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COST-EFFECTIVE ATTAINMENT OF ENVIRONMENTAL COMPLIANCE:

GOVERNANCE SOLUTIONS FOR ENVIRONMENTAL OBJECTIVES IN THE PEOPLES REPUBLIC OF CHINA

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Cost-Effective Attainment of Environmental Compliance: Governance Solutions for Environmental Objectives in the Peoples Republic of China

Part A:

An Economic Framework for Environmental Law Enforcement

Part B:

Case Studies: France, the United Kingdom, and the Republic of Korea
& Recommendations

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Abstract

The problem of environmental compliance is considered from an institutional perspective. The problem is portrayed to be a dual one, comprising: a) the specification of the appropriate social objective for the regulated firm; and b) the acquisition of the requisite information for the regulation of that firm. The specific issue addressed is the nature of the various pressure points available for directing regulated entities towards compliance with environmental standards in the context of asymmetric information. We analyse various case studies that demonstrate the available approaches, some more centralised in nature (e.g. France), others more contractual (e.g. UK) and some very decentralised (e.g. Korea). The choice of any particular approach depends upon the country's relative priorities regarding the environmental problem and the asymmetric information problem. The paper concludes with a recommended model for the PRC that combines some of the best features of each approach.

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Summary

This report provides a framework for considering a range of international experiences in the area of environmental law enforcement. This is a very broad area of international activity, as different countries take very different approaches to the solution of problems of the environment and the attainment of environmental objectives. These solutions can run from the highly centralised (governmental operation of industries and firms that impact upon social objectives) to the highly decentralised (empowerment of groups and associations within society to represent environmental interests in specified ways).

In this report we provide (in Part A) a general framework for understanding how and why there is such a broad range of choice in the area of environmental enforcement, through a very informal discussion of the problems of agency involved in attaining regulatory objectives. Then (in Part B) we provide concrete examples of different approaches used by different countries in pursuing solutions to the environmental problem. Together the two parts provide a lot of fundamental information on the range of approaches used in pursuit of environmental law enforcement.

Part A – An Economic Framework for Environmental Law Enforcement

The environmental problem is usually viewed to be result of the appropriation of un-priced (or under-priced) resources by the polluting firm. When resources are un-priced, then any firm that makes use of them is potentially denying higher valued uses to other groups or members of the same society. This is known in economics as allocative inefficiency, and it is a very basic problem of market failure.

In order to address this problem, governments will usually try to find some means of targeting a solution that balances legitimate social interests in the resource. This may be achieved, for example, by means of specifying some minimum environmental standard that will be maintained, or by pricing (e.g. taxing) the previously un-priced use of the resource.

However, the efficient implementation of any sort of efficient solution concept in the area of the environment fundamentally concerns the general problem of asymmetric information in a regulatory environment.

In general, this means that the firm that is being regulated has much better information regarding its actions and its impacts than does the regulator. In this situation the regulator must solve two simultaneous problems: 1) the specification of the firm's social objective (e.g. the maximisation of output with the minimum impact on the environment); and 2) the observation of the firm's actual performance against this objective.

Without accurate monitoring of the firm, the specification of the target objective is meaningless, as the firm is able to exercise absolute discretion without outside knowledge of its actual performance.

The pursuit of accurate monitoring is then critical to environmental performance, and there are at least three very different approaches to attaining this objective:

- a) Central planning – this involves the government substituting its own choices for those of a decentralised firm or industry. In this case the industry is believed to be so replete with social impacts that it makes little sense to have private industry involved in making many of the decisions.
- b) Direct governmental regulation and monitoring of the firm – this involves the specification of the standard to be attained by the firm, and the creation of an accurate monitoring mechanism, a professional class of inspectors, and a system for ensuring that these inspectors do their jobs.
- c) Indirect governmental regulation and external monitoring – this involves specification of a standard to be attained by the firm, and the creation of incentives and powers vested in external agencies (NGOs, individuals, banks, shareholders, consumers) in order to have a wide variety of agents monitoring for a wide range of social impacts.

Each of these approaches may be successful in achieving the joint outcome of efficient resource allocation and information acquisition, but each one is distinguished by the priority that it places on the two parts of the problem. The first, Central Planning, places most weight on specifying the appropriate social objective, and little weight on the solution of the information problem. The other two approaches place far more weight on the information problem, and a reduced weight on direct government control over the social objective. Different countries differ in the political priority they give to different parts of these objectives, and so very different systems are in use.

Part B – Case Studies in Environmental Law Enforcement

The three different countries considered in the case studies provide a range of differing approaches to the problem of environmental enforcement. France is the best example of a country that is working through a vertical structure of governance, and attempting to optimise the workings of its own governmental operators within that inspectorate. A large part of the emphasis in France is placed on creating clear and concrete standards, and then solving the problem of controlling a centralised vertical governmental inspectorate. The UK is an example of a country that operates through a very flexible system of vertical regulation, where the regulator attempts to negotiate and incentivise the regulated party toward some sort of agreed rate of compliance. This involves working toward the two different parts of the problem (objective specification and information acquisition) simultaneously, through a flexible regulatory body employing a wide range of powers. Finally, Korea is an example of a country that has adopted a more decentralised approach to environmental regulation, in which the government has empowered many individuals and associations to monitor resource usage and to claim resource rights. In this way Korea has placed a much greater emphasis on the role of decentralised information acquisition in solving environmental problems than has either the UK or France.

France Case Study:

France operates through the creation of various levels of self-monitoring and self-reporting obligations for its firms and industries. These obligations lie with the firms themselves, and then a government inspectorate exists to check on compliance with those obligations.

The obligations of firms vary with the scale and nature of the operations employed by the firm. They lie generally under one of three categories:

- 1) Declarations required for less polluting activities, such as a declaration to the prefecture.
- 2) Authorizations required for activities with higher levels of risk/pollution. Operators must submit application to relevant authority before starting operation.
- 3) Self-Reporting: Environmental and social reporting obligations required of all companies listed in the New Economic Regulations Act of 2001.

These obligations attach to the firms specified in the relevant regulations. A government inspectorate exists to follow-up and to monitor firm performance with regard to these reporting obligations. Inspectors must provide regulatory supervision, monitoring of classified installations, and provide information to operators and the public.

Inspections occur at regular intervals, the interval depending upon the nature of the reporting obligation being assessed (but about once every 2-3 years). Inspections can be announced or unannounced. Unannounced inspections are important in order to ensure that accurate reporting is occurring.

It is crucial that the Inspectorate is seen to be wholly trustworthy. Inspectors are well-paid civil servants viewed to be highly qualified professionals. They must fulfil their job specifications in line with the Civil Service Charter that requires competency, impartiality, equity, and transparency. Inspectors who violate the Charter risk losing their jobs. There is a governmental department known as the Central Service for the Prevention of Corruption that provides oversight of the entire civil service.

The Prefecture is the enforcement arm of the French government, and it would become involved in any situation in which the firm is found to have violated its environmental or reporting obligations. If a violation is discovered by the Inspectorate, then the firm is referred to the Prefecture, which has a large amount of discretion in how to deal with the violation.

Administrative enforcement consists of formal notices of non-compliance, and the Prefect can issue an order requiring a financial deposit, a corrective action order, or order for temporary closure. These powers enable the prefect to negotiate compliance with a non-conforming firm.

A criminal violation may be found if there is a written law on the point, an act or omission in violation of the law, and an awareness of the act or omission. Minor offences and misdemeanors can still result in fines or imprisonment. These are little-used enforcement remedies, but provide a basis for negotiated compliance and for civil damages.

Many times government monitoring activity can result in civil liabilities as well. Private parties or associations can bring a civil case on behalf of their membership. Associations should indicate the collective interests they represent on behalf of their membership within their constitutions.

In sum, France provides an example of a carefully constructed vertical governmental monitoring structure. It provides for the obligation to lie with the regulated firm, but then it is the job of the Inspectorate to ascertain any non-compliance (with the environmental standard or the reporting obligation). The independent Corruption Inspectorate observes the inspectors to ensure that they meet all of the standards required of civil servants. An independent Prefecture retains a separation between the agents monitoring the regulated firms and those penalising. This means that inspectors have little incentive to be realised from determining or assessing fines and penalties. In general, it is a well-thought out vertical system that attempts to enforce environmental law through an emphasis on careful centralised monitoring and inspection.

United Kingdom Case Study:

The UK Case Study illustrates how law enforcement may be handled via the creation of a basic structure of regulation (monitoring and enforcement), and then using this structure to negotiate from to create more cooperative outcomes.

The Environment Agency in the UK is wholly independent of local and national political pressures, providing for an independent agency charged solely with the enforcement of environmental standards. This independence insulates the regulator from political pressures, but also creates its own problems of unsupervised discretion.

The agency has the ability to assess different levels of civil sanctions (fines) in advance of criminal sanctions. This gradation of penalties is important for maintaining additional incentives after a firm has been previously sanctioned. This enables the agency to negotiate with the firm, while retaining the authority to bring further actions.

A very significant part of the UK approach is to provide for negotiated cooperative resolutions of regulatory problems, bargaining from the starting point of the standard environmental enforcement system. Regulators are vested with wide-ranging authority to negotiate outcomes with firms in a cooperative manner, and this provides the basis for encouraging the firm to share information and to agree outcomes that are readily monitored and enforceable.

The regulator has the responsibility for publishing information on non-compliance on the EA website and/or in its annual business performance report. Since the EA is

independent, this information places pressure on both the regulated firm, and also on any politicians or regulators that are not doing their jobs in encouraging compliance at the firm.

Environmental tribunals are being created for the purpose of handling less serious violations. Such tribunals will possess expertise in the area of the environment, and also much greater discretion in determining the sanctions for dealing with noncompliance. Full prosecutions in criminal courts would be reserved for the most extreme cases.

In sum, the UK case study demonstrates how the solution to the dual problem of information and environment compliance may be dealt with via negotiation. The regulatory structure in the UK recognises that there is little reason to deal with environmental problems in a situation where the regulated firm is wholly uncooperative, since the firm possesses most of the information on whether compliance is in place or not. For this reason, the UK regulator commences its negotiations from a starting point of standard regulatory measures (penalties, criminal sanctions) but then tries to negotiate a level of observed and agreed compliance that the firm intends to supply. This is then enforced through reliance upon an independent agency with a lot of individual discretion, and a wide range of potential penalties to wield (information disclosure, wide range of civil penalties, environmental tribunals).

Korea Case Study:

The Korean case study demonstrates how broader mechanisms for environmental compliance might be invoked in order to achieve environmental objectives. Korea has made much progress over the past twenty years towards the adoption of a full and systematic body of environmental standards and laws; however, due to chronic underfunding there has been a need to supplement governmental regulatory efforts with other efforts. In Korea this has been accomplished by adopting a series of reforms based on broad public participation and engagement in environmental enforcement.

Since democratization of the country in the 1990's, Korea has revolutionized the way it handles environmental laws, creating stricter legislation and investing resources into the sector. Much of the legal structure was borrowed from the US environmental system, which is based around public engagement and involvement in environmental decision making processes.

Decision-making was moved to the local level. Local governments were given power in making environmental decisions and to develop their own protection measures. National environmental protection acts provided for public consultation processes occurring at the local level.

