal OPRA operator scores are now considered by companies when they recruit new managers (Pers Comm, Simon Pollard, 2010). Potentially therefore providing an added incentive for individual operators to improve their scores as it enhances their marketability. The Environment Agency may be able to capitalise on this further by naming and faming good operators, or providing reward schemes. Staffing changes would need to be reported as this would affect OPRA scores and subsequently the approach taken to compliance assessment.

6 Actions by third-parties to deliver regulatory objectives

6.1 Definition

Actions by third-parties to deliver regulatory objectives (third party actions) are compliance support actions led by a party other than the regulator or regulated. Third parties can be other regulators, trade associations, professional advisors, supply chain, or civil society groups. Trans-national corporations and global civil society groups now have a major role in the management of global politics and economics (Albareda, 2008). Third parties also include the media (Almond, 2009; Lofstedt, 2009; Yeung, 2009), faith and the arts, and insurance companies. A list of types of third parties is given in Appendix C. Actions that might be taken by third parties to deliver regulatory objectives typically include: shared compliance assessment action, development and delivery of advice and guidance, partnership in providing and using information of common interest, campaigns, labelling regimes, and award schemes.

6.2 Effectiveness

Does it work?

The review found numerous good examples to demonstrate that third party actions can bring about improved environmental performance (see WRc et al, 2006) but little or no evidence on effectiveness of third party interventions relative to other approaches or on the cost-effectiveness of third party interventions.

Specifically:

- *What do we think the effects on compliance would be?* – There is good evidence that third party interventions can contribute to many desirable outcomes including positive behaviour change (see West Country River's Trust, WRc, 2006 and Forest Stewardship Council², Karmann, 2009, Pedley 2009) increased compliance (see Red Tractor Scheme, Assured Food Standards, 2010) and going beyond compliance (see Marks & Spencer Field to Fork, WRc, 2006). Often third party interventions are seen to be leading regulatory interventions (Chartered Insurance Institute scheme (Pedley 2009), Shoppers guide to GM by Greenpeace (WRc, 2006).
- *How would they impact in terms of administrative burden?* – Third party schemes may or may not reduce the regulatory burden on operators as there may be extra costs as well as benefits and these interventions are only likely to be acceptable if costs and benefits are in line with business objectives.

² **NB** In contrast Sasser et al (2006) report that firms in the U.S. forest products sector have been put-off participating in the NGO-sponsored private authority regime that is the Forest Stewardship Council (FSC); and Chan & Pattberg 2008 talk of an accountability deficit with the FSC.

- *What other effects would they have, good and bad?* – There may be a risk of the Environment Agency being perceived as delegating or ‘ducking’ their responsibilities by appearing to let others do what a regulator might be expected to do. Therefore the accountability of third party interventions may be lower as these schemes may be seen to be transferring responsibility and transparency for the public might also be reduced. Third party schemes often mean that direct contact with the operator is lost, this has both positive and negative effects, on the one hand third party interventions provide an opportunity to drive wider outcomes (carbon transport, cost reduction) without being seen to impose regulatory creep, on the other hand the loss of direct contact with the regulated, can lose the opportunity to talk about wider environmental performance or how to go beyond compliance. Another potential negative is the risk of regulatory capture of the third party, so it’s important to ensure they maintain independence and credibility.

When & why does it work?

Developed and delivered by a trusted source – Third parties can be useful as they are often ‘more trusted’ than regulatory or government bodies. In its Carbon Reduction plan the NHS recognises the benefit of using trusted ‘messengers’; - ‘We see the medical profession as playing a potentially highly influential role in spearheading a movement towards carbon reduction and sustainable development. Doctors are highly regarded by the public, professionals and policymakers, and their collective voice can make a considerable impact.’ (NHS Sustainability Unit, 2009).

When regulatory or government bodies provide advice, operators can feel more managed than if they receive advice from a more independent source. Similar benefits can be achieved by creating a new brand to create the perception that advice comes from an independent source. This approach has been adopted by WRAP for the ‘love food hate waste’ campaign. In some cases third parties may be more suited to providing the advice or services required in a particular area and in these cases regulatory offices should make use of these resources or refer the operator to this source (EA, 2010b). To be effective the third parties have to have adequate resources and recognition and support from the other parties (Walters and Nicholls, 2006).

Of relevance here are the questions ‘How is the scheme accredited? and Who accredits the accreditors? As an example UKAS has been used to reduce DWI compliance inspections in the water industry and may have a role to play (Pers Comm, Mark Kibblewhite, 2010).

Following on from the Anderson Review, the Government is running three pilots between September 2009 and April 2011. These will test whether offering SMEs access to tailored, insured advice will help them understand and comply with employment and health and safety law. The advice is being provided by private sector insured advice providers.

The target audience is properly engaged. Third parties can be very useful in ensuring the message is properly aligned with target group values. Third parties may have a better understanding of the target audiences motivations and limitations or may have a history of working jointly with the target group and a long-standing relationship,

so that they are considered by the target audience to be credible and trustworthy. These attributes can be built into a partnership approach as in the Rother Valley Land Care Initiative. A positive aspect was that the initiative did not have any statutory powers. This encouraged farmers to come forward and discuss the issue. It was felt that a “policing” remit would have compromised the project’s ability to win support for its objectives with the target group (WRc, 2006).

The message is effectively disseminated – Third parties can be particularly useful in helping the message to get to the right people and amplifying the impact of the regulator particularly with SMEs (Wright et al, 2004). The target group might be a narrow group of people identified through a professional network (e.g. CII and professionalism in financial advice where the third party can help to raise standards (Pedley, 2009)) or a very widespread group of people who could best be reached for example via the media or via an established presence at national or global scales (e.g. Greenpeace’s Shopper’s Guide to GM, Forest Stewardship Councils Certification Scheme).

Local communities and customers are also important third parties, not in delivering the message but as recipients of the message and whose actions impact on those whose whom we would wish to become compliant. Dissemination to these groups, rather than by these groups, becomes the issue here. Third parties can be good at developing networks for example the Mersey Basin Campaign and the West Country Rivers Trust to help achieve a wider dissemination.

One form of third party intervention is where supply chain pressures impose compliance or better compliance on businesses via requirements of up-stream and down-stream businesses to belong and conform to an EMS such as ISO14001 or EMAS. This type of effect has been judged to occur even in poorly regulated less developed countries in businesses which are subsidiaries or suppliers of foreign (e.g. European) companies (Kamau, 2005). Gunningham and Sinclair (2002) refer to this mechanism as “potentially powerful” and have great potential to cascade change effectively down the supply chain (e.g. Marks & Spencer’s Field to Fork initiative setting supply chain standards for fruit, salads and vegetables).

Other factors to help achieve the benefits of third party interventions are:

- define success and how it is to be measured right at the start, for example through OPRA and CCS, as it’s not possible to fall back on inspection related measures later;
- encourage and commission 3rd party schemes, but avoid micromanagement (EA Workshop, 2010). There are other key leadership roles a regulator can play through providing good quality information, targeting sectors or areas for action, monitoring the effectiveness or approving solutions (WRc, 2006).

When would we not apply them?

Third party interventions by their nature are not applied by regulators but regulators can have important roles in supporting them (see WRc, 2006). Their success relies on

there being an organising third party that is trusted, has the ability to influence and ensure that target actors participate fairly by having transparent and reliable monitoring and clear consequences where conditions are not met (WRc, 2006). The absence of such a third party would restrict the potential for effective third party action.

How much regulatory effort would be needed to implement them and what would be the admin burden?

The resource implications of working with third parties are uncertain (Wright et al, 2004). Regulatory activity can be transferred from the regulator to a third party (e.g. monitoring of certification schemes as with Marks&Spencer's Field to Fork initiative). However it's also possible that there may be a transfer of operational effort into other activities such as scheme auditing rather than a reduction in regulatory input.

In third party certification, firms pay to receive the award and it is important that they see financial benefit as a result of this investment, indirectly via improved reputation, or directly by increased sales (SAI Global, 2010). This suggests that only schemes where the benefits to participants outweigh the administrative burden or costs are likely to endure. Reducing administrative burden can be a key driver for some third party interventions. For example in the Local Better Regulation Office partnership initiative between local authorities and large corporations, advice is given once corporately rather than many times to individual stores (LBRO, 2010a).

What do we think about how it could be applied in the EA context?

There are numerous examples of where third parties are involved in interventions that have positive environmental outcomes, often in partnership with the Environment Agency. The Scotland's Environmental and Rural Services' (SEARS) land management project which is a partnership between nine public bodies, including SEPA, reports reductions in administrative burden for both regulator and regulated (SEARS, 2010). Working in partnership to make use of third party relationships is a key design principle advocated by earlier Environment Agency research (WRc, 2006). The implementation of River Basin Plans is likely to highlight priority areas where action is needed and third party interventions make be particularly useful here in part facilitated by the joint development of the plans through the Regional Liaison Panels and more local level engagement on priorities, possible solutions and actions. The Environment Agency has an important role in catalysing, and/or supporting such actions (see WRc, 2006) and the evidence it holds on environmental status and pressures will be important in this.

7 The level of evidence to support conclusions

The literature search conducted provided evidence (in many cases limited) about the effectiveness of interventions viewed in isolation, but little or no information about the relative effectiveness of different interventions. The evidence uncovered often comes back to the 'same old' principles with a lack of hard evidence to support them. The discussion above is based largely on anecdotal evidence and the experience of the team gained while working in this area for many years, supported by conclusions from other studies where available. In a way, this discussion can be considered as a set of theories about whether these interventions are effective, and why.

The limited availability of evidence on effective regulation is a view supported extensively by other reviews. It's a key message from several years ago and, perhaps surprisingly, is still a message headlining conclusions from recent studies. Atkins (2010), for example, when talking about self-certification, comment that there is *'generally a lack of good robust examples showing how self certify compliance schemes had been successfully implemented within or out-with the environmental sector, either in the UK or internationally'*. The same report identifies one of the barriers to evaluating the potential for self certification regimes was the *'little robust data on the effectiveness of Agency processes'*.

Other recent reviews from the Environment Agency support this conclusion, for example, White et al 2010, states *'there is limited evidence for the effectiveness of risk based decision making'*, going on to identify the reasons for this as being:

- Limited perception of what constitutes an outcome;
- Indirect link between interventions and outcomes;
- Means to evaluate the decision not designed in;
- Limited monitoring;
- Institutional factors (specifically mentioning that parts of the Environment Agency are not effectively connected in terms of linking elements of evaluation).

Recent research, from the Environment Agency in particular, provides stronger evidence to answer some questions on the effectiveness of specific cases, for example 'Do they work? When do they work? Why do they work?' This evidence is useful in designing new instruments that work. Work on board room interventions (100% Cotton, 2010) provides a useful analysis from both regulator and operator perspectives of the characteristics of successful Account Management. Similar research on the other interventions covered in this study, i.e., through a series of structured interviews conducted with the regulators and operators would provide a useful perspective on the theories outlined above and strengthen understanding about where approaches work and how to make them work well.

What these studies do not contain is reliable information about the costs to the Environment Agency of adopting the approaches described (though there are comments within the cases to indicate that these might be high (e.g. White et al refers

to investing 3 times the normal amount of effort to advise a particular problem landfill site). Atkins (2010) specifically highlights this issue of lack of cost information when reviewing self-certification approaches stating: '*The cost of inspections between and within sectors is highly variable as is cost capture. Evaluating costs and hence financial implications of self certification may therefore be difficult under present financial monitoring regimes.*'

However at the end of such research, two vital questions remain unanswered:

- How much does it cost to implement these approaches?
- How cost-effective are they compared to other approaches?

Without research designed to answer these questions it will be impossible to address issues of cost-effectiveness and value for money.

Two suggestions for moving forward in the Environment Agency are:

1. Set up a series of structured and comparative trials to test the theories and provide sound evidence on specific interventions.
2. Develop a consistent, logical and linked evaluation framework for all regulatory activity.

In the meantime it might be worth considering whether information on standard times required for regulatory activities (from resource planning) could be used as a rough proxy for regulatory costs.

7.1 Structured and comparative trials on effective regulation

Trials on specific interventions have been conducted elsewhere, for example on waste compliance support interventions. Recent case-study analysis for the Environment Agency (100% Cotton (2010) and Atkins (2010)) also support the need for properly designed trials. Some initial thoughts on trials which might be useful to conduct, preferably in collaboration with other regulators who have a similar agenda and who deal with the same operators, relevant to the interventions discussed in this study are:

- **Advice and Guidance:** Have enhanced senior inspector support to provide advice in one region
- **Board Room Interventions:** Have a targeted campaign to benchmark performance, deliver messages and publicise information for one sector and/or develop a part of the website targeted at directors (as for HSE) and test responses to this.
- **Good performers:** Linked to the demonstration planned above, fast track regulatory procedures for good performers in one region and feedback results. A comparative study of the application of naming and shaming vs. naming and praising to see whether one is more effective than the other or whether it is the combination of both that is the most effective

- **Third parties:** The RBMP implementation process which is proceeding at a local level may give many opportunities for similar initiatives to be developed in different ways. An experiment to assess the impact of involving/delegating to different types of third parties could be designed into this.

7.2 A consistent, logical and linked evaluation framework

It would be helpful to create a consistent, logical and linked evaluation framework for regulation that is used as part of the policy implementation and development process and which is embedded within the Environment Agency's operational management evaluation framework of score cards and key performance indicators. This recommendation is supported by work from Atkins who recommend: *'As a pre-requisite to identifying how and where self certification might be used by the Agency, it may be useful to systematically capture the current approach taken by the EA to enforce regulations for which they have primary responsibility, together with the current mechanism and cost of assessing compliance'*. The LBRO evaluation toolkit (LBRO 2010c) provides a useful model to consider. The use of impact models in assessing the effectiveness of interventions might also be worth exploring but as with other approaches evidence is needed. (see Primdahl et al 2010).

With many regulators facing the challenge of identifying and applying the most effective interventions, it would make sense for regulators with relatively similar agendas and dealing with similar types of organisations to work together to pool knowledge and understanding and to undertake common research projects and field studies. These would target effectiveness assessment, evaluation tool kits and categorisation systems.

8 Conclusions

Of the four interventions under consideration the following key points can be made:

- 1. The effectiveness of advice and guidance given by regulator to operators:** Advice and guidance covers a broad range of activities and are used widely in a range of forms by all regulators studied. Advice and guidance are recommended as 'the first and preferable way to induce compliance' and seen by businesses as the most important approach for reducing administrative burden on businesses. There is strong evidence that good advice and guidance increases compliance when used in the right situation and the wide and persistent provision and use of advice and guidance in a range of forms in itself implies that this intervention is effective as a compliance support tool. There are also numerous studies provide evidence of how to make advice and guidance effective and there is good practical guidance on how to use these interventions. Of particular note is the evidence that the experience-level of the regulator's representative (inspector) including in relation to the particular industry being regulated is critical to ensuring advice and guidance are effective. Too much advice and guidance could be seen to decrease the accountability and potentially the ability of the operators to find solutions to their own problems. It's important to balance advice and guidance with inspection and enforcement as this latter role is seen by businesses as essential in maintaining standards and ensuring the delivery of a level playing field.
- 2. The effectiveness of actions taken by the regulator in the boardrooms of operators:** There is widespread acceptance that commitment at the highest level in a company is a key factor determining compliance levels. In recent years a number of regulators have used a range of approaches to raise boardroom interest in environmental compliance, including account management, director level sign-off and targeted training and communication. Of all the interventions studied there was the least information available about boardroom interventions and important queries remain about when boardroom interventions work. However, early positive outcomes from account management have been reported as closer relationships enabling solutions to be identified before they occur, enhanced consistency across sites, and improved efficiencies on both sides. On the negative side, account management approaches might be criticised as a form of regulatory capture and demand considerable high level resource inputs. By contrast, the Australian system of Annual Performance reporting and CEO sign-off is aimed at enhancing transparency and increasing public attention to environmental performance and may have a role to play in increasing boardroom accountability.
- 3. The effectiveness of approaches to regulating 'good performers':** There is some evidence of improved compliance associated with good performer schemes. The key is to link good performance to rewards which are motivators for the operators concerned. Identifying motivational factors can be difficult as businesses exhibit widely differing characteristics and commitment where

environmental issues are concerned and what motivates one company will not necessarily motivate another. Motivation isn't always tangible and avoidance of a negative is often useful (e.g. loss of reputation, loss of other benefits, or increased charges). The intention of performance awards should be to promote improvements in standards, not merely maintenance (that is going beyond compliance). It is essential that schemes are developed transparently to ensure a level playing field and avoid potential criticism about 'unfairness' and concerns about regulatory capture.

4. **The effectiveness of actions by third-parties to deliver regulatory**

objectives: The review found numerous good examples to demonstrate that third party actions can bring about improved environmental performance from a wide range of third parties including other regulators, trade associations, professional advisors, supply chain, or civil society groups, investors, the media and insurance companies. For different reasons, actions by third parties can in some circumstances, have a greater impact than that provided by the regulator and useful partnerships can be formed where such parties can be identified, for example advice and guidance from trusted parties or links to decisions with high financial impact made by insurance companies or investors. In other cases third party actions can help reduce regulatory effort by sharing activities which have a common interest such as compliance assessment or providing additional support to improve environmental outcomes such as the knowledge transfer partnerships.

The project has viewed regulatory effectiveness through the lens of types of regulatory intervention, however some findings cut across all interventions and can be applied more generally.

Selecting interventions: The literature review shows that there has been relatively little reported on controlled studies which have attempted to analyse the effectiveness of particular interventions, even fewer which have examined cost-effectiveness, a vital assessment if questions of value for money are to be answered and cost-effective choices are to be made. In the absence of clear evidence of the effectiveness or otherwise of particular interventions, one could reasonably assume that all interventions that have been widely and consistently used, do have some benefit.

"The central normative argument of Smart Regulation is that, in the majority of circumstances, the use of multiple rather than single policy instruments and a broader range of regulatory actors can and should be used to produce better regulation" (Gunningham 2009).

Key design criteria. A key message going forward is that it might be better to focus more, not on what you do, but on how you do it, it being reasonable to assume that if you do something well it will have greater impact than if you don't. This involves deconstruction of any intervention in to its component elements, processes and principles - to provide some 'theoretical insights'. The literature reviewed was able to provide more answers to these questions than to the value for money question. Common criteria for designing effective interventions are:

- **the message must be developed and delivered by a credible, trusted source;**
- **the target audience must be properly engaged. Messages must be compelling, 'to-the-point', in a language users will understand and expressed in terms of the values they hold, linked to business motivations;**
- **the message must be effectively disseminated;**
- **the message must be consistent and up to date.**

The role of the individual cannot be under-estimated in the success of any intervention. Undoubtedly trust is a key factor supporting compliance (Braithwaite, 1995; Braithwaite & Levi, 1998). The evidence is however that building trust, understanding and then changing behaviour and maintaining positive behaviour change takes time.

Regulatory outcomes are reported from the perspective of the regulated and the regulator. Understanding what constitutes a 'beneficial outcome' from the perspective of the regulated is important in finding win-win situations and understanding what motivates compliance.

An intervention can be seen in simple terms as having three on three key elements – Messenger (the regulator or third party), Message, and Recipient (the regulated). All three elements need to be given careful consideration in order to facilitate the optimum selection and design of an intervention. Effectiveness can be enhanced by optimising each element, and the interactions between them. Often it depends as much on the individual(s) involved as it does on organisation level policy and practice. Here again trust is a key factor but it needs to be recognised that building trust, understanding and then changing behaviour and maintaining positive behaviour change takes time.

There is recent growing acceptance of the need to undertake more evaluation of intervention effectiveness and to be able to categorise operators in order to be able to optimise the selection, design and application of interventions. Understanding the desired outcomes (from both regulator and regulated perspectives) and how to assess progress against these outcomes, is an essential part of running a successful process and of evaluating it.

A key conclusion must be that whilst there is evidence (limited in many cases) to show that interventions have been effective in achieving positive environmental outcomes, and some understanding of how to design interventions to make them more effective, the issue of the cost-effectiveness of interventions relative to each other is poorly understood and under-researched.

To improve the evidence base, we recommend (a) undertaking structured comparative trials and (b) developing a consistent, logical and linked evaluation framework for evaluating regulation, possibly based on a log-frame approach, embedded into working practices.

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11 List of abbreviations

AES – Agri-Environment Schemes
AMD - Accounts Modernisation Directive
APS - Annual Performance Statement
BERR – Business, Enterprise & Regulatory Reform, Department for (no longer exists)
BIS – Business, Innovation and Skills, Department of
BITC – Business In The Community
BRE – Better Regulation Executive
BRTF – Better Regulation Task Force
BSI – British Standards Institute
CBI – Confederation of British Industry
CEO – Chief Executive Officer
CIEH – Chartered Institute of Environmental Health
CII – Chartered Insurance Institute
CIPD - Chartered Institute of Personnel and Development
CIRIA – Construction Industry Research & Information Association
CPRE – Campaign to Protect Rural England
CWU – Communication Workers Union
DEFRA – Department of Environment, Farming & Rural Affairs
DfT – Department for Transport
DWI – Drinking Water Inspectorate
EA – Environment Agency
EC – European Commission
ECSFDI – England Catchment Sensitive Farming Development Initiative
EMAS – Eco-Management & Audit Scheme (European EMS scheme)
EMS – Environmental Management System
EPA – Environmental Protection Agency
EU – European Union
FSA – Food Standards Agency
FSC – Forestry Stewardship Council
GM – Genetically Modified
GMC – General Medical Council
HMRC – Her Majesty's Revenue & Customs

HPA – Health Protection Agency
HSC – Health & Safety Commission
HSE - Health & Safety Executive
ICO – Information Commissioners Office
IEMA - Institute of Environmental Management & Assessment
IoD – Institute of Directors
KPI – Key Performance Indicator
KTP – Knowledge Transfer Partnership
LBRO – Local Better Regulation Office
NGO – Non-Governmental Organisation
NHS – National Health Service
OASys – Offender Assessment System (used by National Probation Service)
OFT – Office of For Trading
OFWAT – Office of Water Services
OPRA - Operator & Pollution Risk Appraisal (an Environmental Protection tool)
Opra – Operational risk appraisal (part of Environmental Permitting Regulations for waste facilities)
PEPFFA - Prevention of Environmental Pollution From Farming Activities
PESTLE – Political, Economic, Sociological, Technological, Legal, Environmental
(factors incorporated in a PESTLE analysis)
RBMP – River Basin Management Plan
REMAS – Research into the
SARS – Severe Acute Respiratory Syndrome
SEARS – Scotland’s Environmental And Rural Services
SEPA – Scottish Environmental Protection Agency
SMEs – Small & Medium Enterprises
UKTI – United Kingdom Trade & Investment
WRc – formerly Water Research centre (now covers water, waste & environmental fields)

12 Glossary

Advice: Giving recommendations about actions or formal information about something, by the regulator to the regulated, a direct and active engagement between the regulator and the regulated.

Advice - formal: Advice which must be followed, for example, as given in advisory notices.

Advice - informal: Advice given as a warning before formal procedures are followed or in response to a request from the operator and is aimed at facilitating improvement.

Boardroom intervention: A targeted means of securing, enhancing, or reporting the performance of a company - potentially for multiple sites, activities and sectors - by engagement between the Regulator and the Board of Directors of that Company

Compliance: Meeting the requirements of regulation; e.g. complying with the legal requirement to have a permit to operate and/or complying with the condition(s) of that permit.

'Good performer' intervention: A carefully selected and specifically targeted form of intervention or non-intervention aimed at sites, or companies, whose operational performance has been recognised by the regulator as being 'good'. Good performer interventions are designed to reward operators so that it is in their interest perform at a high level.

Guidance: The passive provision of information to the regulated, typically in the written (printed or electronic) form. In contrast to advice, 'guidance' is an indirect engagement with the regulated.

Guidance – statutory: Guidance produced in response to a requirement in legislation which typically places (a) a duty on a regulator to produce such guidance and (b) a duty on the regulated to comply with or have proper regard to that guidance.

Guidance - non-statutory: Sometimes regarded as advice because it is sought, gained, considered and then it can be accepted or ignored. It is defined as the giving of recommendations about actions or formal information, by the regulator when asked by the regulated (for example information given during site visits, via campaigns, or telephone advice lines). It is also the provision, whether requested or not, of formal help and direction by the regulator to the regulated, typically in the written (printed e.g. leaflets, or electronic e.g. the Netregs web-site).

PESTLE analysis: A PESTLE analysis is “in effect an audit of an organisation's environmental influences with the purpose of using this information to guide strategic decision-making”. It can be used “as a generic 'orientation' tool, finding out where an organisation or product is in the context of what is happening outside that will at some point affect what is happening inside an organisation. The six elements (Political, Economic, Sociological, Technological, Legal, Environmental) form a framework for reviewing a situation, and can also be used to review a strategy or position, direction of a company, a marketing proposition, or idea.

[source = <http://www.cipd.co.uk/subjects/corpstrtg/general/pestle-analysis.htm?lsSrchRes=1>]

Regulatory capture: Regulatory capture can be described as where regulators come to share the interests and viewpoint of the industry they are supposed to be overseeing, rather than acting in the broader “public interest” Regulatory agencies are ‘captured’ by the industry they are supposedly regulating. In some cases larger companies are perceived to use their resources to persuade the regulator into concessions that give them preference over smaller companies.

SME (Small and Medium sized Enterprise): There is no single definition of an enterprise, or of a firm or business, which are often used to mean the same thing. Generally it means a legal unit, person or group of people producing goods or services under their own control and with their own legal identity. There is no universally accepted definition of a small, medium or large enterprise. The revised European Union definition, used for EU statistical comparisons, defines a small enterprise as one with employment less than 50, and a medium enterprise as one with employment of at least 50 but less than 250.

[source = <http://stats.bis.gov.uk/ed/sme/smestats2008-meth.pdf>]

Third party actions (actions by third-parties to deliver regulatory objectives): Compliance support actions lead by a party other than the regulator or regulated. Third parties include trade associations, professional advisors, supply chain, civil society groups. It may also include trans-national corporations and global civil society groups, the media faith and the arts, and insurance companies. Actions that might be taken by third parties to deliver regulatory objectives typically include: campaigns, labelling regimes, and award schemes.

Appendix A: Details of the Literature Review

Three main sources of literature were searched: academic, regulator, third party. A summary of the approaches adopted and the logic used in refining sources is given below together with a list of the library facilities accessed.

A.1 Academic literature

We used general search engines (Google and Yahoo) as well academic databases such as EBSCO, CSA Illumina, Informaworld, Scirus (Elsevier), Scopus, Social Science Research Network, ProQuest,. Web of knowledge, Wiley Interscience. This led to the identification of specific journals particularly electronic ones which could be further searched (e.g. via Ex-Libris) – see A5. In addition we searched for academic groups/institutes that might specialise in legal studies which included regulatory interventions. These different routes inevitably lead to the same sources of information. Information relevant to this study was limited but quite wide ranging with respect to Journal and discipline and academics (see Reference list and Bibliography). The key academics in this field include John & Valerie Braithwaite and Neil Gunningham, all based at the Australian National University.

The academic literature was searched using the combinations of key words listed below:

- ‘regulator’ and ‘advice’;
- ‘regulator’ and ‘guidance’;
- ‘regulator’ and ‘boardroom’;
- ‘regulator’ and ‘good performance’;
- ‘regulation’ and ‘effectiveness’;
- ‘regulation’ and ‘advice’;
- ‘regulation’ and ‘guidance’;
- ‘regulation’ and ‘boardroom’;
- ‘regulation’ and ‘good performer’;
- ‘third party’ and ‘regulator’;
- ‘third party’ and ‘regulation’.

Where the lowest numbers of references were found detailed reviews of the literature were conducted in order to identify relevant research.

Due to the relatively low numbers of relevant, or possibly relevant, documents identified by these detailed reviews, and the high resource requirements to carry out the same level of detail search for those key word combinations with >1000 results, further searches were conducted for the following key word combinations:

- ‘effectiveness of regulatory interventions’;
- ‘regulatory interventions’;
- ‘provision of regulatory advice’;
- ‘effectiveness of regulatory advice’;
- ‘provision of regulatory guidance’;
- ‘effectiveness of regulatory guidance’;
- ‘dealing with good performers’;
- ‘recognition of good performance’;
- ‘boardroom interventions’;
- ‘interventions at boardroom level’;
- ‘alternative interventions in environmental regulation’.

With specific regard to the effectiveness of boardroom interventions, the team engaged with the Doughty Centre for Corporate Responsibility within Cranfield University’s School of Management, who were only able to find and provide limited information.

A.2 Regulator literature

An initial search identified over 90 regulatory bodies operating in England and Wales (Public Concern at Work, 2010; Harris and Carnes, 2009), however many of these were active in very narrow fields of activity/profession (for example the General Medical Council (GMC), the Civil Aviation Authority (CAA)). To focus the literature review to a manageable number of regulators, the list was filtered to include those bodies:

- with a similar target audience to the Environment Agency (that is a broad range of different sized organizations from across different industry sectors); or
- seeking to achieve similar outcomes to the Environment Agency (taken to include environmental protection, wildlife conservation and public health).

The list of 27 regulators given in Schedule 5 of the Regulatory Enforcement and Sanctions Act 2008 was used as a guide to refine this list.

The following regulators were selected as meeting one or both of the above criteria:

- Water Services Regulation Authority(Ofwat);
- Drinking Water Inspectorate (DWI);

- Food Standards Agency (FSA);
- Health and Safety Executive (HSE);
- Health Protection Agency (HPA);
- Office of Fair Trading (OFT);
- Local Authorities;
- Natural England;
- Local Authority Trading Standards Service;
- HM Revenue and Customs (HMRC);
- Companies House;
- Information Commissioners Office (ICO);
- Care Quality Commission;
- The Pensions Regulator.

The websites of each of the regulators listed above were searched using the key words: 'advice', 'guidance', 'boardroom', 'good performers'.

Databases (primarily Scopus and ABI Inform Global) were used, to focus the search on the most relevant materials fell into the following categories:

- academic analysis of the fundamental processes;
- academic studies of regulator actions/procedures;
- reports written or commissioned by regulators;
- reviews of third party actions;
- stakeholder or third party reviews of regulator actions or procedures;
- other materials.

The team meeting also identified areas for further review, particularly with respect to general materials on the effectiveness of regulatory interventions.

A.3 Third party literature

The regulators listed above and selected third parties were contacted directly to identify any relevant material not yet in the public domain. This produced a limited amount of additional material.

Relevant academic articles and regulator reports found were reviewed, and the findings discussed at a team meeting on 25 March 2010. The team meeting was used to

produce an initial analysis of the factors contributing to successful interventions which formed the basis for the conclusions of the initial draft report (26th March 2010).

A.4 Logic adopted

Road maps of the logic applied to the literature review and external contacts are given in Figures A.1 and A.2.