The legislative process of consultation and engagement has been supplemented by a private process of association and engagement. Through NGO involvement, local people have become aware of environmental issues on a national scale and in their own towns. NGOs have become involved in the environmental consultation process, adding pressure on the government to better protect the environment, and to enforce laws.

More importantly, the national environmental legislation has provided for both public and private enforcement of environmental standards. Since they are empowered to bring enforcement actions, private citizens and NGOs have shown great interest and initiative in monitoring neighbourhoods and cities. The private sector (NGOs and individuals) are now an integral part of the enforcement process.

One issue that always arises when private associations become involved in environmental enforcement is the legal issue of “standing”. Legal standing refers to the legal requirements for allowing any given individual or association the authority to bring an action on the part of the “public good”. This right has been interpreted broadly in Korea. Korean citizens can bring cases in the independent courts against the government or companies regarding environmental issues. This enables individuals and NGOs (and courts) to become a crucial component of the enforcement process in this country.

In sum, Korea demonstrates that a country that has been faced with severe difficulties with environmental governance at the state level may still address these problems through private involvement in the compliance process. Individuals, NGOs and associations may be involved in environmental enforcement at many levels: consultation, monitoring, and penalties. Since individuals and associations bear the costs of environmental non-compliance, there are substantial incentives for them to do the job of monitoring and enforcing environmental standards. When they are empowered in legislation and in fact (as in Korea), they can become a fundamental force supplementing the public enforcement mechanisms.

The final recommendation of this report is that the choice of environmental governance system must take into account both: 1) the establishment of clear environmental objectives; and 2) the acquisition of sufficient information on compliance.

These dual objectives may be met in a number of distinct ways, involving reliance upon pure centralised governance mechanisms (government inspection, monitoring and enforcement) or upon much more decentralised governance mechanisms (relying upon regulatory discretion or public engagement). The choice between these approaches depends upon a country’s confidence in its own governance structures and in its capacity for securing information from the regulated entities. The case studies demonstrate examples of countries with substantial confidence in their civil service, and its capacity to get the job done. France has placed a lot of responsibility with its Inspectorate and its professional capabilities. The UK has placed a lot of responsibility with its Environment Agency, and its ability to use discretion and flexibility. On the other hand, Korea has demonstrated that, when internal governance procedures fail, it is still imminently practicable to rely more upon private individuals and associations to do much of the work.

Recommendations:

The result of this review of the objectives and options available to a country for environmental enforcement indicates that there is a substantial range of options available for addressing the dual problem of environmental compliance and asymmetric information.

This review suggests that the following measures might be adopted as a model for environmental compliance within the PRC:

- 1) An independent environmental monitoring agency (IEA) (similar to the UK's Environment Agency) should be considered for adoption in the PRC. The agency would be wholly independent of political and ministerial bodies, and charged only with enforcing environmental standards in all parts of PRC.
- 2) The members of the IEA should be subject to a code of ethics requiring that any discretion be exercised in line with agency principles, and subject to review by the Sanction Review Panel (set out below). Any failure of a member of the IEA to exercise discretion in accordance with the standards of professionalism and competence is subject to immediate removal. A civil service commission should enforce such a standard against all members of the IEA (as in the case of France).
- 3) The IEA should have the authority to assess a gradation of penalties against non-compliant firms, ranging from civil penalties (fines) to the lodging of criminal actions. (as in the UK)
- 4) The IEA should publish all information on environmental compliance on its website on a regular (e.g. monthly) basis, including: a) names of any firms breaching standards; b) the extent of noncompliance; c) any fines or penalties proposed or assessed; and d) any fines or penalties collected. (as in the UK)
- 5) The objective of civil sanctions should be to assess costs in the amount of any gain received by the non-compliant firm, together with any costs incurred by the community or environment impacted by the non-compliance. The penalties should be immediately assessable by the IEA, subject to its own discretion, but according to the principles set out here. (as in the UK)
- 6) A Sanction Review Panel (SRP) should be established (similar to the UK) which assesses whether the penalties being assessed by the IEA are equivalent across jurisdictions and firms, and in accordance with the principles set out above for setting penalties.
- 7) Private associations or individuals should be empowered to bring complaints before the SRP in the event that any act of non-compliance is not adequately monitored or penalised by the IEA. An individual should be able to bring such a complaint if he/she is able to show that he/she is impacted by the noncompliance. An association (NGO) should be able to bring such a complaint if it is able to show that the representation of such an interest is part of the reason for the association's existence in accordance with its constitution. (as in France and Korea)
- 8) Private associations (NGOs) should be enabled by legislation for the reason of monitoring and encouraging compliance with environmental standards.

INTRODUCTION

The Peoples Republic of China is a case study in environmental compliance problems. Despite the adoption of an increasingly large body of environmental legislation and standards, the country's environment demonstrates little improvement. Much of the problem lies in the regulatory and administrative structure that exists in China. (Lin,T. and Swanson,T. 2010) Authority for enforcement is disaggregated and devolved to local authorities (Environmental Protection Boards) in most instances. This often results in the classic "race to the bottom", where local regulatory authorities give way to local development interests. This disaggregation also provides little in the way of any capacity for the widespread implementation of cost-effective regulatory approaches. The approaches used are often piecemeal and always under pressure from local interests. The result in the PRC is little effective environmental regulation and enforcement.

The purpose of this report is to analyse the basic nature of the environmental enforcement problem, and to develop concrete proposals for consideration in the PRC. This report takes a broad perspective on the issue of environmental law enforcement. The question we are addressing here is: What is the most cost effective approach to the attainment of the objective of environmental quality? There are a couple of prefatory remarks to make about this as the question addressed in this paper.

First, this is not equivalent to an enquiry into the most cost-effective approaches to environmental law enforcement. That question would be focused only on the much narrower question of the best means for monitoring and sanctioning noncompliance. In the economic analysis of that question, the event of compliance is viewed as a choice by the regulated firm, which is the outcome of a balancing of the perceived relative benefits from a) compliance with the law (and the benefits flowing from production in compliance) and b) noncompliance (where production benefits are higher but there is some likelihood of being detected and then assessed with some penalty).

The analysis of this question goes back to Becker (1968) and simply looks at the means by which regulated entities can be caused to perceive either a higher penalty for or a greater likelihood of detection. The literature on this issue essentially asks: which is the least costly means of increasing compliance – increasing penalties or increasing the likelihood of detection?

It is more interesting to ask about the wider range of interventions for encouraging compliance - in addition to enhanced monitoring and enhanced sanctions. There has been a substantial economic literature looking at the regulatory issues dealing with this problem, considering how a regulator can secure optimal compliance by the firm given the *asymmetry in information* between the two (i.e. the firm possesses more information on the industry, its production processes, and its actual choices than the regulator can ever possess - information is asymmetric between the two). (Laffont and Tirole 1993) The issues addressed in this literature include: How much *discretion* remains with the firm when information is asymmetric? How much information should the regulator acquire? How should incentive mechanisms be constructed to take the asymmetry of information into account? The basic message from this literature is that the regulation of firms is a mixture of these two basic

problems: 1) the problem of asymmetric information; and 2) the problem of inefficient private choices.

Direct monitoring and sanctioning by the regulator is of course one means of encouraging compliance with environmental law, and the consequent attainment of environmental objectives, but there are numerous other means for placing pressure upon regulated entities. The regulated entity sits within a hierarchical structure that provides many pressure points through which to act.

In this study we take this broader view of the question of environmental law enforcement. We ask about all of the various approaches to encouraging compliance in an uncertain environment – including but not limited to monitoring and enforcement by the governmentally designated oversight administrator (“the regulator”). There are many other potential oversight mechanisms, other than the designated regulators, including: neighbors of the firm, and consumers of its products; the competitors of the firm; the suppliers to and participants in the firm (including banks and unions); environmental organizations and associations; financial markets and shareholders; the media and public information; even the general public and citizenry. Any of these constituencies may be used as pressure points for monitoring and moving the polluting firm, and some of them may be far more influential than a simple regulatory threat. In general, in western countries, environmental compliance is attained through some mix of interventions, acting through various pressure points and compliance policies.

In figure 1 to this paper (see appendix), we attach the outline of all of the various agencies that are able to influence environmental compliance by a firm, and the pressure points through which they influence it. At the top of the chart is the classical “vertical structure” of standard environmental regulation, led by government policy makers and implemented (as against the firm/industry) by the regulators. This is the typical – or vertical – way to think of the environmental regulation problem. Here general environmental objectives are given by the government to regulators, who in turn give more specific instructions to monitors. It is this third level of hierarchy that is responsible for actually inspecting the firms in the regulated industry, and bringing detected violations to the attention of the regulators. Within this vertical model of regulation, environmental law enforcement is simply a matter of monitoring at each level of the hierarchy, and enforcement to generate as much compliance as possible.

The remainder of figure 1 outlines the remainder of the structures available for attaining environmental objectives. It shows that a firm exists within this vertical structure (developed by the government) but also exists within a set of horizontal “markets” as well. In these markets the firm is seen to provide certain outputs (products to consumers, and by-products to citizens more generally) and receives inputs from others (e.g. loans from banks, finance from equity markets, management from managerial markets, labor from labor markets). Finally, it is also possible that other branches of the government can also interface with the firm if access is provided (e.g. courts, local officials or ombudsman).

Any of these interfaces may act as a means of encouraging compliance. For example, environmental courts may work on firms through pressure brought via citizen groups or environmental NGOs. Alternatively, consumer groups may bring pressure on firms

if provided with information on poor performance (as evidenced by the “naming and shaming” example from the UK above). It is also possible to publish environmental performance in the financial press, in order to influence share purchasers or bank creditors in their dealings with the firm, also bringing pressure on the firm. All of these are equally viable alternatives to standard environmental enforcement, and potentially much more effective. The governmental object should be to choose the mechanisms that move the firm toward making the socially desired choices - at the least cost possible.

In this paper we proceed as follows:

In the first part of the paper (Part A) we set out the basic framework for considering how government structure broadly considered is able to impact upon the choice of the regulated firm under conditions of asymmetric information. This is the basic theory of environmental law enforcement.

In the second part of the paper (Part B) we set out three case studies emphasizing different aspects of governance, demonstrating how different countries have adopted very different approaches to environmental compliance. Each of these studies emphasises a particular aspect or approach to enforcement, some more vertical in approach and others more horizontal (or non-traditional). We will look at France, UK and Korea in turn.

In France, the primary method of regulation recently has been focused on the central government itself – the top level of the vertical hierarchy. France has pursued environmental objectives by means of encouraging non-polluting firms. It has invested substantial resources in designated “green industries” in an attempt to turn the economy toward those sectors that are less polluting. This is a roundabout approach to environmental law enforcement, providing a very general signal of the desired direction for the economy, but it can be viewed as an example of attaining environmental objectives by encouraging compliant industries. In addition, France has made a recent effort at restructuring its monitoring and compliance system - providing for a fairly systematic approach to inspecting firms regarding their compliance. We will examine France as a case study in the way in which such "vertical" approaches to environmental law enforcement can be useful.