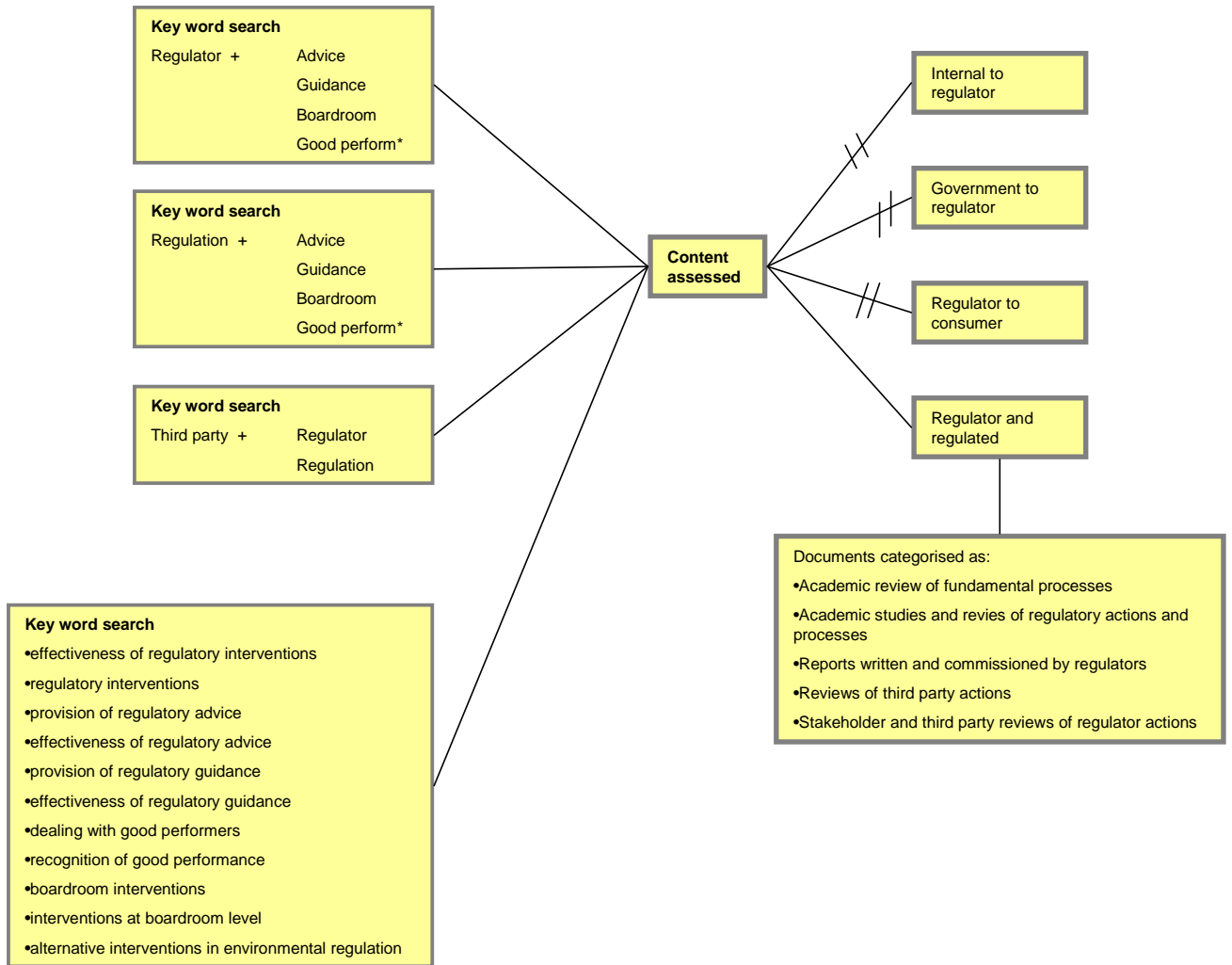
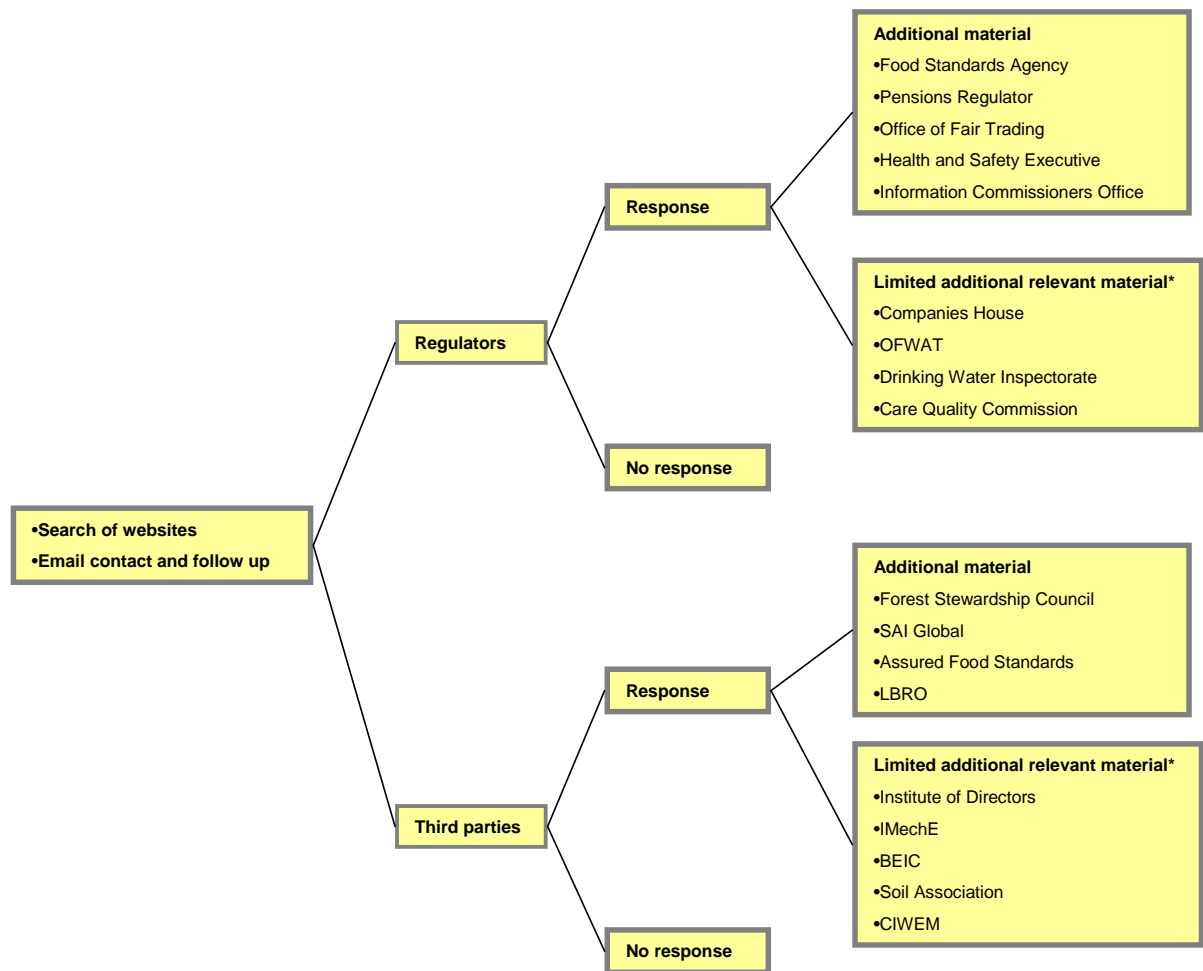


Figure A.1: Road map of logic applied to literature review



* Limited or no additional relevant material provided within the time frame of the study.

Figure A.2: Road map for contacts with regulators and third parties

A.5 Journals & Library facilities used

Journals investigated (those in **bold** are ones which generated one or more useful references)

Behavioural Science and the Law

British Food Journal

British Journal of Infection Control

Corporate Governance

Criminology

Employee Relations

Environment

Environment and Planning: Government and Policy

Environmental Law and Management

Environmental Politics

European Law Journal

Food Control

Food and Drug Health Policy

International Journal of the Sociology of Law

Journal of Empirical Legal Studies

Journal of Business Ethics

Journal of Environmental Policy and Planning

Journal of Environmental Law

Journal of Law and Society

Journal of Policy Analysis and Management

Journal of Public Administration

Journal of Public Affairs

Journal of Risk Research

Law and Policy

Legal Studies

Local Environment

Personnel Review

Planning and Environmental Law

Policy Studies

Professional Engineering

Public Administration

Public Health

Public Money and Management

Urban Studies

Library facilities used

Cranfield University Library Information Services (EG/PH)

Cranfield University, School of Management Publication database (EG via SoM staff member)

Cambridge University Squire Law Library (PH)

Appendix B: List of third parties

Arts

Business in the Community (BITC)

Certification and management consultancies, third party inspectors

Certifying bodies (such as the British Standards Institute (BSI))

Chartered Insurance Institute (paper Pedley 2009)

Chemical Industries Association (CIA)

Civil Society Groups

Confederation of British Industry (CBI)

Customer contract conditions

Faith groups

Food standards (e.g. Red Tractor, red lion eggs, Soil Association)

Forestry Stewardship Council (FSC)

Institute of Directors

Media

Professional Advisors

Professional Institutions (e.g. IET, IMechE, IFE, CIWEM, IEMA)

Supply Chain

Trade Associations

Trade Unions

UK Trade and Investment (UKTI)

Universities/Academia

Appendix C: Effectiveness of ‘advice and guidance’

C.1 Definitions of the approach – and the usefulness of these

A report produced for the Environment Agency in 2006 describes advice and guidance as two forms of information provision. Using these approaches, an agent can actively seek to make information available to a particular audience by publishing it in different forms or by engaging and communicating with different groups. This target audience can be broad (i.e. a campaign designed to raise general levels of awareness amongst the public) or narrow (by giving information to a particular target group). These interventions have an **enabling** effect and are likely to be more effective when combined with measures designed to increase the ability of stakeholders to apply the information. This instrument is also likely to be more effective when stakeholders trust the source of the information (WRc, 2006).

The terms ‘advice’ and ‘guidance’ cover a wide range of activities. From an initial review of regulators websites the following categories were identified:

- face-to-face advice;
- telephone or web-based advice lines/help requests;
- free access internet guidance pages;
- publications (including audio-visual presentations);
- tools developed by regulators to assist the regulated in complying with their legal duties (for example risk assessment tools developed by HSE);
- campaigns;
- training and seminars.

This study focuses on the first four of these since these are the formats most widely used by regulators.

C.1.1 Advice

The specification for this study states, “there does not appear to be a common definition of what ‘advice’ is in UK regulatory policy. It may be contrasted to inspection in that it is focused on improving an operator’s performance by providing information, rather than on a narrow investigation of regulatory compliance for example. Initially we are assuming that advice is an active pursuit by the regulator with respect to the operator.”

The Encarta English Dictionary gives two definitions of ‘advice’ as:

“recommendations about actions (somebody’s opinion about what another person should do)”;

“formal or official information about something usually received from a distance”.

For the purpose of this study ‘advice’ is considered to be giving recommendations about actions or formal information about something, by the regulator to the regulated. As such ‘advice’ is a direct and active engagement between the regulator and the regulated.

Activities classified as ‘advice’ include: information given during visits, telephone advice lines or website help requests (here it is the regulated that seeks the contact with the regulator).

Advice may take different forms; formal advice, for example as given in advisory notices, must be followed, informal advice may be given as a warning before formal procedures are followed or in many cases in a response to a request from the operator and is aimed at facilitating improvement.

C.1.2 Guidance

The project specification states “there does not appear to be a common definition of what ‘guidance’ is used by UK environmental regulators. As with ‘advice’ above, it is contrasted to permit compliance activities. Initially we are assuming that guidance is the passive provision of information by the regulator with respect to the operator e.g. the production and availability of documents (electronic or otherwise)”.

The Encarta English Dictionary defines “guidance” as:

“leadership, direction, supervision, management, control, regulation”;

“help, advice, support”.

For the purpose of this study ‘guidance’ is considered to be the provision of formal help, advice and direction by the regulator to the regulated, typically in the written (printed or electronic) form. In contrast to advice, ‘guidance’ is an indirect engagement between the regulator and the regulated.

Activities classified as ‘guidance’ include website free-access guidance pages (for example Netregs as provided by the Environment Agency), leaflets, brochures and other publications, campaigns, videos and case studies.

It is important to distinguish between statutory guidance, which must be followed, and non-statutory guidance which need not be. Statutory guidance is specified in legislation which typically places (a) a duty on a regulator to produce such guidance and (b) a duty on the regulated to comply with or have proper regard to that guidance. The requirement is expressed in terms such as “*Local Authorities are required to have regard to this guidance in exercising their functions under Part 6 of the 1996 Act. In so far as this guidance comments on the law it can only reflect the Department’s understanding of the law at the time of issue. Local authorities will still need to keep up to date on any developments in the law in these areas*” (DCLG, 2009) and as in s.39 (1) of The Environment Act 1995:

“General duty of the new Agencies to have regard to costs and benefits in exercising powers

(1) Each new Agency -

(a) in considering whether or not to exercise any power conferred upon it by or under any enactment, or

(b) in deciding the manner in which to exercise any such power,

shall, unless and to the extent that it is unreasonable for it to do so in view of the nature or purpose of the power or in the circumstances of the particular case, take into account the likely costs and benefits of the exercise or non-exercise of the power or its exercise in the manner in question.”

Statutory guidance can be supported by further non-statutory guidance. Non-statutory guidance is often regarded as advice because it is sought, gained, considered and then it can be accepted or ignored. It is defined as the giving of recommendations about actions or formal information, by the regulator when asked by the regulated (for example information given during site visits, via campaigns, or telephone advice lines). It is also the provision, whether requested or not, of formal help and direction by the regulator to the regulated, typically in the written (printed e.g. leaflets, or electronic e.g. the Netregs web-site).

Non-statutory guidance is usually qualified by statements such as:

“IMPORTANT LEGAL NOTICE

These Notes contain simplified guidance based on complex and changing legislation, and do not constitute legal advice. The Notes apply to England and Wales and to waste legislation for which the Environment Agency is the competent regulatory authority. Whilst we endeavour to keep them up to date, neither the regulatory authorities, nor national or devolved government departments nor the Waste and Resources Action Programme can be held liable for errors and/or omissions; compliance with the law remains the user’s responsibility. If you have concerns over compliance, you must seek professional advice, or contact your regulator or local authority.”

C.2 Examples of use

From the initial review of the websites of the regulatory bodies selected for this study, it was observed that ‘advice’ and ‘guidance’ are widely used by the majority of regulators, including: FSA, HSE, HPA, OFT, Natural England and Trading Standards. All have specific sections on their websites dedicated to ‘advice’ and ‘guidance’ or ‘publications’. Furthermore the majority offer telephone and on-line advice lines. Other forms of ‘advice’ and ‘guidance’ specifically mentioned by individual regulators include specific resources for start-up companies (HSE, 2010a) and e-newsletters (OFT, 2010a).

The following sections describe the specific advice and guidance offered by a selection of regulators. Whilst information on effectiveness was sought, the majority of regulators do not currently measure the effectiveness of their advice and guidance, therefore limited material was found. There is however a growing recognition of the need to measure effectiveness of advice and guidance with a number of studies underway or

about to report (OFT, 2010b; The Pensions Regulator, 2009) which may provide useful material in the future.

Health and Safety Executive (HSE)

Responsible for regulation to “prevent death, injury and ill-health to those that work and those affected by work activities (HSE, 2010c), the HSE is a well-established regulatory body and considered to be widely trusted (Weyman et al., 2006). The advice and guidance issued by the HSE is generically good (Bellamy et al., 2008); as a result the HSE provide a useful benchmark for best practise. The HSE works closely with local authorities to deliver its regulatory objectives.

The HSE provide the following forms of **‘advice’**:

- access to on-line advice and tools, free confidential helpline and on-line publications available for download (HSE, 2010b).

The HSE provide the following forms of **‘guidance’**:

- specific resources for start-up companies (HSE, 2010a);
- extensive guidance on website, this is targeted to specific industry sectors, to businesses, and to workers (HSE, 2010b);
- a health and safety Performance Indicator tool to allow companies to assess their own performance (HSE, 2010b);

In their annual report, the HSE include their assessment of performance against their standards, illustrated by case studies and key achievements (HSE, 2009). One case study is the Fit 3 programme, an initiative where advice and guidance were combined with other interventions namely inspection, stakeholder engagement, enforcement and **information**. The programme involved a number of stakeholders, and sought to make sustained improvements in reducing the number of people injured or made ill by work activity. The programme resulted in an improvement in accident rates, but little change to the rate of ill health. There was little to justify that the improved outcomes resulted from the programme, and less that they were attributable to the **information** given under the programme (HSE, 2009).

In 2004, the HSE commissioned a literature review of the effectiveness of their own and local authority **advice**, inspection and enforcement in bringing about regulatory objectives (Wright et al., 2004). Activities considered included issuing advisory documents, inspection based advice and enforcement work, and accident investigation. Their research reviewed

- commissioned evaluations of the impact and effectiveness of HSE/LA interventions;
- commissioned evaluations of interventions of other regulators;
- HSE statistics arising from sector specific initiatives;
- reviews of the effectiveness of strategies adopted in other countries.