In the UK, on the other hand, the approach has been to encourage compliance at the level of the regulator itself, and through a specific approach to compliance at this level. The focus in the UK is on negotiated compliance (between the regulator and the industry), rather than through traditional law enforcement activities. The UK has moved toward having a very wide range of potential penalties available for use in the event of noncompliance – ranging from publicity to criminal penalties – and it vests its enforcement agency with the discretion to decide which penalty to employ. This allows the agency to impose a lesser penalty, while threatening a greater penalty if a negotiated resolution is not reached. This provides the means by which discussions are commenced and negotiations finalized with the noncompliant firm. This is an example of negotiated compliance at the level of the regulator.

Finally, in Korea we see a country that has dramatically altered its environmental performance via the employment of a wide range of methods and approaches. Here

we emphasize the use of horizontal monitoring methods – the use of citizen and environmental association pressure against noncompliant firms. This has resulted in providing access to courts against polluters for many interested citizen groups and associations. These people, often neighbors of the polluter, have every incentive to continue monitoring and complaining about noncompliance, and so a lot of information is generated relatively costlessly. This horizontal change in institutions made for a dramatic and rapid change in the environment in Korea.

In sum, this part of the paper provides the reader with a menu of options to consider on how to address problems of environmental noncompliance – and it provides the reader with three very different approaches used recently by three very different governments. We provide these case studies to demonstrate how different countries use these approaches to address this common problem, and then we derive recommendations for the PRC based upon these examples. The end-result is intended to be a set of proposals that will help to address the basic problem of environmental law enforcement as it exists in the PRC.

PART A: A GENERAL FRAMEWORK FOR ENVIRONMENTAL ENFORCEMENT

This part of the paper examines and explains the framework of analysis used throughout. It focuses on the diagram attached in Annex 1, and provides a full discussion and description of how this framework explains the movement of regulated firms toward desired outcomes. The narrow objective is to explain why there are different avenues or approaches to securing environmental law enforcement, and to make clear how the different ones can be given effect. The broader objective is to make clear how environmental law enforcement is a combination of the two regulatory objectives: the securing of information on regulated firms and the movement of private firm choices nearer to those that are socially preferred.

1. The Economic Framework for Regulation

1.1 The Economic Objective of Regulation

In the economics of regulation, the goal of any firm is assumed to be *profit maximisation*. The firm has choices to make (regarding its inputs, outputs and production methods) and it makes all of these choices in order to effect the purpose of maximum profits, the difference between input costs and output revenues.

In general it is believed that this mode of behaviour by firms is socially optimal. When firms pay the full cost of inputs, and then generate outputs demanded by society, the object of profit maximisation will guide the firm to allocate resources optimally to the production of goods that society demands. This belief in *efficient resource allocation* by profit maximising firms is a foundation stone in the belief that market economies are able to achieve socially worthwhile outcomes.

A fundamental exception to this general rule results when firms are able to acquire resources without paying for them. Then firms that are maximising profits will automatically be directed toward the use of these under-priced resources, and profit-maximisation (as a goal) will result in overexploitation of resources.

When is it the case that resources are under-priced? This is precisely the problem afflicting those resources we know as "environmental goods and services". Resources such as the air or water are difficult to price, and (even if a price is in effect) it can be difficult to collect the correct price from every use or user. This is the source of the *environmental problem*: the gearing of profit maximising industries/firms toward the overuse of underpriced resources.

What is the measure of the correct price to charge for any resource use? This is known as the concept of *opportunity cost*. Opportunity cost is the value of any resource given that it is allocated to its first-best use (i.e. the most highly valued use throughout that society). It is assumed in a well-functioning market economy, that the market will allocate resources to those uses that value them most highly (simply by outbidding other uses). The problem with unpriced resources (such as environmental ones) is that the resources may be allocated to very low-value uses by users who are very good at appropriating the resources.

For example, it is possible that an unpriced resource such as air may have a very high value use for purposes of enabling children in a neighbourhood to breathe. When they are unable to make use of adequate air quality in their neighbourhood, the costs of the foregone use may be valued in terms of missed days of education, increased morbidity and illness (measured in terms of hospitalisation) and chronic impacts on functionality (measured in terms of reduced capacities and incidence such as asthma etc.) Despite the aggregate value of this use of air for the supply of health in that neighbourhood, it can be straightforward for a neighbouring factory to appropriate all of the value of the local air by means of burning large quantities of coal in its factory. This factory is then allocating the local air quality to the production of goods in its factory, without paying the opportunity costs of depriving other users of the alternative uses of that air. This is known as an *externalised cost*, and it is a common failure in market economies.

Thus, externalised costs (or externalities) result in the failure of the market to allocate resources efficiently. When a market economy is not allocating resources efficiently through the price mechanism, firms that are pursuing profit maximisation will systematically appropriate resources to their own use without paying the appropriate price. This results in *inefficient resource allocations*: the production of goods and services in quantities that do not reflect the full social costs of their production. Overexploited resources (such as unhealthful air) are the observed outcome of such inefficient resource allocations.

The goal of the regulator is then to recognise the existence of inefficient resource allocations, and to intervene to attempt to shift this outcome toward a more efficient one. In order to do this in a market economy, the usual way forward is to try to alter the perspective of the firm concerned - in order to cause its profit maximising choice to result in more efficient resource allocation. That is, in a market economy, the overarching goal of regulation is not necessarily to direct private firms to alter their choices, but rather to alter their decision making frameworks in such a way as to cause them to make their own choices more efficiently in regard to resource allocation.

This is a crucial point to understand regarding regulation. The goal of the regulator is not to attempt to usurp the private firm's choices (when they are observed to be making inefficient choices within the existing decision making framework). The goal of the regulator in a decentralised economy is instead to alter the decision making framework so as to cause the firms to make the socially-preferred choices.

This approach is described through the conceptual framework of the basic *Principal/Agent Problem*. (A good basic reference on the regulation of agents within vertical structures is Milgrom and Roberts, 1992) In that framework the regulator acts as the Principal, and it attempts to create a regulatory framework that causes the Agent (the firm) to react to it by: a) choosing to remain within the industry and the regulatory framework (the *participation constraint*); and b) choosing to elect the Principal's preferred outcome in preference to the Agent's preferences (the *incentive compatibility constraint*). Many different forms of institutional changes can cause the the profit-maximising choices of the Agent to change (taxes, penalties, standards), but all of them must operate through altering these two basic constraints of the firm.

For example, the factory described above (using up the supply of health-providing air) might be suspected by the government of providing an inefficient allocation of resources in its neighbourhood on account of the un-priced air it is using. The government could alter the decision making framework in a number of ways. One possibility would be to charge a price on each unit of emissions that the firm produces. If the regulator charged the firm the actual opportunity cost of that use of air (in terms of the potential for health costs the emissions generate), then the profit maximising choice of the firm would be translated into a welfare maximising choice (i.e. it would result in an efficient resource allocation). This is because the firm would have to pay the cost for the use of the resource, and so it would only choose to do so to the extent that the value of the firm's outputs exceeded that of other uses of that air. The firm would use less air in aggregate, and the air supply in the community would generate some factory production and some health production (balancing the two goals). Note that the regulator does not have to inform the firm of the actual regulatory target or the reason to pursue it, but simply changes the profit-maximisation problem of the firm so that its choice is more similar to the one that the regulator wants it to solve. That is, the Principal transforms the Agent's problem into one that society would like the firm to address.

Now, the regulator within a Principal/Agent framework has a simple problem to solve if it has full information on all of the relevant choices made by the firm. Any mechanism is equally efficient at moving the agent toward the principal's desired outcome, if the principal can see either all of the choices made by the agent, or the outcome of the choices made by the agent. The solution to the Principal/Agent problem is a trivial matter in the context of full information.

It is far more difficult to solve regulatory problems if some of the choices of the firm are not observable by the regulator. For example, in the case of the firm charged the opportunity cost for its emissions, the regulator cannot alter the firm's optimisation problem if the firm does not believe that the regulator is able to monitor its choices. Then a price on emissions is irrelevant to its profit-maximisation problem, because the price is only charged against those firm choices that are monitored. In the context of such severe asymmetric information, a charge against emissions would have no impact on the firm's choices.

The *problem of efficient mechanism design* concerns the importance of solving the dual problem of causing the firm to change its choices within a context where the agent's choices are not necessarily fully observable. Then it is critical that the mechanism for regulating firm choice is able to provide for the capacity to both induce optimal choice and to provide information on that choice.

1.2 The Three Basic Approaches to Regulation

There are three basic routes for moving the firm/industry in the direction of efficient resource allocation:

1) Central Planning - directed outcome

First, the regulator may attempt to calculate the efficient outcome as an engineering matter. This amounts to an attempt to ascertain both the efficient set of outputs that

should be emanating from a particular bundle of resources, and the efficient allocation of resources that would be required to achieve that.

For example, the central planner might survey a neighbourhood similar to the one described above and decide that the appropriate mix of goods to issue from there should be mainly children's health and education, and that the goal of industrial production should receive a higher priority. It might decide this by, for example, asking economists to value the costs to children's health, and deciding that this cost overrode the value of factory production in that community.

Then the central planning solution could take many forms. The planner could simply order the factory to shut down, or it might place an emissions standard on the factory requiring it to eliminate harmful emissions, or it might simply specify the technology that must be used by the factory to remove or reduce emissions. All of these approaches have been used by many different governments in the pursuit of directed outcomes.

The central planner must recognise, however, that its attempt to move the firm to the desired resource allocation outcome depends upon both the identification of that outcome in advance, and the causing of the firm to move to the identified outcome. A firm has many other choices other than simple compliance with a regulatory directive, and so (to the extent that the firm's choices are unobservable) the regulatory outcome might be different the one that is directed.

For example, in the case of the factory discussed above, if the central planner directed the firm to meet a daily emissions standard in order to avoid excessive pollutants, then the firm might respond to the daily limit simply by shifting much of its production to the nighttime (thereby avoiding the time when the emissions were more easily monitored and counted). This is simply one example of the sort of discretion that might remain with the regulated firm, under central planning, that would cause the outcome to deviate significantly from the desired one. The difficulty of accounting for emissions during the nighttime means that the firm retains this discretion to use the un-priced resource at this time of day.

The fundamental problem of central planning lies in such *agency costs*. These are the costs incurred by reason of the discretion that is retained by private firms and industries, when there is incomplete or asymmetric information. There are many different choices a firm might make in response to a planner's directive, and only one of those choices is the one the planner actually desires. If the choice of the firm is not directly observable in all cases, then there are several categories of costs, all resulting from this asymmetric information. Retained discretion and agency costs also result in substantial costs of monitoring and enforcement. These are all different names for the same categories of agency costliness. The costs of this direct - or central planning - approach lie in agency costs and also in the vast information requirements for ascertaining the efficient resource allocation and how to move toward it.

2) Direct Regulation - governmental pricing of resources

An equally effective approach, although less direct in application, is the attempt to ascertain the optimal charge to assess or the optimal quantity of pollution to allow in a particular context. Then - once the optimal price or quantity of pollution is known - the regulator moves the firm toward the social optimum by means of an implicit market mechanism.

This might be done for example by deciding on an optimal emissions charge that any firm must pay in a given neighbourhood in order to emit one unit of pollution there. As mentioned above, this charge should equate with the opportunity cost of clean air (for purposes of producing health).