From this review, Wright et al. (2004) concluded that there was strong evidence to support the continuation of a balanced combination of these methods, particularly for large and traditional organisations. However, Wright et al. (2004) also identified that some SMEs did not approach the HSE for advice nor respond to HSE awareness raising activities, possibly due to fear of the HSE. Furthermore, small firms were found to prefer specific advice and information so that they did not need to interpret to apply information to their own activities.

The HSE recognized the importance of the setting and other factors in the selection of regulatory interventions (HSE, 2005). To bring about good standards of compliance, **advice and guidance** must take into consideration past experience and future intentions, and be based on evidence and consultation. The HSE believe that there is no simple mix of interventions that will work in all cases, but that a tailored approach is required (HSE, 2005).

Health Protection Agency (HPA)

The HPA was established in 2003 to “provide an integrated approach to protecting UK public health through the provision of support and advice to the NHS, local authorities, emergency services, other arms length bodies, the Department of Health and the Devolved Administrations” (HPA, 2010b). Thus it is relatively new regulatory body. The HPA provide **consultancy and advice** services to organizations. It also provides **guidance** through: on-line learning tool for health professionals, events and training; and guidance documents are available on-line for specific disease risks (HPA, 2010a).

In analyzing the effectiveness of the of the HPA’s response to the SARS outbreak, Goddard et al. (2006) consider **the advice and guidance** issued by the HPA and highlight the need for prompt, readily accessible (ideally web-based), proportional guidance. From further examination of the operation of the HPA’s telephone advice line for SARS, Goddard et al. (2006) emphasise the need for adequate staffing to respond to surges in demand, and to ensure advice line staff have the up-to-date and relevant information.

Food Standards Agency (FSA)

Like the HPA, the FSA is a relatively new regulatory body, established in 2000 to protect the public’s health and consumer interests in relation to food (FSA, 2010a). The FSA provides guidance notes for use by all businesses that handle food which are maintained to reflect changes in regulations (FSA, 2010b).

Like the HSE, the FSA works closely with local authorities to deliver its regulatory objectives. Yapp and Fairman (2004) examined the effect of local authority interventions towards SMEs, involved in the catering industry, including **advice** on delivering compliance with food safety regulations. They found that the main barriers preventing food safety compliance were:

- a lack of knowledge and understanding about food safety requirements and principles;
- a lack of trust in the regulator and their requirements;
- a lack of motivation on the part of the firms.

Furthermore, Yapp and Fairman (2004), in discussing **guidance**, found that generic written information was frequently misunderstood, which limited its effectiveness and that formal enforcement is vital to the compliance process. The factors influencing the lack of understanding were identified as:

- “the level of deprivation in the local authority area;
- the level of formal enforcement activity;
- the level of educational activity undertaken.

LBRO (2009) studied the effectiveness of a **guidance** manual issued as part of the FSA’s ‘Safer Food, Better Business’ initiative. It found that firms that use the manual believe it helps them to stay compliant with food hygiene legislation, with 70% believing that it increases business effectiveness. LBRO (2009) highlight the need for a consistent regulatory message, and that in offering advice and guidance regulators need to recognize the diversity of businesses and their regulatory needs. However Worsfold (2006) found that “*while the guidance packs have many positive attributes, they also have many shortcomings.*” For example, Worsfold noted that the conventional template hazard plans in the packs might be replaced with a completed set of hazard analysis sheets, each addressing an individual process step. Businesses would confirm their understanding and application of the processes by ticking boxes and signing, and the sheets could be laminated and displayed in the workplace. Worsfold further highlights the need for **guidance** to be complete and up-to-date if regulatory outcomes are to be achieved.

Taylor (2008) presents the development (piloting, evaluation and validation) of food safety guidelines for the catering industry and considers the effectiveness of training. She concludes that the target businesses will respond to **advice and guidance** from a credible source, and presented in an appropriate manner, when complementary to business aims.

Improved information for regulated entities was noted as the most important factor for reducing the administrative burden on businesses by respondents in a recent global survey of regulatory modernisation (Deloitte, Wishart, 2009).

C.3 Examples of Use from Recent Environment Agency Studies

Several case-studies about the effectiveness of **1:1 advice and guidance** have recently been assessed by White et al (2010) as part of evaluating the effectiveness of risk-based decision making. In one case study, a poorly performing landfill site in England and Wales falling under PPC regulation was allocated additional resources (3 times as much as suggested by the OPRA score) to give compliance staff time to focus on underlying issues affecting performance. Staff provided detailed feedback on compliance issues, actions required as well as providing advice and guidance. The site operator responded promptly to them. Positive outcomes included a reduction in the number of odour complaints, reduction in severity of CCS scores and implementation of an ISO14001 management system.

In another case-study looking at risk-based agricultural inspections under the Integrated Regulation of Agriculture Project (IRAP), White et al (2010) noted that the inclusion of farms into regulation provides a good justification for visiting them. This in turn allows knowledgeable inspection staff to work with farmers to solve their problems and reduce the potential environmental impact of their farms. Although unable to link this **advice** to changes in environmental indicators, such as pollution incidents, there was evidence of changed behaviour to farm infrastructure and practises resulting from visits to farms made by officers. Changes included: re-siting a slurry store away from housing; and reductions in man-made fertiliser use through better use of materials generated on site. White noted that there were 'examples where this also resulted in improvements to site operations' and that 'these are expected to reduce the actual or potential impacts on the environment'.

White et al (2010) also quotes case studies which provide evidence to support the link between inspection and advice - inspection being the 'foot in the door' which then leads on to **advice** focused on the operators requirements, and of the positive outcomes which result. A number of the case studies also highlight the importance of the relationship between the inspector and the operator.

In assessing case-studies about the **advice** given whilst inspecting of landfill sites, White et al 2010 found that 7 out of 9 respondents described the relationship with the operator as having an important influence on the outcome. One case study identified that 'a good working relationship encouraged the operator to make minor improvements at the site'. The operator was constrained by lack of resources to make other improvements. Another case study highlighted that the relationship with the operator had informal and formal dimensions. As well as 'informal chats' with the operator, a quarterly technical meeting is held to discuss operator plans, progress and emerging issues. However, this has not stopped more formal enforcement action being taken, which in this case, has included prosecution. Specifically, White et al 2010, explores the effect of trust with farmers providing several relevant quotes from inspectors:

- '...with the people I've worked with over the years, it takes time to get to know them and to get them to trust you'.
- for many farmers, their farms are '*where they live, not just a place of work.*'
- 'you need to show that you can work with them to improve operations by providing help and guidance ... and, giving them a clear sense of what the priority issues are..'
- 'Listening to farmers thoughts about what they might do and encouraging the good ideas with practical support'.

Key factors supporting success were:

- Being well prepared and focused: 'the inspector said "We were well prepared, and set out a clear case for bunding the tank and didn't back off."'
- Being clear about what needs to be done supported by consistent and definitive guidance: 'the inspector said that "**The advice and guidance** on the external

web site is very good and it can be passed externally to the farmers. This is a key part of the process – things can get difficult if you can't tell people exactly what needs to be done.”

- Have good staff: ‘the team leader felt that the professional attitude of his staff, and a high degree of training, are key to ensuring that necessary improvements are made by negotiation.’
- Having a regulatory backstop: ‘the inspector felt that while she preferred to resolve problems by negotiation, the lack of supporting legislation can be a problem and is preferably the last resort.’

In a survey of business attitudes to advice and guidance given by the Environment Agency, Brook Lyndhurst (2010) identify eight key aspects of good site visits, the first of which is the experience of Environment Agency staff in relation to understanding the legislation, the sector, the operations and the role of an inspector, recognising that this knowledge and experience needs to develop over a number of years.

Business attitudes to advice and guidance reflect the experience businesses have with site inspectors and potentially at a higher level within the Environment Agency; their industry sector or regime and the relevant environmental regulation; the requirements of their specific permits; the size of their business; and in many cases, the resources available to a business to improve its environmental management (Brook Lyndhurst, 2010).

Brook Lyndhurst goes on to conclude that advice and guidance will be most effective in improving businesses environmental performance where it is responsive to business needs as opposed to potentially constituting a more removed, ‘top down’ approach to regulation or permit compliance. Factors affecting the value of advice and guidance were identified as:

- Businesses internal resources for environmental management and EA A&G - Where a company has limited resources, advice and guidance is likely to be more strongly valued and will potentially have a correspondingly greater impact.
- Up-to-date advice and guidance, developed directly with industry - Providing relevant and up-to-date A&G, which is both pertinent to the industry and to a business’s particular site or sites, is essential for the overall effectiveness of A&G provision.
- Industry technology and environmental regulation is constantly evolving - The most effective guidance, both written and that provided by inspectors to sites, has been developed through in-depth consultation or investigation with industry and/or reflects the experience of the inspector. It is essential that written guidance is not overly technical, scientific or abstract, but is pragmatic in tone and cognisant of the realities of business operations within the particular sector.
- Consistency in delivery of advice and guidance - Related to the above, consistency in the delivery of advice and guidance to all businesses and ensuring this consistency exists at all levels with the EA, is also a principal challenge. Businesses require this consistency in order to be on a ‘level playing

field' with other operators. Businesses will make investment decisions on new technologies or incur other costs in making improvements to their environmental performance. These improvements may well be based on EA Advice and Guidance and if this is inconsistent or less pertinent then businesses could incur unnecessary costs.

- Advice and guidance for small companies - Whilst there needs to be consistency in the provision of A&G to all businesses, this may be particularly important for small businesses. These companies are generally not involved in the higher level strategic discussions with the EA that larger businesses may hold. They may be less pro-active in seeking A&G on improving their environmental performance, potentially as a result of resource constraints. The ability to access industry relevant and up-to-date written guidance, or to receive this directly from the EA, is therefore of specific importance to small businesses.
- Timely delivery and dissemination of advice and guidance and responses to queries - There is a need to ensure advice and guidance is provided in a timely manner and that the EA is able to respond to business queries, for example relating to interpretation of regulation or permit conditions, as efficiently as possible. This requires stronger communication channels and handling of queries within the EA to address the difficulties businesses sometimes experience in obtaining information. Currently, requests sometimes become 'snagged' in internal bureaucracy and between the different 'silos' which are perceived to exist within the agency. Unless a company already has contacts within the agency, it is difficult to navigate through the organisation to find the right person to assist. (This conclusion was questioned as being 'out of date' at the practitioners workshop (EA Workshop, 2010) where participants noted that the NCCC has a really good handle on who customers need to speak to and a great database for advice.)
- More advice and guidance and a 'one stop shop' approach. - A one stop shop approach to providing A&G may be an effective way for business to access A&G from the EA and to assist business in improving its environmental performance. However, this may raise questions over the extent to which EA should move towards being an advisory body for industry given its role as regulator for industry; there is a potential tension between the two roles. Any future consideration of the remit and function of the EA in supporting improved environmental performance by business should give consideration to the opportunity for a one stop shop approach, alongside the need for regulation and enforcement.

Increasing provision of advice and guidance, if delivered effectively and in line with business needs, is considered by industry to have beneficial and potentially very beneficial effects in terms of improving the environmental performance of businesses. The value of an independent view and independent advice on improving environmental performance was identified by nearly all companies interviewed in the survey. However, businesses are strongly of the view that the Environment Agency's regulatory and enforcement role must be maintained to ensure standards and the delivery of a level playing field. Nearly all consider this enforcement role should not in any way lessen. Overlaying the above is a higher level and more strategic consideration

regarding the extent to which the EA can be the advisory body to industry alongside its role as regulator. Whilst this research did not identify any particular tension regarding this potential dual role, the research suggests it would be useful for the EA to be mindful of this in increasing its provision of advice and guidance (Brook Lyndhurst, 2010).

The Environment Agency and SITA, a waste management company, ran a joint six-month pilot from September 2009, to trial the greater use of A&G in the North East region. 12 sites managed by SITA, and covered by Environmental Permitting Regulations, took part in the trial. Six sites had a record of good environmental compliance, and six were less compliant. For the more compliant sites, 50% of the Environment Agency's effort was to be spent on advice and guidance during the trial (with the remaining 50% on traditional compliance activities such as inspection/audit), and 20% of effort on advice and guidance for the less compliant sites (80% on inspection/audit etc.).

Brook Lyndhurst and the Environment Agency's social science team evaluated the trial, to understand when and how advice and guidance is effective using in depth telephone interviews, a web-based survey, and two focus group discussions. In terms of outcomes the study found:

- Better working relationships between the Environment Agency and SITA were, widely felt to be the most significant outcome by both parties.
- There were some improvements in compliance scores, particularly for the less compliant sites.
- It was not clear whether or not there had been improvements in environmental performance at the sites. This may be due to the short length of the trial (six months), as environmental improvements may take longer to be seen.

Factors found to affect the compliance of a permitted site included:

- Physical/infrastructure factors (e.g. location, type and age of site, presence of immediate neighbours)
- People factors (e.g. staff 'buy-in', getting the right point of contact)
- Organisational factors (e.g. operator size, willingness to invest, values and knowledge)
- Permit factors (e.g. permit conditions such as trigger levels for breaches)

Recommendations to enhance the success of advice and guidance were:

- use more experienced staff, staff with an industry background, and try to maintain continuity in staffing;
- ensure a good level of consistency of regulation between sites, and between operators;
- develop approaches which can adapt to suit different sites, for example, to be able to deal with the significant differences between large and small operators;
- get 'buy-in' from the operator by taking account of their own internal management values, knowledge and processes, and identifying the right point of contact);

- share information internally and with the operator about the Environment Agency and operator processes, and agree/jointly identify topics for advice and guidance;
- combine advice and guidance with more traditional compliance visits;
- focus on less compliant sites;
- contact operators face to face;
- bring in technical experts, particularly to resolve longstanding or historical issues;
- provide information on new guidance, new 'best practice' techniques, best practice for annual reviews, and data requirements.

The evaluation includes recommendations for a basic framework, to support staff in deciding when and how to use this approach, how it can be adapted to suit different operator and site needs, Whether advice and guidance should be separated from 'formal' inspection or audits, and how breaches found on 'advice and guidance' visits should be dealt with, and how and when to move from advice and guidance to other, more formal, enforcement methods.

Much of the success of an advice and guidance approach relies on the good judgement of the individual officers. Additional training may be needed, or other 'on the job' support for EA staff.

There are numerous examples where **advice and guidance** have had successful outcomes, ongoing support mechanisms such as NetRegs and Flood-line and specific campaigns like the Oil Care project (see WRc, 2006).

Examples of Advice and Guidance	Objectives	Achievements
Oil Care project	Overall objectives were to work in partnership with business, federations, government and NGOs to inform, educate, influence and guide in order to reduce oil pollution and to maximise the efficient collection and re-use of waste oil	Project has been running for over 10 years, there has been an 80% decrease in Category 1 incidences from 1990 - 2001
Floodline	Raising awareness of flood issues and providing best practice and information leaflets to minimise the costs of clearing up after flood events. The EA and SEPA information service is designed to raise awareness and promote guidance in prevention of or minimising the impacts from flooding by providing information on flood warnings in areas, best practice guides for business, flood information leaflets on making DIY flood defences to minimise impacts.	In 2 weeks between 25th Dec 2002 and 7th Jan 2003, the Floodline received > 120000 calls and the website >115000 hits, guides for flooding have been widely taken up, flooding cannot be totally prevented and there will always be people that will not take the advice available

A report for the Environment Agency in 2006 (WRc, 2006) describes the effectiveness of advice and guidance to depend upon the relevance, accessibility and trustworthiness of the information that is being made available to stakeholders. It also relies on the presence of actors that have the capacity and the incentives to access, understand and use the information to make more informed decisions. The report sets out NetRegs' as a successful example, noting key factors in the success as being:

- providing easily accessible information (through the internet) that can be readily applied by the target audience;
- through exposure / publicising of the site as being an important information source. By publicising the information the target group become mutually engaged with the instrument.