The main difference between this approach and the central planning outcome described above is that the firm is left to decide how to deal with pollution emissions, once the charge is known. It can simply pay the charge on each unit of emissions, or it might try to minimise emissions by means of technological change or production alterations. It might simply alter the sorts of inputs it uses, in order to alter the outputs that it generates. For example, much of the response by firms to SOX controls in many countries was simply to shift to fuel inputs that emitted far less sulphur. Other firms responded to these regulations by means of changing technologies, either in terms of new furnaces or new emission abatement technologies. So - firms are excellent mechanisms for searching for and identifying the most cost effective response to a newly imposed price or constraint.

Of course firms can also respond to a tax or limit imposed by the government, by simply shifting toward times and situations where the monitoring of emissions is difficult. Just as in the case of central planning direction, firms can also respond to a tax by shifting production to the nighttime. If firms are difficult to monitor at particular times or in particular ways, then shifting in the direction of this difficulty will be one of the means by which profit maximising firms will avoid regulatory constraints or taxes.

So, the advantage of using regulatory instruments that focus on mimicking the price mechanism is that placing a price on resources provides the firm/industry with the incentive to search out the least cost techniques for minimising the (detected) emissions. The choices for the firm run from the exit from the industry/neighborhood to the creation of emission reducing techniques and innovations. The regulator in this situation relies upon the firm to move itself toward the more efficient outcome, and it relies upon the price mechanism to provide the incentive for firms to want to target efficient use of resources.

The disadvantages of regulatory instruments remain very much the same as central planning approaches. If resource use is to be priced or limited, then the regulator must be able to detect any and all usage for the price mechanism to incentivise the firm toward efficiency. Otherwise, if the firm retains discretion, it will simply shift to times and places when resource use remains unpriced.

Therefore the costs of regulation remain similar to central planning. There is the cost of obtaining the information required for targeting the efficient resource price, and

there is also the cost of monitoring for any and all resource use - in order to charge the efficient price against its use. Regulators must continue to dedicate resources to monitoring and enforcement - in order to make market based mechanisms effective.

3) Indirect Methods for Regulation - bringing costs back to the polluter

A third and much less well-recognised form of regulation concerns any number of a wide range of indirect methods used to internalise the costs of pollution to a polluter. The most obvious and direct route to internalising such costs is for the government to calculate the cost, and then to attempt to charge the polluter for each unit of use.

More indirectly, it is also possible for other users of resources to be empowered to charge polluters for the inefficient use of resources. This can be done in a number of ways:

- 1) neighbours might be given the right to charge the firm for use of their common resources in courts (liability);
- 2) banks and financial institutions can be made secondarily liable for costs incurred by firms that they finance (secondary liability);
- 3) shareholders might be provided with the right to information on potential costs and claims that might result from pollution caused by firms they own (shareholder activism);
- 4) managers might then compete for better jobs and positions by reference in part to their ability to avoid inefficient resource management and the costs that result;
- 5) consumers might be provided with information on the production processes used by firms and the emissions they imply (labelling, media information);
- 6) citizen action groups might be allowed to form, lobby and provide information for the purpose of contesting inefficient resource use by firms and industry (NGOs).

In appendix I, the figure shows these as particular pressure points that exist in the more *horizontal structure* of the firm or industry (at the bottom of that figure). In this framework the firm is being incentivised not by the government or regulator directly - but by means of the government providing enabling powers to those within the economy who also have an interest in efficient resource use. These agents are usually incentivised by having the government recognise the opportunity costs that arise from having their resources appropriated, and providing a mechanism for the compensation of these costs when a good claim is proven against a firm or industry.

For example, in the case of the factory polluting a neighbourhood's air supply, it is possible for the government to act by enabling *ex post pricing* mechanisms: these are mechanisms that enable an individual to claim the costs of inefficient resource use in a court claim. Then a person with an asthmatic child who has missed many days of schools would be enabled to bring a claim in local court to claim damages from the firm or firms polluting the local air supply. Once such a claim is proven, it establishes the price of such air pollution after the fact (*ex post*), and firms are placed on notice that any individual harmed by their activities in future also must be compensated for that usage. This price of pollution then becomes internalised in the thinking of the firm, and it must then decide whether to simply pay such claims or to take steps to minimise claim-generating emissions in the future.

The other mechanisms listed above are derivatives of this basic liability of the firm. If inefficient pollution comes to be seen as a potential cost of doing business, then firms will have to compete in this dimension as well as in those involving quality of their produced goods. Consumers may demand information on which firms are most efficient in resource use. Banks and shareholders may demand information to help them to avoid inefficient firms. NGOs and media organisations may attempt to provide the information desired by consumers, financial institutions and interested citizen groups. Basically, the pricing of pollution costs (through the creation of some sort of liability for damages caused) generates a new market for the information on these potential costs deriving from inefficient resource use.

And this is the most important benefit flowing from a system based upon indirectly generated pricing of inefficient resource use - it creates many different incentives for the monitoring and measuring of firm performance. When the regulator acts directly (and creates a price payable only to the government for use of resources), then the only incentive for monitoring that is created lies with the government. When the regulator acts indirectly (and creates a price payable to any individual who is impacted by inefficient resource use), the incentive for monitoring becomes much more economy-wide. There is an incentive for all potentially impacted users of environmental resources to become monitors of the firms and industries with which they share the resources.

In general, it is important to recognise that the regulated firm responds to both the direct regulation regime by the government, and also to the indirect pressure points that result within the horizontal structure surrounding the firm. These are most particularly activated when the pricing of the resource actually occurs at that level - through the creation of a right of action for liabilities for harms resulting from inefficient resource use. Then all of the other associated stakeholders in the firm can be motivated by reason of the need for monitoring for such potential liabilities before they are incurred.

Such indirect pressure points can be equally important in the context of firm liabilities that result from direct government penalisation. Studies of both civil and criminal penalties in the US have shown that shareholders withdraw support from those firms found to be in nonconformance with legal requirements. It might also be the case that managers, banks and financial institutions withdraw some support from such firms as well. In any event, it is important to recognise that openness of information and transparency of regulation can be essential to encouraging these other more horizontal mechanisms in providing additional monitoring of the firm's performance.

1.3 Summary of Part A - General Framework on Law Enforcement

Solving the problem of environmental law enforcement is fundamental to the solution of environmental problems. This is because environmental problems are the result of inefficient resource exploitation, which itself results from the problem of unpriced resource usage. Hence, the solution to an environmental problem is to move firms toward the level of resource use that would obtain in a world in which resources were

charged efficiently. This movement can only occur if the government is successful in both identifying the outcome which the firm should target, and also in securing the information on which the observation of the firm's response can be based.

This may seem obvious, but history is replete with firms' successful avoidance of regulatory directions. It is clear that the solution to environmental problems is at least as much one of information and implementation, as it is of identification of the desired solution. Some mechanism must be identified that minimises the agency costs of firm discretion, as much as it maximises efficient resource use.

To that end, we have outlined the three basic approaches for governmental solutions to environmental problems: a) central planning; b) direct government regulation; and c) indirect government regulation. Each of these approaches lies at a different point on the spectrum of regulatory costliness. Central planning is notorious for its high agency and information costs, but in theory directly targets efficient resource use. On the other hand, indirect government regulation (through liability, information and activism) minimises the costs of monitoring but is much more inexact in regard to its target. Direct government regulation has some of the best and some of the worst of both worlds.

We turn now to three different case studies of different countries, and the ways in which they have attempted to address this combined monitoring/environmental problem. These are case studies in approaches to environmental law enforcement.

Part A Summary – General Framework on Law Enforcement

The efficient implementation of law enforcement in the area of environment concerns the general problem of asymmetric information in a regulatory environment.

In general, this means that the firm that is being regulated has much better information on its actions and its impacts than does its regulator. In this situation the regulator must solve two simultaneous problems: 1) the specification of the firm's social objective (e.g. the maximisation of output with the minimum impact on the environment); and 2) the observation of the firm's actual performance against this objective.

Without accurate monitoring of the firm, the specification of the target objective is meaningless, as the firm is able to exercise absolute discretion without outside knowledge of its actual performance.

The pursuit of accurate monitoring is then critical to environmental performance, and there are three very different approaches to attaining this objective:

- a) Central planning – this involves the government substituting its own choices for those of a decentralised firm or industry. In this case the industry is believed to be so replete with social impacts that it makes little sense to have private industry involved in making many of the decisions.
- b) Direct governmental regulation and monitoring of the firm – this involves the specification of the standard to be attained by the firm, and the creation of an accurate monitoring mechanism, a professional class of inspectors, and a system for ensuring that these inspectors do their jobs.
- c) Indirect governmental regulation and external monitoring – this involves specification of a standard to be attained by the firm, and the creation of incentives and powers vested in external agencies (NGOs, individuals, banks, shareholders, consumers) in order to have a wide variety of agents monitoring for a wide range of social impacts.

PART B: CASE STUDIES IN APPROACHES TO ENVIRONMENTAL LAW ENFORCEMENT

Introduction

In this part of the paper we wish to provide concrete examples of these different approaches to environmental law enforcement. The range of approaches used by different countries is generated by the differing priorities placed on the different parts of the environmental problem. As described in Part A, the problem of environmental resource allocation comes in two parts: 1) specification of the societal objective for resource allocation; and 2) acquisition of complete information on resource appropriation. It is necessary to address both parts simultaneously in order to have a solution concept that addresses either independently.

Different countries place higher priorities on one part of the problem, or the other. On the one hand, the specification of the desired environmental objective might be done in a highly centralized manner, with little concern for how the centralized process will engender the information necessary to implement that objective. For example, many countries will keep industries with substantial resource implications closely held within the governmental sector – in order to ensure that a carefully balanced objective is pursued. This could be argued to be the case with regard to fisheries in some countries or nuclear generation in others. In these cases the government retains near-complete control over issues of resource allocation, and attempts to manage the problem through internal or governmental processes. This places a high premium on control, but leaves the issues regarding information acquisition (monitoring) unspecified. To a great extent this approach flows from a faith in the capacity for governmental processes to work efficiently in attaining a specified objective, but it also involves the careful specification of processes for generating information within government. (see Case Study on France)

On the other hand, there are other countries that place a far higher priority on decentralized management of the environmental problem and the specification of processes for generating accurate information regarding the use of resources. This often involves the creation of a highly decentralized system of management, by which many individuals or associations have rights and incentives to report on unauthorized uses of environmental resources. Such decentralized approaches are based in the belief that the crucial part of the environmental problem is the empowerment of all individuals impacted by a particular environment, and places a higher priority on the problem of information acquisition over that of centralized control over the environmental objective. (see Case Study on Korea)

There is no one generally-preferred approach to environmental law enforcement to be recommended, on account of the differing priorities that might be placed on the different parts of the problem. The case studies here instead provide good examples of how different systems result from these different priorities.

1. France: Governmental Processes of Inspection and Monitoring

France is a country that places a high priority on the creation of careful procedures for the centralised management of environmental objectives. It has created a vertical structure of monitoring, inspections, and control measures. These vertical systems of control are intended to provide the government with an effective means for observing non-compliance with environmental objectives, and for ensuring that information is acquired and used in enforcing compliance. It provides an excellent case study in a centralised system for managing vertically structures of governance. (see Figure 1)

1.1 Structure of French Environmental Bodies¹

We commence our discussion of France with a description of its governance structure for the monitoring of environmental performance by regulated entities. France is a country with an historical focus on vertical forms of governance. The structure provides the means for monitoring important facilities across the nation, and the focus in this country is on investing in a pervasive monitoring structure.