The report identifies a major pitfall of information provision as not understanding the target audience i.e. providing information that is too technical or seen as irrelevant, providing out of date or incomplete information as this will significantly affect stakeholder confidence. Stating this can be overcome by researching the target audience (market research) regularly updating the information / guidance given to maintain stakeholder confidence and engagement with the measure, and early engagement of the target group to ensure that the information to be provided will address the issue. Early stakeholder engagement is vital to build mutual trust and increase the likelihood of uptake by the target audience. Working through groups that are trusted by the target groups may make the messages more effective and reduce the costs of implementation. The cost and effort required by the implementing body may be high especially with regard to the maintenance aspects e.g. provision of workshops, monitoring performance. The cost and effort for the measure lies with the implementing body, the costs are chiefly administrative e.g. establishment of websites, publication of leaflets and other media, there is a cost for maintaining up to date information. There is very little effort / cost required by the stakeholder in obtaining the information but the implementation of the guidance may have cost / effort requirements.

Information provision should be focused to meet the needs of groups, like industry, business, agriculture, and co-deliverers (other bodies with powers to encourage controls that will enable the WFD requirements to be met). Information provision may be used for the general public where certain domestic activities or choices (as consumers) impact on good status. Examples may be information on, use of chemicals in the home/garden. Where targeted information is given, action from government and advisory groups should be co-ordinated to give consistency and prevent confusion. Support to enable and encourage stakeholders to implement guidance should be provided.

C.4 Observations and additional material from the Practitioners Workshop

Practitioners at the workshop felt that the findings from the literature review generally mirrored what is seen in practice. The following points were highlighted regarding advice and guidance:

- Delivery of guidance, methods, channels and context for users to match their needs sector, scale, ethnicity, viability?
- Development of guidance with stakeholders to meet their needs.
- Thoughts on who else should put the message across.
- Secondments from business to the Environment Agency and vice versa give expertise to the Environment Agency to deliver the right advice and guidance.
- The Environment Agency should provide advice on regulatory approaches e.g. changes to OPRA.
- It's important to recognise that advice and guidance is very complex, there is a spectrum of advice/advisor roles including, officers can provide advice on site but also often need to deliver advice and guidance and in the boardroom.
- The regulator being well informed is a critical requirement and the Environment Agency shouldn't assume this is always the case.
- Perhaps need to do more to develop the capabilities of staff to advise more effectively.
- The report should include recommendations on how effective advice and guidance is in achieving compliance and indicate how to measure effectiveness.
- The Environment Agency provides many tools for planning, writing, and developing guidance, e.g. 10 point check list, regional co-ordinators for advice and guidance.
- Need to define, regulatory capture and what is meant by SME's as small businesses are different to micro-industry.

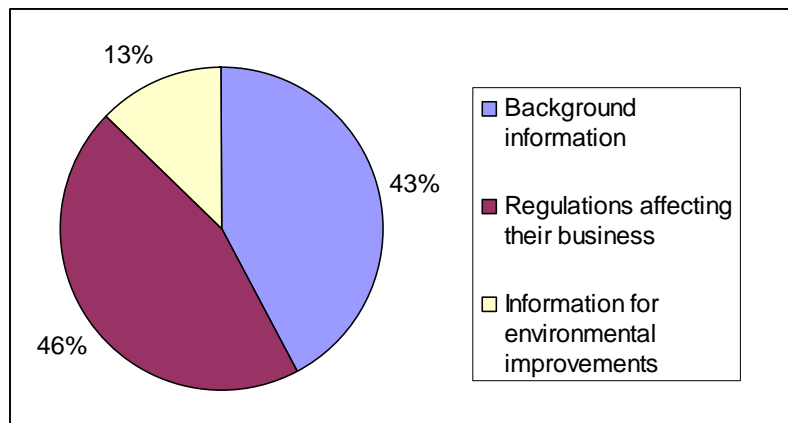
Other examples/evidence provided

In 2007 Sarah Anderson reviewed how government departments and regulators give guidance to businesses. Her report – [The Good Guidance Guide – taking the uncertainty out of regulation](#) – said that government and regulators should:

- make their guidance more accessible, and
- take part in HMRC Business Advice Open Days

Anderson said that “Businesses don't have a lot of time to gain information about regulations and these open days are an easily accessible way for them to do so locally”.

Working with HM Revenue and Customs (HMRC), the Environment Agency provide advice and guidance to non-permitted businesses through Business Advice Open Days. The Environment Agency takes part in 15 events each year across England and Wales. Last year 550 businesses attended the seminars 'Your Business Protecting the Environment – rules and top tips', with at least 50% encouraged to making environmental improvements. The Environment Agency estimate that for every £1 we spend supporting these events £100 is invested by business on environmental improvements (EA, 2010b). The events also provided an opportunity to identify what information businesses are seeking from the Environment Agency during the presentation stressing the importance of information on the background to and detail of regulation rather than on environmental solutions (see below):



EA, 2010e)

Benefits of the HMRC days include:

- Area and local staff say the day is enjoyable and worthwhile. It can be a great development opportunity.
- For minimal effort we can engage with up to 200 businesses (depending on event size) and influence their environmental performance with our regulatory and good practice guidance. This also increases our local visibility, credibility and reputation.
- Areas can use Business Advice open day support to count towards SLAs and other local environmental objectives.
- We are practicing recommendations from the Anderson review.
- We get information about businesses in the area. We can follow up those attending our seminar and use other general information for campaigns.
- We know that 80% of businesses who use the Pollution Prevention Pays pack go on to spend up to £5k in environmental improvements. On average each event has the potential to influence at least up to £40k spending to protect the environment; a total potential spending of £0.5million each year.
- If only 5% of the 2500 businesses we engaged with since March 2008 prevented pollution we would save £0.3million because each incident costs us £600 to deal with.
- We estimate a 1:100 benefit ratio for these events; for every £1 we put in we get £100 benefit to the environment (environmental risk reduction work, compliance with regulations, good practice compliance, pollutions prevented etc)

(Source: Environment Agency 2010e).

The Environment Agency has done much to improve its advice and guidance. There is an 'Advice and Guidance to Business Project team' whom have produced a case study log for advice and guidance to share success across the organisation and enable all to learn from staff who have used advice and guidance to solve problems and deliver environmental outcomes. There are also clear guidance documents on how to develop and apply guidance for example the 'is your guidance right checklist' which capture the factors described above (EA, 2010b). This checklist for use when writing and reviewing regulatory guidance for businesses enables users to meet the regulators compliance code and the eight golden rules in the Code of Practice on Guidance on Regulation.

There are examples of the benefits that the Environment Agency's advice and guidance provide, for example, the NetRegs service enables UK SMEs to save an estimated £58 million each year, on average £2,400 per business (Independent business survey by Eftec, March 2008). Practical support such as the online Waste

Directory developed by NetRegs.gov.uk shows businesses their nearest facilities to recycle or dispose of their waste to help small and medium businesses comply with waste disposal laws in the UK (EA, 2010b).

The Advice and Guidance Business Project team have also developed an e-learning package to further develop staff understanding of business, how to influence behaviour and change approaches to different situations. A key message is the need to clarify who you are targeting before you choose intervention. This package is being used by front-line officers and has received positive feedback (Environment Agency 2010d).

Another approach to improving advice and guidance has been to better develop understanding of the regulated community through secondments. In June/July 2007, Thames Water and the Environment Agency began job shadowing to improve relationships and gain an appreciation of each other's roles, issues and concerns. Each partner spends a week at a time at the other's sites looking at issues such as Pollution Control; Network Blockages/CCTV; Process Solutions and Trade Effluent. Pilot trials were considered very useful and the approach continues (Pers Comm, Chris Hazelton, 2010).

Good advice and guidance may be available from third parties and there is much to be gained by understanding these initiatives and sign-posting operators to them for independent help. One example of such an initiative is the Knowledge Transfer Partnership scheme (KTP – see <http://www.ktponline.org.uk/>). KTP is a UK-wide programme enabling businesses to improve their competitiveness, productivity and performance by forming of a Partnership between businesses and academic institutions enabling access to skills and expertise to help business development. Graduates facilitate the partnership by investigating opportunities for improvement across a range of disciplines. Whilst the focus is on improving profitability and business performance projects regularly tackle aspects that will support the delivery of environmental outcomes, for example a project to 'Improve efficiency by reducing the proportion of waste and improve the utilisation of waste' in a food manufacturer. By talking to the KTP team and by being aware of the potential of this scheme the Agency can encourage operators to look at it as a cost effective approach to finding new solutions to the problems we identify (Pers Comm, Jon Foreman, 2010).

C.5 Summary of effectiveness

		Comments	Evidence
Regulator Outcomes	Compliance	Likely to vary considerably, higher for those 'willing but currently unable'. Inspectors have noted a regulatory backstop would be preferred.	Commonly used which implies that they are effective. Advice and guidance is ubiquitous. Case-studies on landfill (White et al, 2010). Oil care campaign was more successful in England where the threat of regulation was imminent, than in Wales where it was not.
	Behaviour change	Likely to vary considerably, higher for those 'willing but currently unable'	Commonly used which implies that they are effective.
	Increased awareness	Likely to be high as is the focus of these approaches	FSA Safer Food, Better Business guidance
	Efficiency improvements for the regulator	Likely if there is a significant target audience considered to be 'willing but unable'. But costs of providing information are likely to be high.	
Regulated outcomes	Reducing administrative burden for the regulated	Good	Generic written information may be misinterpreted (Yapp and Fairman, 2004) Improved information for regulated entities was noted as the most important factor for reducing the administrative burden on businesses by respondents in a recent global survey of regulatory modernisation (Deloitte, Wishart, 2009).
	Acceptability to businesses	High – as usually voluntary	HSE and FSA advice is widely used and accepted

Wider regulatory principles	The 5 principles of good regulation (transparent, accountable, consistent, proportionate (or risk-based), targeted (or outcome-focused))	<p>Scores highly for transparent, accountable, and consistent.</p> <p>Scores for proportionate depend on the issue.</p> <p>Scores for targeted depend on the design.</p>	
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Appendix D: Effectiveness of actions taken by the regulator in the boardrooms of operators

D.1 Definitions of the approach – and the usefulness of these

'Boardroom intervention' is described in the project specification as "Action by the regulator – such as advice or performance information – targeted at company directors. Most of our regulatory actions, site visits for example, are undertaken by relatively junior staff. These interactions may well be with managers of small or medium sized companies but they are not routinely with directors of larger companies. [The Environment Agency] do interact with larger companies at director level and these interventions are referred to as 'boardroom intervention'".

To obtain a dictionary definition of the term 'boardroom intervention' it must be broken down to its component parts. Thus the Encarta English Dictionary definition of 'boardroom intervention', comprises 'boardroom', defined as "*a room where members of the board (a group of people chosen to make executive or managerial decisions for an organization) meet*", and 'intervention', "*an action affecting another's affairs*" and "*deliberate entry into a situation in order to influence events or prevent undesirable consequences*".

For the purposes of this study 'boardroom intervention' is defined as "...a targeted means of securing, enhancing, or reporting the performance of a Company - potentially for multiple sites, activities and sectors - by engagement between the Regulator and the Board of Directors of that Company."

Boardroom actions can take different forms, for example actions might be a presentation from a senior Environment Agency Manager to the board of directors, or it might be a discussion between a senior inspector and the operations director. The first example is likely to be a more formal and closed interaction than the second.

D.2 Examples of use

Our research indicates that boardroom interventions are not widely used by the selected regulators with the exception of HSE and the OFT. The latter have no data on the effectiveness of this type of intervention (OFT, 2010c).

The HSE website includes a leadership section targeted at company directors, which includes advice on legal liabilities and associated costs (HSE, 2010c). Furthermore academic and other literature refers to HSE Awareness Events for company directors.

Leckie (2004) addresses HSE guidance to company directors, and emphasises the importance of boardroom commitment to health and safety leadership. Furthermore Day (2004) highlights the importance of leadership, and the need for directors to

“understand the issues at board level and set the tone for the expected standards of performance and attitude.” The importance of board awareness and ownership is emphasised, and the liaison between IoD and HSE in promoting awareness through presentation of leadership case studies identified.

The HSE Social Inclusion Policy Branch have studied the increasing use of innovative interventions at HSE, including senior management awareness events and attempted to measure impact costs and benefits Whitnell (2004). Significant factors in success of awareness events are trust, targeting and interactive content. However there is continued emphasis on the need for a multi-pronged approach, that is a combination of interventions – awareness events provide not only increased awareness but the opportunity to gain practical advice, training and education. The potential of using third party intermediaries to promote the HSE strategy is also identified.

The Local Better Regulation Office (LBRO) is not a regulator. Its mission to improve the local regulation of business by environmental health, fire safety, licensing and trading standards services LBRO (2010a). One of their initiatives is the Primary Authority scheme, which might be considered as a boardroom intervention between one local authority and a large corporation, which may be based in the local authority area, but have branches across a number of local authority areas (for example, the Primary Authority scheme between Argos and Milton Keynes Council). LBRO manage the scheme by registering partnerships, issuing guidance and resolving disputes. Through the scheme, the regulated company deals with the one authority but applies its advice to all its operations, including those outside the primary authority area. This reduces the administrative burden for the company and ensures consistency of advice (LBRO, 2010b).

In the Australian State of Victoria, a new approach to compliance assessment reporting was introduced in May 2010, to reduce ‘red-tape’, to increase public transparency and accountability and to set simple, clear obligations. Under the new approach, operators must undertake a risk assessment of their activities and use this to develop a risk-based monitoring program. Then use the data from the monitoring to determine compliance, review site risks, inform management options and drive continuous improvement. All monitoring must be reported annually, in an annual performance statement (APS) in which the managing director or CEO is required to sign a declaration that ‘the information in this Annual Performance Statement is true and correct’ that ‘all the necessary enquiries’ have been made ‘and no matters of significance have been withheld from the EPA’. The penalties for non-submission or providing false or misleading information or concealing relevant information carries a penalty of 2400 penalty units (related to the level of financial penalty) or imprisonment for two years, or both for company Directors.

The EPA in Victoria is driving the change in approach as it believes:

- that licence-holders know their business well. Using a risk-based approach to developing a monitoring program, licence-holders will be familiar with how their site interacts with the environment and community. Accordingly, EPA is confident they will be able to develop a fit-for-purpose monitoring program to determine compliance with their licence.

- the requirement for CEO sign-off of APSs, will make businesses more accountable for the risk their operations present to the environment. (The EPA expects compliance with licence requirements, and will check and, where necessary, enforce these.) (EPA, 2010a)

Operators raised concerns during the consultation relating to potentially increased costs and that public provision of APSs will increase risks of unnecessary attention from public groups. These concerns were acknowledged but the EPA stressed their commitment to transparency and to support businesses to work more effectively with their local community (EPA, 2010b).

D.3 Examples of Use from Recent Environment Agency Studies

A recent study commissioned by the Environment Agency (100%Cotton, 2010) evaluated how successful Boardroom Interventions had been by investigating a series of case-studies. The study defined Boardroom interventions as a new style of account management where the Environment Agency has director level involvement with directors of large waste and water companies.

Three case-studies were examined, two sectors where Account Management at a senior level has been introduced (water and waste) and liaison with a non-regulated industry, the construction industry, via its trade body. The study examined the relationship that developed between the Account Manager (see diagram below) and the operator to identify characteristics of successful Account Management (100%Cotton 2010).



The study identified the key as ‘providing a forum where the challenges can be made and answered’ this was ‘seen by both operators and Environment Agency staff as an important process which directly leads to an increased openness and trust between them and enables the relationship to deepen’ not just between the organisations but also the individuals’ (100%Cotton 2010).

The study noted ‘the benefits of this deeper relationship was that they enable:

- **Making changes:** action is taken within both the Environment Agency and operating companies which lead to improving operation efficiencies
- **Preempting problems:** identifying solutions before problems occur
- **Strategic planning:** regulation innovation, industry understanding
- **Closer relationships:** improves trouble shooting and has the potential to lead to better regulatory processes
- **Information sharing:** two way process with operators sharing information in a transparent and open manner’ (100%Cotton 2010)

As the relationship matured further, the study identified additional benefits as:

- ‘Potential for **self-regulation**: within water sector self-reporting appears to be successful
- **Accreditation not inspection**: both Environment Agency and waste operators can envisage a situation where the success of Account Management in increasing compliance leads to a lighter inspection regime
- **Operators influencing regulatory processes**: sharing of operator experiences resulting in reduction of bureaucracy or streamlining the processes surrounding regulation. Developing a shared understanding of regulations; operators understanding the rationale behind regulations and the Environment Agency understanding unintended consequences of the process.
- **Shared training/staff**: for instance the possibility for joint training or indeed staff secondment’.

The report did not look at any potential problems that might arise from applying this intervention.

The report summarised the key factors in the success of Account Management as:

- **‘Compliance information**: at its simplest, the information has to be succinct, easy to look at and accurate. Its objectivity is important too, especially at the early stages of the relationship; it provides the platform for developing a personal rapport and is an efficient way for both operator and regulator to take an overview and see where efforts should be focused
- **Senior level involvement**: is imperative because it equates to giving status to the relationship and the prospect of change and action. Even once the relationship is well established across other levels of the operator organisation, the senior personnel convey the significance of the relationship – and can step in if problems occur
- **Ensuring messages cascaded**: senior level contact alone would not make for an effective account management system; instead as we’ve seen in the maturing case studies the other links across EA and the operator organisations (e.g. via other regular meetings to which EA personnel are invited, or close working relationships at many levels) provide the mechanism for information to filter through and actions to be taken
- **Technical Lead**: this is a critical role, especially at the outset. The role is less effective when the relationship between the Director and the TL is distant, or when they feel under great time pressure because of the existing demands of their main role. Best practice Account Management will recognise the central nature of the TL’s role
- **Good personal rapport**: inevitably Account Management works best when the key players develop a rapport. This should be recognised and, as has happened within the wider account management structure of the more mature case studies, where people do not work well together, personnel changes should be possible.’

The findings that ‘compliance information is a ‘door opener’ and a reason to meet and start discussions’ was also supported by White (et al 2010) looking at cases of landfill

regulation. Landfill inspectors noted the importance of compliance information in 'getting the attention of senior management', use of compliance assessment forms by management teams as an indicator of success, but also as a means to secure resources for investment. The same study quoted a landfill inspector who reported that "the increase in the site's subsistence fee, in light of its increased OPRA score, provided a basis for dialogue with the operator about what they needed to do to improve their compliance and reduce their subsistence cost". Although the subsistence cost is small, as another inspector in this study noted 'Their actions were focused firstly on the appeal and subsequently on the major investment in getting the new site infrastructure installed which dwarfed the subsistence fee', any increase in costs is likely to be something which would need explanation at a senior level, providing an opportunity for discussion about why this had happened and how to reverse it. So whilst the reduction in subsistence fee costs is not likely to be a considerable incentive, the increase in costs might send a signal to senior managers that the operations manage might be keen to avoid.

Another study focussed on the supply of advice and guidance looked at perspectives of business to compliance it concluded that fundamentally commitment at the highest level in the company was the biggest driver (Brook Lyndhurst, 2010). The study quoted a small business as saying *[The company...] is owned by one man, he wants to be the best. He wants to be the best employer, the best carbon footprint, the best health and safety record, you name it, environmental records, so it is literally driven from the top. If it doesn't come from the top, then you don't stand much chance to be honest.* Other drivers related to those above include the importance of environmental performance to investors and insurances which take environmental risk into account. One large company indicated that its shareholders are 'very interested in our environmental performance' as this has an impact on the return on their investment.

Brook Lyndhurst (2010) also refers to comments from several companies on the effective working relationships they consider they have at a high level with the Environment Agency (typically between regional managers or directors of both organisations). Industry participants interviewed considered these to help develop consistency in the way a company's sites are regulated and inspected and significantly improve efficiency from both sides. The study concluded that better environmental performance is a likely outcome from this, given the more focused approach. One Medium sized business was quoted as saying *'I think it's a very good relationship. It's quite an open and honest discussion. That's with my chief executive officer and a regional director.'* For larger companies, the higher level dialogue is therefore strongly valued. *Higher up the level it is also good to have that same one to one or round table discussion with senior managers. Where it sometimes might fall down is there sometimes seems to be a break in the chain of communication within the Environment Agency, between a senior and the bottom. I think they also realise it, on occasions the message gets lost in transmission. One of the problems is that because we have these high level discussions and we know what is coming, we have already told our staff before it arrives; we may be better informed than the inspecting officer, which is a bit embarrassing for both sides.*

Work done recently to assist the investment of the Environment Agency's pension fund (EA, 2010f) highlighted opportunities for the Environment Agency to improve the efficiency of its regulation by focusing greater attention at the board levels of large

companies rather than sites in each region. Apart from benefits associated with the creation of more powerful aggregated datasets, the report concluded that it would help ensure the efficacy of the Environment Agency's regulatory work which could be better focused at a Board level of poor performers to improve environmental performance across their business rather than at a site by site basis. One example quoted from 2007 – 2008, 4 of the parent companies responsible for the top 10 cumulative permit condition breaches were based outside of the UK. Global companies operate through a wide pattern of subsidiary companies in the UK, for example, one Spanish company owned 12 subsidiaries, operated 35 sites responsible for 198 permit condition breaches across the UK.

D.4 Observations and additional material from the Practitioners Workshop

At the practitioners workshop, Environment Agency staff agreed with the finding that buy-in at senior levels is critical to improving compliance. Other views, ideas highlighted were:

- Board room and site level interventions can sometimes be the same thing (SME's etc).
- Need to be clear about the objectives and to target issues to the right level (i.e. determine when board room interventions will provide an advantage and when local level interventions can deal with it). Particularly as there are very limited senior staff resources to implement this intervention if Director level involvement is required.
- Should be annual performance discussion and performance assessment which should take place at the "highest level".
- Some key questions about the account manager type intervention remain:
 - o Is it more effective to have an on-going relationship or one-off Director involvement for specific issues?
 - o How to move from "it's good to talk" to improving performance?
- Self-declaration at a senior level is another form of boardroom intervention which would move from the Environment Agency identifying problems to company taking ownership.

Some other aspects of interventions to engage directors at boardroom level are:

- **Intra-company site benchmarking** – This has been taken forward by the Environment Agency as an aspect of the account management work with multisite waste companies. Directors are not always aware of how sites are performing relative to each other in terms of environmental performance as they use other criteria for comparison such as profitability. The information was a powerful tool in questioning why lower performing sites weren't able to reach the same standard as others in the same company (Pers Comm, Martin Cox, 2010).

- **Inter-company benchmarking** – A similar benchmarking approach has been used to compare companies undertaking similar activities e.g. clinical landfill operators. This information has been powerful in terms of directors taking their own operations managers to task. The approach is particularly useful with big companies who wanted to avoid being in the bottom quartile in terms of performance. Although the effects have not been measured there were good indications of impact in initial meetings that the information would encourage improved performance (Pers Comm, Martin Cox, 2010). The USEPA has a Partnership programme involving environmental performance benchmarking and recognition. Part of this operated via a National Environmental Performance Track scheme which aimed to recognize and encourage top environmental performance among private and public facilities, which go beyond compliance with regulatory requirements to achieve environmental excellence. The scheme was terminated in 2009 after 9 years of existing. Some measure of success has been reported but no clear reason given for termination (USEPA 2010).
- **Self-declaration approaches with Director level sign-off.** This approach works by requiring companies to take ownership of their environmental performance as they currently do for Health and Safety and Financial performance. The current feeling is that companies can often rely on the Environment Agency to highlight inadequate environmental performance rather than taking ownership of improving their performance and that sometimes environmental performance does not have sufficient priority with senior managers. One approach to address this would be to require the company CEO, particularly for sites requiring a bespoke permit, to sign a declaration that systems are in place and sign-off an annual performance audit as is currently required for company financial accounts and Health and Safety Performance. Although this requirement is not enshrined in law as it is for financial accounting, the requirement could be introduced as a condition in a permit to make it binding (Pers Comm, Martin Cox, 2010). This type of approach has been recently adopted in Queensland (EPA, 2010a) although there is no evidence yet of its success.

D.5 Summary of effectiveness

	Comments	Evidence
Compliance	Strong perceptions from Environment Agency Account Managers and operators that the process has a positive effect.	Waste Industry Account Management
Behaviour change	Positive changes in behaviour likely with Account Management type approaches as the close relationship approach develops to resolve misunderstandings and to find common way forward.	Increased investment at 'problem sites' within waste companies and better problem resolution in water companies, account management integral part of investment decisions for water companies

	More general boardroom interventions, with less 1:1 interaction (as in the HSE examples) is likely to lead to change if the message is taken up by the senior managers as they have the authority to direct action within the company.	and waste companies liaising with EA about environmental aspects of new initiatives at the earliest stages. Mixed evidence within the waste sector that attitudes were changed but it was queried whether this matters (100%Cotton, 2010)
Increased awareness	A key outcome of board room approaches is the increased awareness from both sides of the positive changes in behaviour likely as the close relationship approach develops to resolve misunderstandings and to find common way forward.	Waste and water account management (100%Cotton, 2010)
Efficiency improvements for the regulator	High levels of senior input are needed but these seem to have a positive impact, i.e. big cost to the Environment Agency associated with a big benefit. Difficult to compare efficiency in terms of cost-effectiveness with traditional approaches. However once this approach is adopted, operators seem reluctant to disengage so it would be important to have a process for moving to a less intensive, 'holding', senior relationship once the desired outcomes have been achieved.	Waste and water account management (100%Cotton, 2010)
Reducing administrative burden for the regulated	Possibly higher as in effect are requiring the board to take the lead in encouraging compliance internally but can also be associated with a streamlining of regulatory processes so maybe neutral	Waste and water account management (100%Cotton, 2010)
The 5 principles of good regulation (transparent, accountable, consistent, proportionate (or risk-based), targeted (or outcome-focused))	<p>Scores low for transparent, accountable, and consistent. May give rise to calls of 'regulatory capture' or favouritism.</p> <p>Scores for proportionate and targeted depend on which sites/sectors are chosen and how they are chosen. The high level of senior time would certainly mean this type of approach would only be suitable for sites where high environmental benefits may result.</p>	Waste and water account management (100%Cotton, 2010; Stallworthy 2008)

Acceptability (to the target audience)	Appears to be very positive as the operators can see considerable benefits from the approach and are reluctant to disengage from the account management as the target audience considers is derived from this.	Waste and water account management (100% Cotton, 2010)
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Appendix E: Effectiveness of actions taken by the regulator to good performers

E.1 Definitions of the approach – and the usefulness of these

The Environment Agency project specification defines ‘good performers’ as “sites, or companies, whose operational performance has been recognised by the regulator as being ‘good’. One measure is the number and severity of non-compliances detected as part of an inspection.”

To obtain a dictionary definition of the term ‘good performers’ it must be broken down to its component parts. Thus the Encarta English Dictionary definition of ‘good performers’, comprises ‘good’, defined as “*superior, respectable, trustworthy, well-behaved*”, and ‘performer’, “*player, actor, the person responsible*”.

For the purpose of this study a ‘good performer intervention’ is a carefully selected and specifically targeted form of intervention or non-intervention. ‘Good performer interventions’ may be managed at operational level or via boardroom interventions.

‘Good performer interventions’ include reduced inspection and reporting requirements. A key issue here is how good performers are identified. OPRA scores are assessed by looking at the inherent hazard of an operation and the historical performance of the operator. Because these assessments have been made over many years, there should be good information within the Environment Agency on what makes a good performer. This information could be used to benchmark within and across sectors to identify the best performers and whether there are common characteristics that determine the likelihood of good performance.

We understand that personal OPRA operator scores are now considered by companies when they recruit new managers. Potentially therefore providing an added incentive for operators to improve their scores as it enhances their marketability. The Environment Agency may be able to capitalise on this further by naming and faming good operators, or providing reward schemes. Staffing changes would need to be reported as this would affect OPRA scores and subsequently the approach taken to compliance assessment.

E.2 Examples of use

‘Good performer interventions’ are used by the HSE and the FSA. The HSE may employ reduced inspection and reporting for companies with a good record on health and safety. HSC (2005) observes that ‘recognising good performance’ is a specific form of intervention, but that there is limited evidence of its effectiveness. Recognition

of good performance is also linked with third party action, whereby certified firms with a low risk profile are subject to reduced inspection (SAI Global, 2010).

Wright et al. (2008) conducted a review for the FSA of 'Scores on the Doors' schemes set up by local authorities to promote food safety in their local areas, with a view to setting up a national award scheme to reward good performers. The schemes studied were open to all catering businesses within an area, and establishments were rated in accordance with compliance with food safety regulations. Each local authority was free to establish and promote its own rating scheme. Wright et al found that the costs of the schemes (which are borne mainly by the local authority) were considered acceptable, whilst benefits accrued to businesses, local authorities and customers. Whilst most local authorities identified significant initial start up costs for the schemes, operating costs were relatively low, and did not hinder other food safety enforcement work. The resources required to operate schemes were less than expected, in most cases and the immediate cost to businesses was minimal. The scheme was also seen as a way "to harness consumer power" (CIEH 2005)

These findings are supported by Worsfold (2005) who carried out a similar study. Worsfold found, however, that credibility of the awards is reinforced by the independent nature of the local authority, and the intention of the award should be to promote improvements in standards, not merely maintenance (that is going beyond compliance). Businesses may be encouraged to participate in the schemes where they result in additional publicity; however effectiveness of schemes may be limited by lack of public awareness of the intention of the scheme and the meaning of the award. For schemes to be effective, more information needs to be made available to the public about them.

While a regulator should consider when, where and how to apply 'good performer' interventions, it is also necessary to consider the attitude of the regulated towards good performance. Again it is part of the need for the regulator to understand the different perspectives and postures of the regulated (Braithwaite 1995).

The drivers for good performance are important. Hutter et al (2008) and others (Gunningham 2002, 2009) suggests that reputational issues are important, with the loss of reputation for firms already in compliance being a stronger driver for future compliant behaviour, than any publicly declared reward or sanction. Parker (2002) also finds that damaged reputations via naming and shaming "can be strong motivators for compliance".

Braithwaite uses 4 categories to describe the different attitudes that the regulated can adopt:

Compliant	Non-Compliant
managerial accommodation	resistance
capture	disengagement

In all these (a) trust and respect and (b) perceptions and common understanding play a key role.

However Makkai and Braithwaite (1994) point out from their work in nursing homes, that shaming which is reintegrative can be more effective than that which is stigmatising, providing there is a good relationship between regulator and regulated and the process is handled sensitively.

E.3 Examples of Use from Recent Environment Agency Studies

One of the incentives for good performance in terms of reducing the 'riskiness' of the regulated site is the system of fees and charges schedules under OPRA. In a recent study of the waste industry landfill regulators commented that reduced fees were not an incentive in 8 out of 9 case-studies (100% Cotton 2010). The main reason quoted was that the scale of the costs was dwarfed by the investment costs for environmental and operational improvements. This demonstrates the importance of the benefits of good performance being perceived as 'a real benefit to the operator'. The case where the fee differential was seen to be an incentive, interestingly, was a case where compliance had deteriorated and hence the fees had increased, in this case the landfill inspector noted "the increase in the site's subsistence fee, in light of its increased OPRA score, provided a basis for dialogue with the operator about what they needed to do to improve their compliance and reduce their subsistence cost". Any increase in costs is likely to be something which would need explanation at a senior level, providing an opportunity for discussion about why this had happened and how to reverse it. So whilst the reduction in subsistence fee costs is not likely to be a considerable incentive, the increase in costs might send a signal to senior managers that the operations management might be keen to avoid.