The Ministry of Ecology, Sustainable Development, Transport and Housing

The Ministère de l'Ecologie, du Développement Durable, des Transports et du Logement (Ministry of Ecology, Sustainable Development, Transport and Housing) is in charge of the EU environmental legislation transposition and the enactment of national laws and regulations. In the Ministry, the Direction Générale de la Prévention des Risques (Directorate General of Risk Prevention (DGPR)) is in charge of industrial pollution control, technical assistance, methodological and regulatory guidance and oversight on compliance assurance. The Technological Risk Service and the Bureau of Regulation, Inspection and Control Guidance and Quality, the latter being under the direction of the former, both deal specifically with monitoring practices.

A key feature of the organization in France is the role of the “*préfet*” (prefect). The prefect is under the authority of the Ministry and represents the central government. There is one prefect for every territorial department, of which there are 100 in France. Since the prefect represents the central Government, he is the one that will carry out the compliance monitoring and the administrative enforcement. Additionally, he and his representative chair the Conseil Départemental de l'Environnement et des Risques Sanitaires et Technologiques (CODERST) (Departmental Council of Environment and Sanitary and Technological Risks). It is “a stakeholder committee comprising representatives of government agencies, local elected officials, NGOs and experts – which meets monthly and contributes to the elaboration and implementation of local environmental policies and delivers opinions (usually followed by the prefect) on individual draft environmental permits and administrative sanctions.”²

The prefect is assisted by several delegated inspection departments, which fall under the Ministry of Sustainable Development for this specific activity, but are also part of other ministries' offices as well. These inspection departments are:

¹ Updated elements from the following OECD report: OECD (2009), Ensuring Environmental Compliance: Trends and Good Practices, OECD Publishing. doi: 10.1787/9789264059597-en.

² *Ibid.* at 114.

- The Directions Régionales de l'Environnement, de l'Aménagement et du Logement (DREAL) (Regional Directorate of the Environment, Development and Housing) are in charge of enforcing sustainable development policies introduced by the Government. Notably, DREAL assists administrative authorities in their missions of planning, establishing programs and projects related to the environment. There is a DREAL in every region except in the Parisian region (in which case, the Direction Régionale et Interdépartementale de l'Environnement et de l'Energie (DRIEE) (Regional Directorate and interdistrict of the environment and energy) is in charge of these activities) and for overseas territories (which have separate Directorates for the environment, development and housing).
- The Directions Départementales des Services Vétérinaires (DDSV) (Departmental Veterinary Service Directorates) are in charge of the implementation of environmental requirements for agricultural sites, slaughterhouses and some food industries.
- The Service Technique Interdépartemental d'Inspection des Installations Classées" (STIIC) (Technical Service for Inspection of Classified Industrial Installations) is an agency under the Police Prefecture of Paris covering the capital itself and its surrounding departments.

High Council for the Prevention of Technological Risks

The Conseil Supérieur de la Prévention des Risques Technologiques (CSPRT) (High Council for the Prevention of Technological Risks) assists the Minister in charge of classified installations. It is composed of five parts: administration, NGOs for the protection of the environment representatives, exploiters/user representatives, employees working in classified installations representatives, and mayors' representatives. Moreover, the High Council includes members of representing government agencies, former and actual inspectors of classified installations and legal professionals. It issues mandatory and consultative opinions on draft legislation and regulations. However, the Directorate General of Risk Prevention (DGPR) often consults with it when dealing with any draft in relation to classified installations.

1.2 Regulatory Regimes

The compliance mechanism used in a given situation will vary, depending on the type of installation. Therefore, it is necessary to explain the categories of "installations". In France, this term is used differently than it is in other countries, such as the UK. It refers to one technical unit of a facility, even in situations where multiple technical units may have been permitted as one entity (which, in the UK, would be referred to as an installation). Permitting and compliance figures are analyzed in terms of numbers of facilities, not number of installations. The Ministry does not regulate, on an environmental basis, non-classified installations, which fall below the regulatory thresholds for declaration requirements. There are approximately 500,000 classified installations in France.

Permitted installations

In France, issuance of permits has been integrated across the environmental media since the adoption and subsequent implementation of the 1976 Law on Classified Installations. The prefect issues a permit, through an order (arrêté), based on a proposal from an inspection service, and it is valid for an unlimited time period (except for quarries and landfills). However, permits must be reviewed every 10 years, and the operator must notify the prefect of any significant operational changes which may require submission of a new permit application. Certain categories of “classified” installations (high-risk facilities subject to permits with siting restrictions, waste management installations, and quarries) are required to provide a bank or insurance guarantee covering routine operations, potential accidents, as well as decommissioning and site remediation.

Declared installations

Declared installations are subject to general binding rules that are laid out in standardized ministerial orders (arrêtés-types). These requirements are attached to the formal acknowledgement of receipt of a declaration, which is sent by the prefect to the operator. In some cases, the prefect may issue an order to make them more stringent to reflect local conditions. However, the inspection services do not usually have an opportunity to review a declaration or recommend rejecting it.

Under a 2006 regulation, some categories of declared installations have to request and undergo periodic compliance checks (once every 5 years, or 10 years if they have a certified EMS) by third-party organizations accredited by the Ministry of Sustainable Development. There is also a provision under consideration to allow the inspection services to review declarations and to add specific conditions for installations located in environmentally sensitive areas.”³

Regulatory Regimes in Summary

- A “classified installation” is any industrial or agricultural installation that is likely to present a risk or cause pollution or nuisance, especially if it is likely to affect the safety or health of local residents.
- A declaration is required for the less polluting and less hazardous activities. A simple declaration to the Prefecture is all that is required .
- An authorization is required for higher levels of risk or pollution. Operators must submit an application for an authorization demonstrating the acceptability of the risk before starting operating. The Prefect may grant or refuse the authorization.”⁴

1.3 Current Rules and Regulations

Reporting

The New Economic Regulations Act (NRE) of 2001 states, in Article 116, that environmental and social reporting is mandatory for listed companies, which are very

³ *Supra* note 1 at 116-117.

⁴ Ministère de l'Ecologie et du Développement Durable, The inspectorate of Classified Installations, Environmental policing of industrial and agricultural facilities, 2005, available at http://www.installationsclassees.developpement-durable.gouv.fr/IMG/pdf/plaquetteIc_anglais.pdf, accessed 13 July 2011.

often holding companies. The companies are required to report on social and environmental performance in the management report.

A new law, Grenelle II Law, extends the obligation to companies with over 500 employees and a balance sheet total of over 43 million Euros, provided that they are also obliged to establish a social balance sheet or use public savings on the regulated market. Most importantly, the law provides that parent companies must report on the consideration of social and environmental impacts of their subsidiaries. Companies which do not come under the Commercial Code, but meet the above criteria, must also fulfill this obligation.”⁵

The information “is subject to verification by an independent third-party body, according to terms set by Conseil d’Etat decree. This verification gives rise to a recommendation which is sent to the shareholders’ or members’ meeting at the same time as the report of the board of directors or executive board.”⁶ This provision applies to the financial year ending 31 December 2011 for companies whose securities are admitted to trading on a regulated market. It applies to the financial year ending 31 December 2016 for all companies falling under the article, namely companies whose balance sheet total, turnover or number of employees exceed thresholds set by the Conseil d’Etat decree. The independent third-party recommendation “includes certification of the presence of all information which must be included with regard to legal or regulatory obligations. This certification is due as of the financial year ending 31 December 2011 for all companies concerned by the present Article.”⁷

There are no sanctions available against a company violating the mandatory reporting obligation. However, any party with an interest in the information contained in the reports has the right to efficient judicial recourse and a daily fine, in order to obtain, from the company, the missing extra-financial information. However, two limits apply⁸. First of all, “any person presenting an interest” does not mean “any third-party”. The law is intended for stakeholders such as shareholders, the board of directors and the works council. Secondly, the recourse is available exclusively in the case of the non-publication of the report, and does not apply for partially false information.

Inspections⁹

There are approximately 1,500 inspectors (approximately 1,200 full time) in the DREAL and STIIC. There are approximately 24,000 inspections per year.¹⁰

⁵ *Ibid.* at 3.

⁶ *Ibid.* at 2.

⁷ *Ibid.*

⁸ AEED, Informations extra-financières : Leur « importance progressive » en fait une « source de responsabilité pour les acteurs », Sherpa, 30 August 2010, available at <http://www.asso-sherpa.org/archives/1032>, accessed 5 July 2011.

⁹ Ministry of Ecology, Sustainable Development, Transport and Housing’s portal for classified installations: <http://installationsclassees.ecologie.gouv.fr/>.

¹⁰ Ministry of Ecology, Sustainable Development, Transport and Housing’s portal for classified installations at <http://installationsclassees.ecologie.gouv.fr/http://www.installationsclassees.developpement-durable.gouv.fr/Organisation-des-services-de-l,14339.html>

The Inspectorate's mission is to provide environmental policing of industrial and agricultural facilities. These missions aim at preventing and reducing dangers and nuisances in order to protect individuals, the environment and public health. However, operators remain responsible for their installations, from the time operations commence to shutdown or transfer. Inspectors have three main duties:

- Regulatory supervision: examination of applications for authorization; examination of files of closure of activity;
- Monitoring of classified installations: onsite inspection, examination of reports or studies of external inspection bodies, proposal of administrative sanctions to Prefects or for prosecution to Public Prosecutors in case of infringement of regulations;
- Providing information to operators and the public.

A classified installation, authorized or declared, will be inspected to check its conformity with regulations. The inspectors for classified installations are in charge of these visits. They are under the direct supervision of the DREAL, the DDSV and the STIIC. Though the majority of inspectors do not have a specialization, there is an increase of technical specialization in the industrial sectors covered.

If necessary, an independent laboratory can be commissioned by the Inspectorate of classified installations to take samples and analyze different aspects of the installation. The financial costs of these analyses are borne by the operator. The inspectors and the laboratories can operate onsite, either simultaneously or separately.

These onsite visits do not exclude permanent self-monitoring by the operator. An installation has permanent control of the operator's waste and/or the activity's impact on the environment. The operator has to gather and comment on the results before transferring them to the Inspectorate of classified installations. Declared installations have an additional specific regulatory regime. This regime is currently being put into place.¹¹

Objective of inspection

Every visit consists of one or more inspectors that go onsite to check the conformity of the installation with the law and regulations that apply to classified installations.

Generally, the inspection's objective is to check that the conditions of operations stated either in the prefect's authorization or the ministry's regulation for the specific industrial domain. An inspection can also be intended to check that the installation has received a prior authorization or declaration. Inspections can be categorized in different ways, depending on the information provided to the operator. An announced inspection is when the operator is informed, at least 48 hours prior, that a visit will take place. A spot check inspection occurs when the inspector arrives unannounced, without any prior notice.

¹¹ Ministry of Ecologie, Sustainable Development, Transport and Housing's portal for classified installations at <http://installationsclassees.ecologie.gouv.fr/Qui-controle.html>, accessed 15 July 2011. The provisions regulating this control are being drafted. Articles R512-56 to R512-66 and R514-5 of the Environmental Code comprise the main guidelines.