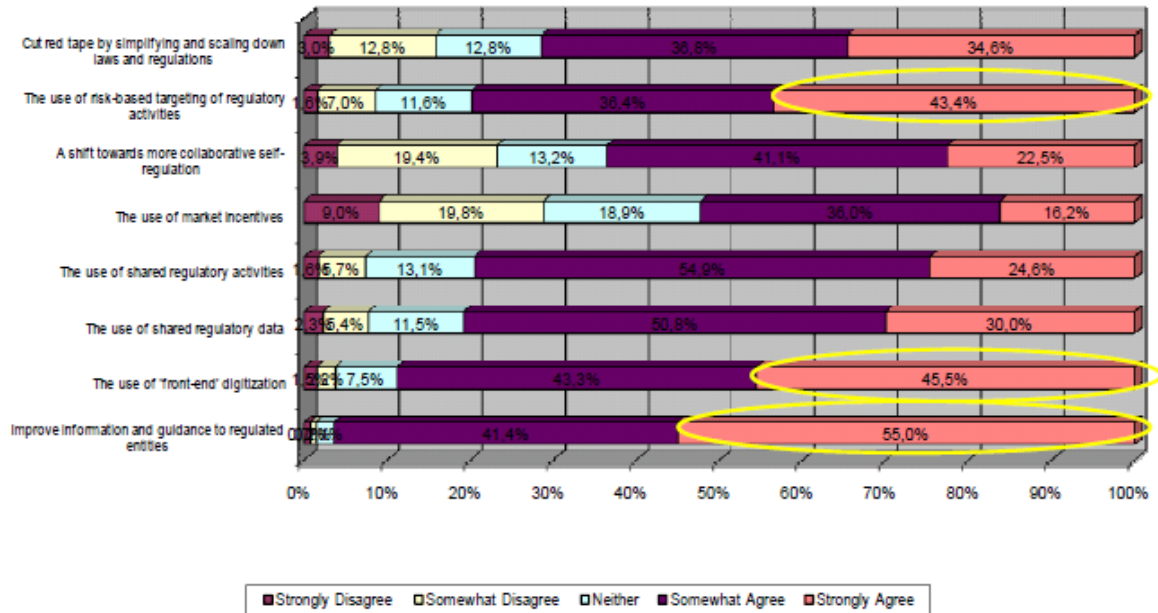
In a study of board-room interventions (100% Cotton, 2010), one of the steps, possibly seen as a reward for developing a mature and trusting relationship and associated good performance is self-certification. In a study of self-certification (Atkins, 2010), empirical evidence for the success of self certification compliance schemes was found in the environmental field in the US where an Environmental Results Programme (USERP) has been applied to relatively low risk sectors comprising numerous small operators.

However, the study also provided numerous other experiences to contradict these findings with the study providing numerous examples of failure from non-environmental sectors, particularly finance, self-assessed mortgages and tax self-assessments. It may be that the other components of the USERP scheme such as increased awareness of compliance levels and advice and guidance, could have been responsible for the improvements.

Interestingly the study (Atkins, 2010) also quoted evidence from a recent global survey of regulatory modernisation which found that when presented with options for reducing the administrative burden on businesses, adopting a more collaborative self-regulation approach did not score highly in terms of either reducing the administrative burden on businesses or effective regulation (Deloitte - Wishart, 2009, see Figure below). Instead the most important approaches were considered to be:

- improved information for regulated entities;
- the use of increased digitization; and
- risk based targeting of regulatory activities.

Figure 5.1 Most important approaches for reducing the regulatory administrative burden on businesses (Figure from Deloitte - Wishart, 2009)



The Atkins study also extracted information about an example of a responsive regulation model, reproduced below which provides some thoughts on the sorts of approaches that might be adopted for good performers.

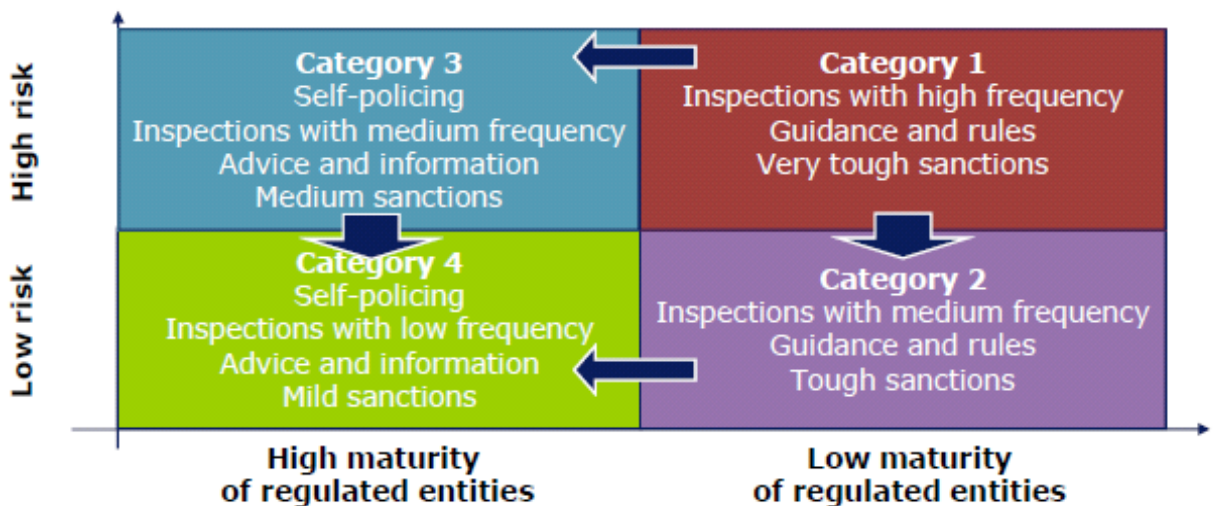


Figure 5.2 Example of Responsive Regulation Model (Figure from Deloitte - Wishart, 2009)

The concept of “faming” successful business practice or the reward of an enhanced or more diverse market can be important drivers. The EA Spotlight publication in recent years has highlighted companies that have taken active steps to reduce their impact on the environment. Business awards for sustainable developments such as those supported by The Royal Institution of Chartered Surveyors (RICS) and The Royal Institute of British Architects (RIBA) have been important in the re-development of brownfield sites. In the consumer sector, the labelling of products through schemes such as Marks and Spencer’s Field to Fork or The Soil Association’s standards has the reward of guaranteeing a market by being accredited. The absence of definitive cost / labour savings / rewards in EMAS schemes is a contributory factor to low uptake of certification of these schemes. Incentivising or rewarding stakeholders participating in voluntary instruments, not necessarily financially, is important especially in terms of getting industry / business to achieve standards that may be higher than those required by existing regulation (WRc, 2006).

EA Spotlight is an example of an intervention designed to Name / shame poor performers to encourage compliance and improved environmental performance. It has had some successes in reducing some areas of pollution and encouraging behavioural change (WRc, 2006). On the down side it has not prevented increases in activities such as fly tipping, since it relies on target industries caring / being worried about reputation.

Another point to consider here is the perception of unfairness that may arise from operators who achieve good performance under their own efforts, when they see poor performers getting a lot of help and attention. The Environment Agency’s website does state that ‘Better Regulation’ involves focusing resources on the highest environmental risks and the poorest performing businesses. Examples of this are given in White et al (2010) referring to a case-study where a high level of resource (3 times the normal level of resources) was allocated to a poor performing landfill site – i.e. it was given considerable attention through specific advice.

To counter such perceptions there must also be clear messages explaining the benefits of being a good performer. Perhaps the rewards need to be more explicit.

On the issue of fairness, Hawkins (1984) emphasises the importance of the use of discretion by the regulator and of the human values and judgement of both regulator and regulated. As such an intervention approach to develop and maintain compliance will reflect a sense of fairness and moral values alongside those of the reality of resource constraints. An intervention which rewards good performers or conversely penalises persistent non-compliers reflects elements of moral values/judgements. Beyond the regulator and the regulated others will consider the unfairness of compliance deficits and have concerns over regulatory capture (Stallworthy 2008; Morgan & Yeung 2007).

E.4 Observations and additional material from the Practitioners Workshop

Practitioners at the workshop noted two important aspects of good performer interventions as:

- Defining good performance to ensure a level playing field; and
- Creating a reward scheme for good performance that is motivating.

Defining good performance:

Key points made were:

- Transparency is essential in:
 - o defining good/poor performance
 - o explaining why good performers get less regulation but charges stay the same.
- A common measure/definition of good performance should apply across business.
- The definition of good performance should encourage operators to be more proactive, to take action that goes beyond compliance rather than passive requirements to achieve compliance. The current default is for good performance to mean compliance, i.e. no complaints, this is not enough.
- What the public thinks is important so customer/public feedback should be used in assessing/scoring performance.
- Good performance is not necessarily static; the approach needs to be dynamic.
- Are we able to measure good performers?
- People can move from being good performers to bad performers in a short space of time so performance must be continually monitored.
- High or low risk needs to be assessed over a number of years.
- The drivers and context of performance need to be recognised, understood and taken account of in the current risk-based criteria.
- Rewards should be proportionate to the strength of evidence of good performance and may be different reflecting company size/sector etc.
- Less resource on good performance does not necessarily mean more resource on bad performance (charging vs. grant in aid an issue).

How to motivate good performance:

Key points made were:

- Attitudes between companies are very different, some want to perform, others are just not interested.
- Public accountability/image is only important for larger companies.
- Motivation isn't always tangible. Avoidance of a negative is often useful. Otherwise it's down to individual inspirations.
- It's important to understand the market, what's the benefit to business and this means understanding how businesses operate and be inventive about incentives. Suggestions for incentives included:
 - o Performance relative to peers within sector (not so important for SMEs).
 - o Reduced insurance premiums. Link good performance to insurance, by working with insurance businesses.
 - o Tax breaks for good performance. Link good performance to tax by working with other organisations, e.g. could obtain tax relief on capital spend on environment.

- Increased investment potential (see below). Link to investment organisations who may consider environmental performance as a proxy for overall management practise. Ethical pension scheme investments would consider environmental performance.
 - Links to wider financial incentive schemes such as the OFWAT scheme for water companies where one of the performance criteria is the numbers of category 1 and 2 incidents.
 - Successful economic incentives proportionate to company size.
- Further incentives discussed after the workshop (Pers Comm, Martin Cox 2010) were:
 - Less severe outcomes if a pollution incident occurs for operators who have acted reasonably: Where a company has taken reasonable precautions to prevent incidents, and responded appropriately to mitigate the effects if they do happen, the Environment Agency always take this into account as public interest factors when deciding the response. i.e if an operator has acted reasonably the enforcement decisions will take this into account, and equally if they have been negligent or obstructive that will be considered.
 - Forcing competitors to follow your lead: Companies at the leading edge of technologies help to drive the industry standards forwards as EC BREF notes (produced on a 6 year rolling period) set the industry standard for BAT), by taking account of technologies adopted by companies going beyond the accepted industry standard, providing they are affordable on a sector basis
 - Being able to provide prompt services by getting faster authorisations to give a market advantage: High spec abatement equipment, particularly of the end of the line, gives operators more flexibility in the processes undertaken. Operators who change their processes rapidly are permitted under envelope authorisations. These operators are often producing chemicals on behalf of others. If there is a high level of control, authorisations can be fast-tracked and in turn are able to offer quicker response times to their customers.
 - Disincentives for poor performance are important: Proceeds of Crime provides a new tool to ensure appropriate sanctions on poor performance.
 - Knowledge takes time to assimilate and it's important to retain this knowledge despite staff turnover. How can experience knowledge captured/recorded so that it is available for all to access for ever; much knowledge resides with individuals which is lost if that person leaves the organisation (both regulator and regulated).
 - Managing compliance at catchment scale as opposed to individual sites e.g. farms.

The Environment Agency has undertaken research aggregating environmental performance data currently held at the site level, up to company level and then to parent company level primarily to inform decisions about pension fund investments (EA, 2010f). The research found that the information at this level was more useful in engaging with pension fund managers and thereby influencing the environmental performance of listed companies operating within the UK. This information would also

provide a valuable dataset on the environmental performance within England & Wales of publicly listed companies, which could be used to influence the financial, investment and insurance strategies of the UK finance sector in these companies.

E.5 Summary of effectiveness

	Comments	Evidence
Compliance	Providing the benefits of being a 'good performer' are sufficiently valued, that these are widely publicised, assessed and operators have control over their performance, then likely to be high.	
	For self-certification, the effects on compliance are unclear with evidence of improved and worsening performance. To enhance the chances of compliance improving, the chances of being caught for non-compliance and the penalties associated with that need to be high.	Atkins 2010 report on self-certification
	Reduced fees don't generally act as an incentive as they are dwarfed by operational costs. But increasing fees can act as a disincentive.	White et al 2010
Behaviour change	Likely to vary considerably.	
Increased awareness	Not so much to the target audience but increased awareness to influencers (such as customers whose improved awareness benefits the good performers) may be a focus.	Scores on the Doors
Efficiency improvements for the regulator	Likely if the target audience sees the benefit to be gained by remaining a good performer.	
Reducing administrative burden for the regulated	Could be a key focus/benefit of this approach as reduced burden a key driver for operators.	
The 5 principles of good regulation (transparent, accountable, consistent, proportionate (or risk-based), targeted (or outcome-focused))	May give rise to calls of 'regulatory capture' or favouritism so approaches would need to be transparent to counter this Scores for proportionate depend on the issue. Scores for targeted depend on the design.	
Acceptability (to the target audience)	Likely to be high to the good performers. Poor performers' reaction will depend on the perceived 'fairness' of how performance is determined and the level of control they have on this.	

Appendix F: Effectiveness of actions taken by third-parties to deliver regulatory objectives

F.1 Definitions of the approach – and the usefulness of these

Third parties include trade associations, professional advisors, supply chain, civil society groups. Trans-national corporations and global civil society groups now have a major role in the management of global politics and economics (Albareda, 2008). Third parties also include the media (Almond, 2009; Lofstedt, 2009; Yeung, 2009), faith and the arts, and insurance companies. A list of types of third parties is given in Appendix C. Actions that might be taken by third parties to deliver regulatory objectives include: campaigns, labelling regimes, award schemes

Some environmental outcomes may have this ‘shock’ affect, for example images of fish dying, of children with asthma, or animals in distress. But it is not always easy to link actions up to such images. CPRE are currently (2010) leading an anti-litter campaign. One of the elements of the campaign is a short radio advert. The advert has been designed to present a humorous image of the ‘lovely English countryside’ dotted with litter. The humorous message is backed up with key facts about the tonnes of litter dropped each day and the millions of pounds spent clearing it up. The approach was chosen because the advertising company felt that the audience couldn’t be ‘shocked’ into changing their behaviour on the environment so chose humour to communicate that message.

However one of the most powerful ways of communicating health and safety information is through ‘shock’. Operators of machinery as part of their early training are shown safety videos demonstrating ‘what could happen’ if a careful approach is not adopted. The key here is that the people receiving the training have a high level of personal control over the outcome (i.e. how they operate the machine) and a lot to lose personally if the outcome is not good.

This principle of ‘shocking’ the audience into behaviour change, however, does not always work. For example with the SARS outbreak, the HPA was heavily criticised for ‘scaring’ the public. The difference here is that the public had little control over how they were affected.

F.2 Examples of use

Third party interventions are particularly common in the food and agricultural sector, with a growing number of certification and labelling schemes (for example Lion Eggs operated by the British Egg Industry Council, Red Tractor operated by Assured Food Standards and organic certification by the Soil Association). These schemes may be delivered by third party certification firms, who in turn are subject to accreditation by

bodies such as UKAS (UK Accreditation Services). Schemes vary between voluntary and compulsory, depending on the branch of the industry, and, once certified, firms are subject to regular audits and spot checks in order to maintain their certification. Furthermore breaches of regulations or scheme rules can result in removal of certification. Firms pay for third party certification and it is important that they see a financial benefit as a result of this investment, either in the form of improved reputation (and thus sales) or a direct benefit in terms of increased sales price for their product (SAI Global, 2010).

The IEPA do use third party certification as part of the general regulatory package, e.g. Solvents Regulations, Certificate of Compliance required based on an independent inspection by an Accredited Inspection Contractor (Atkins, 2010).

Assured Food Standards have analysed the effectiveness of their Red Tractor scheme in, for example, bringing about the reduction of salmonella in chicken meat (FSA target was to reduce salmonella 50% in 5 years, the scheme achieved an 85% reduction in 2 years); managing compliance with regulations for crop spraying; and reducing veterinary residues in pig meat (Assured Food Standards, 2010).

Wright et al. (2004) identified the potential of third parties to amplify the effect of the HSE, especially in the case of SMEs. They identified certain third parties as potential “good” partners, including trade associations, clients, business advisory bodies (e.g. Business Link), professional bodies, educational and training bodies, etc. They found evidence that working with intermediaries is effective; however they observe that the resource implications of working with intermediaries are uncertain.