Depending on the objective of the inspection, an inspection can be general, where the inspector checks all necessary parameters, or it can be targeted at certain parameters. The inspection can be of three different degrees: in-depth (the whole industrial site is inspected, which requires a detailed preparation), usual (inspection which requires a standard knowledge of the installation and its environment, including administrative, by the inspector), and punctual (which is quick and directed exclusively to a few parameters).

Inspections can also be planned or incidental. A planned inspection occurs annually, or within a framework lasting several years. In this situation, the inspector informs the operator about the date and the theme of the inspection. An incidental inspection is triggered by an unforeseeable event, such as legal action, an accident, or closure of an installation.

Frequency of inspection

There are a minimum number of inspections required, depending on the gravity of potential damage or danger at a particular installation. Frequency is organized as follows:

- At least once a year for the 2,000 facilities having the highest risks. These “national priority” facilities include:
 - ❖ “High threshold” Seveso installations; Waste storage, treatment and disposal installations with capacity above 20,000 t/yr for hazardous waste and 40,000 t/yr for municipal solid waste;
 - ❖ Installations with significant pollution releases (most of them are IPPC installations); and
 - ❖ Installations that which carry out spreading of waste or effluent-origin material (e.g. sludge) on agricultural land.”¹²
- At least once every three years for the 8 000 facilities presenting less risks;
- At least once every 10 years for the remaining facilities.

Apart from these categories, the inspectorate of classified installations can also create specific programs for inspections of certain categories of installations, such as foundries, silos, etc. A program can include both authorized and declared installations. Some are decided on a national basis and then transferred to decentralized services. Finally, as previously mentioned, unforeseeable events such as accidents, legal action and pollutions can trigger an inspection.

Rights and obligations of inspectors (including measures against corruption)

Inspectors have an absolute and permanent right to be granted authorization to access sites and be provided with all the documents related to the regulated installation. There is no need for a judicial authorization. The inspectors have all sworn an oath to respect professional confidentiality and not reveal any industrial secrets. Disciplinary and criminal sanctions apply to any violation of this confidentiality. The inspector’s findings must be objective.

¹² *Supra* note 1 at 119.

Competency, impartiality, equity and transparency are the key values representing the inspectorate of classified installations. They are part of the inspection mission. In order to avoid any conflict of interest, an inspector cannot be responsible for the same priority installation for more than six years, and cannot mix regulatory and advisory functions. Some regional inspectorate entities (e.g. in Haute-Normandie) have created special permitting functions separate from inspection, and rotate staff between the two categories.

A civil servant has basic professional ethical obligations, including the obligation to serve the public interest, the obligation to respect professional secrets, the obligation to inform the public, the obligation to accomplish the tasks that have been attributed, the obligation to obey the hierarchy, and the prohibition of a second job. Each of these obligations, if violated, can lead to the dismissal of the civil servant following legal action.

France also has a “Service Central de la Prévention de la Corruption” (Central Service for the Prevention of Corruption) is an interdepartmental service. It is under the supervision of the Ministry of Justice and the Liberties. It is directed by a judge from the judiciary. The members of the council come from various administration services such as judges, civil servants in the army, tax controllers, etc. The goal of this service is to centralize information that is necessary for spotting and preventing active and passive bribery, illegal consideration of interest, misappropriation, favoritism and influence peddling. The agency conducts research on the evolution of corruption and makes the results public on the Ministry of Justice and the Liberties’ website.

Another goal is to assist judicial authorities working in active and passive corruption cases, as well as illegal consideration of interest, misappropriation, favoritism and influence peddling. Judges and investigators can request an opinion from the agency on facts, a legal matter or procedural issues. The agency also issues opinions on draft measures aimed at preventing the aforementioned acts and organizes actions and formations in schools, universities and formation centers for civil servants. It is also in charge of developing international activities by developing bilateral and multilateral cooperation, and developing conventions with the private sector. Several companies have signed an agreement aimed at increasing the dialogue and cooperation with the Central Service for the Prevention of Corruption.

All civil servants involved in activities related to financial or judicial bodies can refer a matter to the Central Service for the Prevention of Corruption. Ministers, prefects, judicial authorities, heads of financial jurisdictions, the president of the Antitrust Counsel, the president of the commission for financial transparency in politics, etc, can all bring a matter to the agency. The submission must be in writing, directly addressed to the head of the service. Advisors answer the question as soon as possible.

Any relevant matter can be referred to the service. This includes any facts of active or passive bribery, illegal consideration of interest, misappropriation, favoritism or influence peddling.

An ensuing inspection then has three steps: (1) an opening meeting that allows the inspector to identify the interlocutors, and to announce the themes of the inspection; (2) an onsite control visit attended by a representative of the company; and (3) a closing meeting where the inspector states the violations and discusses the next steps. A letter is then issued to gather this information, as is a report on what has been done thus far.

Inspections under External Monitoring Schemes -

Example: the National Action Plan for “energy efficiency”

The 2010 report of the Ministry for Ecology, Sustainable Development, Transport and Housing on the Inspectorate for classified installations¹³ presents a detailed overview of the requirements for inspections. The national action plan for “energy efficiency” can illustrate the inspectors work.

The action conducted was onsite, 26 inspections were conducted, and the situation was said to be acceptable. The measure that was assessed was a directive on industrial emissions for the most consuming industries. The inspectors had to evaluate the actions taken by the operators to economize on their use of energy. In order to lead the inspectors, a guide was issued. In the end, no inspectorate service has found necessary to take administrative enforcement measures.¹⁴

Example: industrial accident in an establishment and the intervention of the Inspectorate services¹⁵

In Epernay, an establishment specializing in demolition of ferrous material emitted hydrocarbons into land through which rainwater drained. This pollution was due to the discard of oil, and was realized whenever there were heavy rains. The administration discovered several cases of negligence regarding installations at the firm, notably non-adherence to the law stating that the operator must store motors and other equipment containing oil in closed and sealed containers.

Self-monitoring

All so-called Seveso installations and most IPPC installations (farms are exempted) are required to conduct self-monitoring of their pollution releases (air, subterranean waters, superficial waters, ground pollutions)¹⁶ and waste¹⁷ and report the results to the inspection service. The Ministry of Ecology and Sustainable Development collects the self-monitored data every year. Installations enter the relevant data on a specific website with their login details. Some regional inspectorate services have produced self-monitoring guidance documents for operators describing sampling and analysis methodologies, as well as appropriate data management and

¹³ Report available on the portal for classified installations: http://installationsclassees.ecologie.gouv.fr/IMG/pdf/bilan_detaille_des_actions_nationales_2010-1.pdf, accessed 18 July 2011.

¹⁴ *Ibid.* at 35.

¹⁵ ARIA 13048, 27/05/1998, 51, Epernay, cas n°37.1Z, Récupération de matières métalliques recyclables, available at <http://www.aria.developpement-durable.gouv.fr/>, accessed 19 July 2011.

¹⁶ More detailed information (in French) on the Portal for classified installations at <http://www.installationsclassees.developpement-durable.gouv.fr/Auto-surveillance-eau-air-sol-et.html>, accessed 18 July 2011.

¹⁷ More detailed information (in French) on the Portal for classified installations at <http://www.installationsclassees.developpement-durable.gouv.fr/Auto-surveillance-des-dechets.html>, accessed 18 July 2011.

reporting practices. A ministry-certified laboratory regularly checks an installation's self-monitoring arrangements.¹⁸

There is a regime of periodic compliance checks for 38 categories of declared installations (for a total of about 30,000 installations) by certified third party organizations. The objective is to inform operators on the conformity of their installations with the regulatory provisions. The costs of the visit are borne by the operator who is the first beneficiary of the operation. The administration does not automatically receive the report.¹⁹

Current Rules and Regulations in Summary

Inspections:

- Inspections can be announced or unannounced
- Self-monitoring is expected of companies, in conjunction with spot-checks by inspectors
- If a company does not release required reporting information, interested parties can take action against it.

Measures against corruption:

- Inspectors are required to follow the "Inspectorate of Classified Installation Charter"²⁰, which provides for four "pillars": (1) competency, (2) impartiality, (3) equity, and (4) transparency. Deviation from these rules can cause termination of employment for a civil servant.
 - Central Service for the Prevention of Corruption is an interdepartmental oversight agency, to which any matter relating to dishonesty or corruption can be brought. It centralizes information relating to identifying and preventing corruption.

1.4 Non-Compliance

When an inspector detects a violation, he/she issues a statement of irregularity and transmits it to the prefect. In case of imminent danger, an inspector must seek authorization from the prefect, under an expedited procedure, before he or she may close down or suspend operation of an offending installation.

The DGPR has developed guidance for non-compliance response actions to be initiated by the relevant inspection services, which is part of the regular training program. It makes the level of severity of a non-compliance response commensurate with the operator's compliance record. For example, a generally compliant operator

¹⁸ *Supra* note 1 at 120.

¹⁹ More detailed information on the Portal for classified installations at <http://www.installationsclassees.developpement-durable.gouv.fr/Controle-periodique-de-certaines.html>, accessed 23 July 2011.

²⁰ Ministry of Ecology, Sustainable Development, Transport and Housing' (formerly called Ministry of Ecology and Sustainable Development) at <http://www.ggm.drire.gouv.fr/environnement/projetHC/charte%20inspection.pdf>, accessed 20 July 2011.

that has one violation may have its permit conditions modified, but the inspector will take into account the operator's financial situation. One step up, an operator with a history of minor violations may face administrative sanctions, and a repeat serious violator may be temporarily shut down and face criminal charges.

Administrative enforcement

Administrative actions are taken by the prefect and are independent of any possible criminal enforcement actions that may be taken by a prosecutor. Initially, on recommendation of an inspection service, the prefect serves the offender with a compliance notice (*mise en demeure*) specifying measures that must be taken, along with a deadline. The compliance notice is not a sanction, but it forms a legal basis for further enforcement actions. In some regions, prefects tend to use compliance notices selectively and often send informal letters instead of trying to persuade the operator to correct its behavior without formal administrative action. Still, in recent years there has been a tendency of an increased number of formal administrative actions.

Compliance with formal notices is verified by an inspection service. If the operator does not return to compliance within the timeframe indicated in the compliance notice, the prefect may use, successively or simultaneously, a number of enforcement tools: (1) Order for a Deposit (*consignation*) of a sum of money with a public accounting office as a guarantee of completion of the prescribed corrective action. The amount to be deposited is equal to, or slightly exceeds, the estimated costs of the corrective action (there is no particular guidance on how to estimate these costs). The deposit is reimbursed, often in stages, upon verification of compliance or, in exceptional cases, applied toward the cost of corrective action if the latter is undertaken by the state. Guarantee deposits are the most commonly used administrative sanction, even though the procedure for using them is rather long and complex, (2) Corrective Action Order for the state to undertake specific measures prescribed by the inspection service (*travaux d'office*) at the operator's expense. This type of action is used very rarely, and only in cases where the operator fails to take action under the deposit procedure, as the state is reluctant to take responsibility for the corrective action, and (3) Order of Temporary Closure of the installation or suspension of its permit and measures to prevent further environmental degradation during the suspension period. A prefect may order the closure of an installation operating without a required permit or declaration or if the permit application is rejected. A permit may also be revoked in the interest of public safety or if the operator refuses to follow prescribed corrective actions. If the operator refuses to obey a temporary or definitive closure order, the prefect may order to have the installation sealed (*scellé*).

A prefect has considerable discretion in the application of enforcement powers. After issuing a compliance notice, he/she may negotiate with the operator to agree on measures to return to compliance without applying any further sanctions. The frequency of resorting to such negotiation, which is usually related to potential social or economic implications of applying heavy sanctions, varies greatly by region. The operator or the public may appeal against any administrative sanction in an Administrative Tribunal under the same procedure as for permit conditions. Compliance files for national priority facilities are available on the internet. In

addition, the online ARIA (Analysis, Research and Information on Accidents) database contains information about over 40, 000 industrial accidents²¹.

Enforcement Actions (2010)

Approximately 5,000 bylaws have been issued by prefectures in 2010 in order to complete the regulatory provisions applying to classified installations. In addition, three thousand by-laws have been issued by prefectures as notice of measures required for compliance (*mise en demeure*). In the case of a violation of legislation, inspectors can suggest criminal or administrative sanctions. In 2010, 1,250 charge sheets were issued, and 400 administrative sanctions were established.

Non-Compliance in Summary

-Administrative enforcement, consisting mainly of formal notices. Can also issue an order of deposit (money put forward by the company as a guarantee of completion of corrective action), a corrective action order, or an order of temporary closure.

-Prefect has large amounts of discretion in the application of enforcement measures. It issues clarifying orders and enforcement orders indicating the means for attaining full compliance. In 2010, prefects issued 1250 charge sheets and 400 administrative sanctions for noncompliance.

1.5 Criminal Enforcement ²²

In cases of criminal enforcement, the inspection service submits a statement of offence (procès-verbal or PV) within five days of detection directly to a public prosecutor, with a copy to the prefect. There is national guidance on when to initiate prosecution, and local instructions are produced by each inspection service on how criminal actions should be initiated. A procès-verbal can also be produced and submitted by the police. Finally, the victim of the violation can also bring a case.

The prosecutor decides whether to file the case in court. The prosecutor is only required to pursue the case if it involves civil responsibility vis-à-vis a private party. In 2005, the Ministry of Justice delivered guidance to prosecutors and courts on the “Directions of Penalty Policies in Environmental Matters”. It calls for regular consultations at the departmental level between prosecutors and competent authorities.

In order to use criminal liability, three elements have to exist: (1) a written provision (legal or regulatory text) stating the sanction, (2) an act or omission, and (3) conscious will of accomplishing such an act. However, a simple omission or negligence can be enough to constitute a misdemeanor, even if not wittingly accomplished.

Minor offenses (*contraventions*), such as non-compliance with a ministerial or prefect’s order, or failure to notify the prefect of a significant change in operations or to submit a declaration, are dealt with by *tribunaux de police*, which can impose a fine

²¹ http://www.aria.developpement-durable.gouv.fr/recherche_accident.jsp

²² Updated elements from OECD report, See note 1 at 121-122.

per offence or a daily fine. Minor offenses are classified in five categories, the fifth one being the most serious. The fine increases with the gravity of the offense, the maximum being 1, 500 euros for a class 5 violation, and 3,000 euros for a class 2 violation.

Misdemeanors, which are separate from minor offenses, are another classification of violation. Examples of misdemeanors are: the exploitation of an installation without required authorization, non-compliance with a formal notice, or the continuation of a violation despite a decision to close or suspend an installation. Misdemeanors can result in fines or imprisonment. Fines can range from a few thousand to several hundred thousand euros, and prison sentences can go up to ten years.

A judge may also ban an operator from running the installation either temporarily (for up to five years) or permanently. Violations are never considered felonies under French environmental statutes. All lower court decisions can be appealed to the Appeals Court. Although the stringency of criminal penalties has increased over recent years, and the number of prosecution submissions is growing, actual criminal penalties are seldom applied. This is primarily due to the low priority of environmental cases for prosecutors.

Example: the Erika case

On December 12, 1999, the Erika, which was carrying 20,000 tons of toxic heavy fuel oil for the French oil company Total SA, spilled into the Bay of Biscay. The spill was spread by heavy winds that struck two weeks later, fouling 400 kilometers, or 250 miles, of the French coast from La Rochelle to the western tip of Brittany. A charge sheet issued and criminal charges were brought against the firm. An initial Tribunal ruling found the firm negligent.

On March 30, 2010, the Paris Appeal Court confirmed the Tribunal's ruling of 2008 and increased the sanction. The Court ruled that Total SA was partly liable for the spill. The Court recognized the existence of ecological damage "resulting from an attack on the environment", which allowed communities along the coastline to seek more damages from the company in the future.

Moreover, the Court recognized the criminal liability of all actors involved in the transport line, including Total. As a result, Total was fined 375,000 Euros for maritime pollution. In addition, a civil action followed from the criminal case and the firm paid a share of almost 200 million Euros in damages, to the central government, regional governments, and environmental groups such as Greenpeace.

Criminal Enforcement in Summary

-Criminal violation found if (1) there is a written provision stating the sanction, (2) an act or omission, and (3) consciousness of act or omission.

-Minor offenses occur when there is non-compliance with a ministerial or prefect's order, or when a company fails to notify a prefect of a significant change. Minor offenses are classified on a scale of 1-5, with 5 being the most serious. Can be charged thousands of euros for offenses.

-Misdemeanors occur when there is non-compliance with a formal notice, or a continuation of a violation despite a decision to close/suspend an installation. Can result in fine or imprisonment.

-Criminal penalties seldom applied, but when they are sought the penalty has usually been in the form of a fine.

1.6 Civil Liability

There are provisions for private party suits before a civil judge (in a *tribunal d'instance*) who can order not only payment of damages, but also mitigation measures. A civil judge can also order reimbursement of government costs incurred in response to a violation (e.g. in response to an accident) but cannot order closure of an installation or evaluate permit conditions. These may be contested in an administrative tribunal.

Private parties and associations can also bring criminal and civil cases. An association can bring cases on several grounds. An association can bring a case for the defense of its own interests, and of the personal interests of its members. It can also bring a case for the defense of collective interests that are stated in its constitution. The only condition is that the association must be registered, and its constitution must have been published in the official journal.²³ This is possible even if the law or the constitution of the association does not expressly mention the ability of the association to take legal action²⁴.

Civil Liability in Summary

- Private parties or associations can bring a civil case in theory although this does not happen often in practice
- The association must indicate the collective interests that it represents on behalf of its members (within its constitution)

Environmental Enforcement in France: A Summary

Declarations required for less polluting activities, such as a declaration to the prefecture.

Authorizations required for higher levels of risk/pollution. Operators must submit application to relevant authority before starting operation.

Reporting: Environmental and social reporting required of all companies listed in the New Economic Regulations Act of 2001.

Inspections: Inspectors must provide regulatory supervision, monitoring of classified installations, and provide information to operators and the public. Inspections can be announced or unannounced.

²³ Article 6 of the Law on Associations, 1 July 1901 and Article 31 of the New Code for Procedure.

²⁴ Cour de Cassation, 1^{ère} chambre civile, 18 septembre 2008, n° 06-22038.

Counter-corruption measures: Inspectors who violate the Charter (which requires competency, impartiality, equity, and transparency), risk losing their jobs. Central Service for the Prevention of Corruption provides oversight of the entire civil service.

Non-compliance: Administrative enforcement consists of formal notices, and can require an order of deposit, a corrective action order, or temporary closure. Prefect has large amount of discretion.

Enforcement: Criminal violation found if there is a written provision stating the sanction, an act/omission, and an awareness of the act/omission. Minor offenses and misdemeanors entail lesser penalties, but can still result in fines or imprisonment.

Civil Liability: Private parties or associations can bring a civil case. Associations should indicate the collective interests they represent on behalf of their membership within their constitutions.

2. United Kingdom: Negotiating Compliance

The UK has adopted an approach to environmental enforcement that emphasizes flexibility in enforcement. The approach is distinguished by the range and availability of a virtually continuous range of sanctions, from simple “naming and shaming” (adverse publicity) to fines and sanctions. The availability of this wide range of possible sanctions means that the state has many ways to engage with a potentially offending business, and this helps to initiate discussions and to promote negotiated compromise. The state has the option of starting with a heavy penalty (e.g. fine or sanction) but then agreeing a smaller one (adverse publicity), or working in the other direction. In either case it is the availability of the range of sanctions and the flexibility built into the enforcement approach that renders it possible to engage with the offenders and negotiate a solution.

In the England and Wales, the Environment Agency (EA) is responsible for enforcement of environmental law. The EA consists of a head office that is split between Bristol and London; these offices house the chief executive and directors. They are responsible for ensuring that EA policies are consistently implemented around the country. The head office also supports the regional offices from these locations. There are seven regional offices: South East, South West, Midlands, Anglian, Wales, North West, and North East. Each regional office is run by a regional director, and supports the area offices. There are 21 area offices in England and Wales; these are the offices that work on the daily management of the area, and attend to the needs of the community. Emergencies and urgent situations are also dealt with from area offices, since they are local.

In addition to these offices, the EA has a Board, a team of Directors, and multiple Committees that are involved in its functioning. The EA is a non-departmental public body which means that its board is directly responsible to government ministers for its organization and performance. Through these ministers, the EA is accountable to

Parliament. The board has 12 members, each of whom is accountable to different government ministers. They were all appointed by the Secretary for Environment, Food, and Rural Affairs (except for the board member for Wales, who is appointed by the National Assembly for Wales), and meet six times a year and also delegate day-to-day management of the EA. Government ministers monitor the board to ensure it fills its statutory duties based on directions they provide, and to ensure that the EA operates in a consistent, proper, and efficient manner.

There are also seven directors, chaired by the chief executive, who oversee the creation of national policies. In addition, a regional director oversees and coordinates the work of each regional office. Each region has three committees that advise the office on operational performance, regional issues and how national policy will affect the specific region. The three committees at each regional office are: Regional Fisheries, Ecology and Recreation Advisory Committee, Regional Flood Defence Committee, and the Regional Environment Protection Advisory Committee. These committee members are appointed under statutory membership schemes that aim to achieve representation from all stakeholders. The meetings of the Regional Environment Protection Advisory Committee are always public.

The EA employs multiple methods of monitoring and enforcement to regulate businesses. The traditional approach is through direct regulation and the use of monitoring and sanctions. If a crime is deemed serious enough, offenders are brought to court. Over the past eight years, there have been 1600 cases annually, including 800 prosecutions per year. In the UK, the high costs associated with monitoring and strict enforcement generally make them less attractive than other ways of implementing environmental law.²⁵ With time and experience, the UK has learned that environmental outcomes may be most readily achieved by means of negotiated outcomes rather than hard-nosed enforcement. Some enforcement is important (for the worst miscreants) but it is far easier to attain environmental objectives if the industry or firm has agreed to do so. The UK case study illustrates how regulation can be translated into negotiation through appropriate emphasis on regulatory approach (voluntary agreements, range of sanctions, negotiated outcomes).