Pedley (2009) considers how third-parties (in this case a professional body, the Chartered Insurance Institute (CII)) can bring about a change in behaviour of its members. The paper considers the CII’s campaign to raise professionalism in financial advice, which aimed to protect the public and ensure better levels of service by changing the behaviour and professional standards within the industry. The campaign was built on clear aims and objectives and aimed to develop an industry consensus in support of our proposals. Pedley concludes that the campaign influenced the thinking of the regulator who adopted the CII’s proposals around raising professionalism, and suggests that chartered bodies will support approaches leading to industry-led solutions – in particular where sector recognises that it is in need of change.

Harvey et al. (2001) conducted an attitude survey for third party safety training interventions in the nuclear industry, comparing the short term and long term behaviour changes for different staff groups, following a training course. They found that there were three main factors in the success of training to promote behaviour change:

- Importance of culture and values and their influence on behavioural norms
- Importance of the personality of the person giving training/advice – empathy.
- Importance of organisation’s context- that is matching of training with the objectives of the organisation.

Furthermore Walters and Nichols (2006) studied the effectiveness of worker representation and consultation in context of trade union (TU) health and safety (H&S)

representatives. Under UK H&S regulations, TUs have the right to appoint such representatives who then have rights to representation and consultation, and to access facilities and training in support of these activities. Walters and Nichols found that whilst joint arrangements between companies and trade unions appeared to have a positive impact on H&S record, lack of commitment from management to engage and support union representatives meant that representation was lower than anticipated. Management commitment and support are vital to ensure that representatives are appointed and their rights respected. This view is supported by trade unions view on potential moderation to H&S regulation (Unison, 2004; Joyce, 2004).

A third party intervention on a global scale is forest certification by the Forest Stewardship Council (FSC), which promotes responsible forestry both in environmental and social policy terms. Karmann (2009) identifies that FSC certification has become highly influential in the markets for the forestry and wood industry. Its primary objective is to promote responsible management of all aspects of forestry. The scheme's success has to the development of further certification schemes, with similar aims. FSC certification is now broadly recognised within the forestry industry, however its effectiveness in achieving responsible forest management varies between sectors and developed and less developed countries (Karmann, 2009).

Recognising the importance of board awareness and ownership in complying with Health and Safety legislation, HSE liaise with the Institute of Directors to promote awareness through presentation of leadership case studies (Day, 2004, see earlier).

F.3 Examples of Use from Recent Environment Agency Studies

One role for third parties considered in the Atkins (2010) report on self-certification, is the role of others to act as informants or to influence the regulated e.g. employees/public/other regulators/law enforcement staff etc. This potential role was proposed as a way of increasing the likelihood of non-compliers getting caught.

There are numerous examples of third party actions which have been effective in achieving positive outcomes for the environment. The table below lists a few of these and has been extracted from a report on alternative and complementary mechanisms prepared for the Environment Agency in 2006 (WRc et al, 2006).

Initiative	Objectives/approach	Achievements
West Country Rivers Trust (http://www.wrt.org.uk/)	<ul style="list-style-type: none"> • Catchment scale projects tackling diffuse pollution and degraded habitats like the Tamar 200 pathfinder project or the Cornwall rivers project, • educational campaigns designed to influence current and future generations like school packs for Key stages 1 and 2, and a foundation degree in Sustainable River Basin Management, • Pan European initiatives like waterways net (to trial invasive weed management techniques) and • Community programmes like Angling 2000 (scheme making angling affordable) and 	<ul style="list-style-type: none"> • 1800+ farmers & landowners given advice, • 1400+ Integrated Land & River Management Plans, • 200 km+ vulnerable riverbank fenced, • 16 wetlands restored/improved, • 74+ km ditches prioritised for re-vegetation , • 400+ sites of accelerated erosion controlled, • 450 demonstration sites developed and operational ,

Initiative	Objectives/approach	Achievements
	River Walks	<ul style="list-style-type: none"> • 180+ sites of habitat improvement , • 50+ buffer zones created
Shopper's guide to GM by Greenpeace UK	<ul style="list-style-type: none"> • To help consumers find out whether the food in their shopping basket really is GM-free. • A demand-side initiative. • Free online resource, easily accessible 	Uncertain, arguably positive given EU labelling laws that followed.
Marks & Spencer Field to Fork	<ul style="list-style-type: none"> • In 2003 launched a new over-arching set of standards to cover the management of our supply chain for fruit, vegetables and salads drawn up after consultation with suppliers, government bodies and other organisations and covers aspects of production from "field-to-fork". • Independent research commissioned to look at similar systems around the world. • Field-to-Fork scheme goes beyond the British and European assurance schemes used by other retailers, being the first to include such a wide range of requirements. • Standards cover traceability, minimising pesticide use, ethical trading, support for non-GM foods and food safety. • Recommend suppliers move towards recognised best practice schemes on issues such as protecting the environment by adopting LEAF (Linking the Environment and Farming) Marque, which provides independent certification that standards have been met. 	

Washright in another successful third party intervention (WRc, 2006). The International Association for Soaps, Detergents and Maintenance Products' (AISE) responded to the need to address the environmental impacts of household detergents by developing (in conjunction with national industry bodies in the then 15 countries of the European Union – EU plus Norway, Iceland and Switzerland) a "Code of Good Environmental Practice" in 1997³. The Code was a voluntary initiative that committed laundry detergent manufacturers to achieving measurable reductions (over a five year period, using 1996 as a baseline) in:

- Energy consumption in use (target of 5% reduction per load)
- Laundry detergent product tonnage (target of 10% reduction per capita)
- Package tonnage (target of 10% reduction per capita)
- Use of poorly biodegradable tonnage (target of 10% reduction per capita)

³ The AISE Code of Environmental Practice was in place for the period 1997-2002. This was supported by a European Commission Recommendation (98/480/EC) Discussion on a successor to the Code of Practice (the Charter for Sustainable Cleaning) has been initiated by AISE. Washright has continued and will form a part of the new strategy.

AISE's Life Cycle Analysis (LCA) Task Force established that most of the environmental impact of household laundry products was caused during the use phase. AISE therefore suggested that (in addition to measures taken to address these targets at the formulation and manufacturing stage) manufacturers should provide information to help consumers achieve these targets. There was consensus within the industry's laundry detergent sector on the need for action and this led to the development of the Washright campaign. The campaign generated a lot of public interest, which indicated support for its objectives. Hits on the Washright website (www.washright.com) increased fourfold during the period 1999-2002.

The importance of media coverage for raising awareness has been demonstrated to be very important for the success of some information based approaches. Floodline has received significant publicity through the national media with the contact details regularly given out at the end of weather broadcasts (WRc et al, 2006).

The WRc report also identified the importance of roles the Agency can play if it takes a step back from the process and allows third parties to take ownership / leadership of the problem, be innovative and develop solutions, then there are several **key roles** which it can fulfil, for example to:

- approve solutions developed by the stakeholders;
- provide data to support other stakeholders in proposing solutions and ensure alternative and complementary measures are evidence-based;
- monitor the effectiveness of alternative and complementary measures and feedback any successes/failures to enable better focussed approaches for the future;
- targeting sectors and geographical areas that are priorities for action. Once this is done, the door will be open for others, including NGOs and Water Companies, to initiate action (WRc et al, 2006).

F.4 Observations and additional material from the Practitioners Workshop

Practitioners made the following comments about the effectiveness of third party interventions:

- There may be efficiencies to regulator as operational effort is reduced but it's also possible that there may be a transfer operational effort into other activities such as scheme auditing rather than a reduction in time.
- Third party schemes may or may not reduce the regulatory burden on operators as there may be extra costs as well as benefits.
- Accountability of third party interventions may be lower as these schemes may be seen to be transferring responsibility,
- Transparency for the public might be reduced.
- Acceptability to operators is likely to be high if costs and benefits are in line with business objectives.

Other views, ideas:

- The regulator should
 - o encourage and commission 3rd party schemes, but should simply audit the results and avoid micromanagement.
 - o give leadership through good quality information and by steering to the right issues.
- Third party schemes mean that direct contact with the operator is lost so it's important to define success and how it is measured right at the start, for example through OPRA and CCS, as it's not possible to fall back on inspection related measures later
- There is a risk of breaking off contract, so it's important to know what companies and the sector want.
- There is a risk of regulatory capture of the 3rd party, so it's important to maintain independence and credibility.
- Third party interventions provide an opportunity to drive wider outcomes (carbon transport, cost reduction) without being seen to impose regulatory creep. (Although an alternative view was expressed that this might be a possible downside, if you lose the direct contact with the regulated, can lose the opportunity to talk about wider environmental performance or how to go beyond compliance.)

Other examples/evidence to build in:

- Sharing compliance assessment roles with other regulators/auditors: There are a number of examples where regulators have used other regulators to undertake compliance assessment on their behalf.
 - o In Scotland, the Environment Minister directed the regulators to set-up a one-stop-shop for rural land management regulation. Key elements are: inspections relating to several regulatory regimes are carried out by one party; development of a supporting data exchange system. The remit covers the work of 8 partner organisations including SEPA. The costs and effects have not been assessed but both the regulators and the regulated seem to think it is effective and that it has helped SEPA to gain a better understanding of the agricultural sector. Virtually no SEPA resource is spent inspecting farms although some of the costs saved have been committed to developing the data exchange system. Key reasons for success are thought to be the high level commitment to 'make it happen' and that Scottish agriculture is not very diverse so perhaps simple to regulate (Pers Comm, Dave Pugh, 2010).
 - o A similar approach has been adopted with the Farm Assurance Scheme in England and Wales. This was introduced by the Environment Agency after working closely with the NFU and the pig and poultry trade bodies. The Environment Agency licences Certification Bodies, who already carry out farm inspections for animal welfare and food safety, to carry out inspections on its behalf. Farms that are performing satisfactorily, which is the majority, can join the scheme. This has enabled the Environment Agency to reduce inspections to once every 3 years and to give a 30% reduction in charges. Farms with particular problems such as management issues or odour complaints are not eligible for the scheme. The scheme has been operating since April 2010 and has

been well received by business and government as an excellent better regulation initiative (Pers Comm, Martin Quinn, 2010).

- Under the waste packaging compliance schemes, waste producers must prove that a proportion of their waste is recycled. Third parties have two important roles to play in implementing this regime. Firstly, in an almost boardroom type intervention, the regime captures 5500 waste producers but more than 90% use third parties, (22) specialist contractors called waste schemes, to implement this requirement. On average each waste scheme covers the activities of around 250 businesses and as a result the Environment Agency has to deal with fewer, more capable, operators. This has a financial benefit and also enables effort to focus on developing fewer but better relationships (Pers Comm, Chris Groves, 2010). Another aspect of the scheme, compliance assessment using third parties provides a warning of what can potentially go wrong with using third parties. Under the waste producer scheme compliance is assessed by auditing evidence notes (notes given by waste reprocessors when waste is accepted). Initially the task of auditing fell to the Environment Agency but as industry were not confident in the Environment Agency's abilities to undertake this business auditing and as a result the laws were changed (in 1997) to require chartered accountants to undertake the audits. Although the concept was good, in practice the approach was not successful, few anomalies were detected by the auditing process and the Environment Agency had to read the reports in detail to assess if any action was needed, in effect doubling compliance assessment effort. A key factor in the lack of success was the wording in the regulations which wasn't sufficiently detailed to guide auditors in what was required. A similar concept it now being used for the WEEE Regulations but having learned lessons from the packaging regulations, the approach is giving some benefits.
- There are many examples of working in partnership to develop joint guidance:
 - EA work with accountants to provide guidance about environmental reporting (see below).
 - Environmental management toolkits for SME's – Jeremy Stevens.
 - Code of Practice for working for the cement industry prepared by the trade association – Michelle Steer.
 - Packaging compliance schemes– Defra work (RIP) about cost of regulation for direct vs. third party schemes – Sue Stocks.
 - BMRA metals recycling industry relationships work – Sue Stocks.
- There are also examples of third party interventions which contribute to better environmental performance, often going beyond compliance, and whilst these have often been developed independently from the regulator there are potential benefits to be gained by linking into them. Examples of this are:
 - The NHS Sustainability unit, Addenbrookes, use of medical students at boardroom/clinical level to improve sustainability – Sue Stocks.
 - The work of Knowledge Transfer Partnerships discussed under advice and guidance.

- EMAS, and ISO14001 - REMAS Project – <http://remas.iema.net/content/presentations.htm>, looked at whether operators with accredited management systems were more effective/compliant as EA encourage this and if they have these schemes then they accept this as the basis for a management system, and would ask them to plan to implement against this framework, this would streamline application. Bit inconclusive on whether they are effective, if they have a system and implement it properly then operators do perform better, but the certificate alone is not enough. In fact, some poor performers are required to put in place EMS in response to criticism so there tends to be some bigger companies with naturally poor performance who have these schemes.

The EA and Institute of Chartered Accountants of England and Wales has recently jointly prepared a report about annual financial reporting of environmental issues to provide guidance on environmental issues warranting disclosure in annual financial statements. The report has been produced in recognition that many larger companies now regard environmental issues as a commercial opportunity just as much as a risk. The report states 'Reputation can be enhanced by a policy of transparency, enabling the market to identify businesses that are more forward looking. Disclosure about research and development expenditure, for instance, could be linked to spending on environmental measures. As well as earning competitive advantage, the process of reporting, particularly the disclosure of management policy on any material environmental matters will help to avoid risks and drive internal change. Increased disclosure resulting from the business review requirement is therefore welcome a foundation on which useful information about environmental and social issues can be built'. Increasingly business investors, shareholders, and wider stakeholders are requesting additional and better environmental disclosures in statutory annual reports and accounts. Institutional investors are increasingly seeking a narrative discussion and quantitative information about environmental risks companies face and the steps being taken to mitigate those risks. The National Association of Pension Funds and Association of British Insurers (ABI) issue guidelines encouraging such disclosure. Not being environmentally responsible has potential reputational costs for business. The media is paying closer attention to the environmental performance of companies. NGOs are quick to mobilise campaigns, using shareholder resolutions to drive issues up the corporate agenda.

The Advertising Standards Authority has fined companies for misleading adverts making false environmental claims. UK courts are more frequently using custodial sentences for environmental crimes committed by company directors. As a result of UK implementation of the EU Accounts Modernisation Directive (AMD), the Companies Act 2006 requires directors' reports to include a business review unless the business qualifies as a small company. Depending on its relevance to the company's business, the business review should contain certain information about environmental matters and their impacts on its prospects. Large quoted companies also have to report on environmental risks, policies and key performance indicators (KPIs). The report presents many different examples of the way companies have reported environmental performance, in some cases providing like for like breakdown against key environmental performance indicators, in other cases making commitments to environmental performance improvements, or indicating gains made because of opportunities arising from environmental requirements.

A competitive advantage is often gained from adopting a positive approach by giving, for example, investors, customers and employees information on the operation of an environmental management system or compliance with environmental laws and voluntary codes, and performance against annual targets to alleviate the impact of their operational activities, reduction of emissions and waste, as well as information on environmental improvements undertaken and the results of these.

Rating systems enable investors to benchmark company performance in relation to environmental and other criteria. Ratings are normally based on historical information although confidence is more likely to be enhanced if disclosures include forward-looking information. A balanced discussion of environmental performance can thus be turned to a company's advantage.

Credibility of environmental data incorporated in financial statements is enhanced by the operation of an effective system of internal control linking environmental matters with financial impacts. The information should also be reviewed by a person with appropriate experience. Users are likely to attach more importance to the disclosure of environmental information if some form of independent assurance is obtained.

F.5 Summary of effectiveness

	Comments	Evidence
Compliance	May be higher than if delivered by regulator if from a trusted source.	Red Tractor labelling scheme
Behaviour change	May be greater than if delivered by regulator if from a trusted source.	Red Tractor labelling scheme
Increased awareness	Likely to be high as is the focus of these approaches	FSC certification and other labelling schemes
Efficiency improvements for the regulator	Likely if there is a significant target audience considered to be 'willing but unable'	
Reducing administrative burden for the regulated	Likely to be good at this by providing information	
The 5 principles of good regulation (transparent, accountable, consistent, proportionate (or risk-based), targeted (or outcome-focused))	Scores highly for transparent, accountable, and consistent. Scores for proportionate depend on the issue. Scores for targeted depend on the design.	
Acceptability (to the target audience)	High – as usually voluntary, and where they align with business objectives	FSC certification and other labelling schemes

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