2.1 The Regulatory Structure for Environmental Enforcement²⁶

In the UK, the Environment Agency (EA) is responsible for most monitoring and also is responsible for the issuance of enforcement notices when a potential offence has been detected. This combined role vests a large amount of authority in a single agency. The EA has been created for precisely this purpose, and it has been set up as an independent agency in order to maintain a separation from the pressure from local and national political pressures. In short, the EA is vested with a very significant amount of responsibility, separate from ministerial and departmental controls,

²⁵ Vlachou, Andriana, 'Environmental Regulation: A Value-Theoretic and Class-Based Analysis' (2005) *Cambridge Journal of Economics* 29, 577-9.

Heyes, Anthony G, 'Making Things Stick: Enforcement and Compliance' (1998) *Oxf Rev Econ Policy* 14, 50-6

²⁶ Stott, David, 'Environmental Enforcement in the UK' (2009) *J Environ Monit* 11, 470-74.

precisely to maintain its separation from political pressures and provide for an agency whose focus is solely upon environmental compliance.

This independence of the agency has its own costs. The separation of the agency from the political system takes it outside the usual system of ministerial supervision, and vests the agency's personnel with wide area of uncontrolled authority. Such a governance system is likely to be prone to corruption. In the UK, there is a system in place to try to prevent rent-seeking (corrupt) behavior by EA personnel when they are exercising individual discretion. For example, decisions regarding formal enforcement action are made exclusively by Environment Agency staff at a specific grade level (under their Non-Financial Scheme of Delegation). In addition, the UK has two independent oversight panels that examine issues that come up for enforcement action—the Area Enforcement Panel and the National Civil Sanctions Panel (NCSP). The NCSP, in particular, examines issues of consistency between different agency decisions, and it has the ultimate say regarding whether an Enforcement Undertaking is accepted or a sanction is issued. The Area Enforcement Panel typically looks at instances where the EA is considering any type of formal enforcement response. These two panels may also be involved in examining individual exercise of discretion (such as the negotiated agreements discussed below). However, the focus of the Area Enforcement Panel is on situations where there has been an actual significant permit breach or incident involving a violation, while the focus of the NCSP is on issues involving civil sanctions proposed by the EA, or on Enforcement Undertakings.

Currently, the EA issues about 400 enforcement notices every year. There is wide variation in the form and requirements of these notices; some notices require the recipient to provide information. If a recipient fails to provide the information, this failure itself can be the commission of an offence. Other notices may require specific steps or actions to be taken by the recipient. Certain notices requiring the provision of information, such as with section 71 of EPA 1990 (obtaining info from persons and authorities), can be very useful in obtaining details regarding disposal of waste. Responses to information requests are not useable in court cases later on, but can help the EA tailor and focus enquiries, and speed up the progress of enquiries or enforcement.

2.2 The Standard or Noncooperative Approach to Environmental Enforcement

Only the most serious cases are taken to court. Other cases are handled with fines. For example, the EA fines an average of £6700 per conviction for water violations and £3700 for waste offences. These numbers may seem low compared to the damage that the violators have caused to the environment; one likely explanation is that there is a lack of awareness on the part of the courts regarding the graveness of the effects of violations on the environment. The Regulatory Enforcement and Sanctions Act 2008 has changed the way offences are treated, in that there has been a change in proportion of cases dealt with by EA, and now only the most serious offences go to court.

When the EA becomes aware of a potential violation, it follows its Enforcement and Prosecution Policy and Functional Guidelines.²⁷ The first step is to do a risk

²⁷ <http://www.environment-agency.gov.uk/business/regulation/31851.aspx>

assessment and categorise the effect (or potential effect) of the act on the environment. One factor they may look at is how much damage to the environment the act is causing. It then categorises the violation into one of four groups: major, significant, minor, or having no environmental impact. The category assigned offers a baseline for enforcement response; those in the “major” category will usually lead to a formal court prosecution; violators whose cases fall in the “minor” or “having no environmental impact” categories will normally be issued with a formal caution or warning; cases assigned to the “significant” category may result in either a prosecution or caution. A caution is more serious than a warning. A formal caution consists of the offender admitting that he violated the law, and signing a document saying as much. Then a record of the offence is created, but there is no formal court proceeding. For a formal warning, the EA sends note to alleged offender, saying that the EA thinks he has committed an offence. Both cautions and warnings constitute a “history” for the offender. This record can be used by the EA if there are future infringements.

Violations of waste (61% of total) and water (26% of total) laws produce the highest number of formal prosecutions every year in terms of enforcement. Of the 1600 annual cases, the total number of prosecutions has been higher than the number of cautions and notices combined.

In some instances, there are individual cases with very large fines. One case in 2003, involved Eurocare Environmental Services Ltd, one of the UK’s biggest clinical waste disposal contractors. The company was accused of waste and pollution offences and reckless actions alongside serious management issues. They were fined £100,000 and then had to pay £114,000 in costs. The fact that the fines were so high is partially related to the fact that one violation concerned residual washings from an incinerator being drained into the tributary of a river.

Also in 2003, Cleansing Services Group Ltd was fined £200,000 with £300,000 in costs for waste control offences. There was a serious fire at a waste treatment plant, and a number of residents later became ill. An investigation revealed shortcomings in the way the site was run, and how waste was kept and stored. A survey and excavation showed asbestos and other toxic materials buried on site.

The average overall fine for any violation is £5500. Violators include both companies and individuals. For companies, which may consist of a multinational company or a sole proprietor, the average fine is £8000 per prosecution. One of the reasons these fines are relatively low is that, up until recently, courts have not fully understood or appreciated the environmental effects of these offences. There are also no sentencing guidelines to follow for environmental crimes, unlike for other types of crimes. Therefore, the fines are not uniform, and there is no structure. The Sentencing Guidelines Council is aware of the problem, and it is hoped that sentencing for environmental offences will be analysed soon.

Issues with Levels of Fines

Ninety percent of environmental cases are heard by magistrates; there is no specialty court. The average magistrate may not be aware of the grave effects of pollution, or how much to fine for violations. In 1997, the Milford Haven Port Authority was prosecuted by the EA for polluting the South Wales coastline with thousands of gallons of oil from a negligently piloted tanker that hit the shore. The Crown Court initially fined the Port Authority £4m, but on appeal, the Court of Appeal reduced the fine to £750,000.

The main reason for this dramatic reduction is that the Court of Appeal felt that a £4m fine was analogous to fines for situations where there were fatalities, rather than property-based damages. Also, the Court of Appeal said that since the Port Authority was public body, it would be too detrimental to make the public pay that high a fine.

When fines are inadequate, they do not act as a proper deterrent. The price should at least cover the opportunity costs of the resources involved. In the UK it is often the case that polluters do not even have to pay for the cleanup of a polluted site. For example, in 2000, an individual was fined £30,000 for abandoning 184 drums of toxic waste. However, he had personally profited by £58,000 for throwing away the waste. It also cost authorities £167,000 to clean up the site. The new Environmental Damage (Prevention and Remediation) Regulations 2008 may help courts ensure that polluting materials are removed and full costs recovered.

2.2 Cooperative Approaches - Negotiating Voluntary Agreements

The UK has developed a relatively unique approach to dealing with the problems of environmental enforcement. This country has attempted to deal with the information problems involved in environmental compliance through negotiated agreements with the firms involved. The basic approach involves the creation of a gradation of penalties and approaches (from negotiation to strict regulation), and the negotiation of agreed and enforceable outcomes through mutually agreed processes of information-sharing and cooperation. In short, the UK threatens the regulated firm with a “stick”, but then tries to induce cooperation to avoid this outcome.

One way that UK regulators have innovated is through the negotiation of voluntary agreements (VAs) with industry. These are agreements between the government and businesses that can deliver environmental outcomes that are higher than those required by law. Businesses often agree to VAs to avoid legislation or regulation. It is also often a precursor to higher levels of regulation, if the VA is not seen to be successful in achieving the desired improvements. In this way a VA is a form of negotiated scheme for agreeing monitored improvements, in lieu of strict regulation.

In 2003, there were 20 VAs in the UK. Half of these were negotiated agreements- a low figure compared to the Netherlands and Germany. The other half consists of either unilateral commitments or public voluntary schemes. They have little or no legal force, and are unofficial, and self-assessed. Many of these VAs are more similar

to continental European codes of best practice.²⁸ Some of these agreements have official status, but few have formal legislative status.

Negotiated VAs, which are increasingly popular in the UK, are an alternative to command-and-control instruments that prohibit industry from certain activities. The idea behind them is that more regulation does not necessarily lead to more environmental protection. At the beginning of a negotiated agreement process, the policy objectives of the agreement are defined through public consultation. To achieve a successful agreement, there is a need to balance potential benefits, such as the ability to implement agreed monitoring schemes, in exchange for compromised target objectives. As a result, an agreement generally consists of a number of measures in a package.²⁹

During the negotiation process, great importance is placed on the impartiality and credibility of information is supplied (and will be supplied). This includes data collection, commercial confidentiality, and whether/how information is revealed to the public. The negotiation process is monitored by a variety of mechanisms to ensure credibility of the agreement.³⁰ Many times the agreed monitoring mechanism will be a designated external body, such as an NGO or professional association. The independent body then performs functions such as collecting information, and monitoring and evaluating the agreement. The public does not normally have a place in these types of formal negotiations taking place between the regulator and the operator. However, the regulator makes a point of understanding and recognizing public concerns about a site, and will take these concerns into consideration in the way they approach the negotiation.

Examples of Voluntary Agreements

Example 1: The Energy Efficiency Agreement

The first modern, negotiated agreement was the Energy Efficiency Agreement, arranged in 1997 between the DETR and the Chemical Industries Association. The reasoning behind some VA's should be examined. For example, the DETR VA is not legally binding on either party, and, according to one view, it could be seen as a plan to avoid the carbon-energy tax.³¹ In the UK, energy efficiency agreements have been negotiated with the UK's ten most energy-intensive industries in exchange for substantial rebates on a future energy tax.³² The Climate Change Levy Agreement (CCLA) is another negotiated agreement. This allows firms in certain sectors to obtain an 80% reduction on the Climate Change Levy.

²⁸ Jordan, Andrew et al, 'Policy Innovation or "Muddling Through"? "New" Environmental Policy Instruments in the United Kingdom' (2003) *Environmental Politics* 12:1, 192.

²⁹ Green Alliance, "Signed, Sealed, and Delivered? The Role of Negotiated Agreements in the UK." <http://www.greenalliance.co.uk/uploadedFiles/Publications/SignedSealedAndDelivered.pdf>

³⁰ Green Alliance, "Signed, Sealed, and Delivered? The Role of Negotiated Agreements in the UK." <http://www.greenalliance.co.uk/uploadedFiles/Publications/SignedSealedAndDelivered.pdf>

³¹ Jordan, Andrew et al, referencing: R Salmons, 'Case Studies of Negotiated Environmental Agreements: The UK: Agreement with the Farm Films Producers Group' (2000) (London: CSERGE).

³² Volpi, Giulio and Stephan Singer, 'EU-Level Agreements: A Successful Tool?' in P Ten Brink (Ed), *Voluntary Environmental Agreements* (Sheffield, Greenleaf Publishing Ltd, 2002), 145.

Example 2: The Safe Sludge Matrix

Another example of a VA in the UK is the Safe Sludge Matrix, an agreement between the British Retail Consortium and the UK water industry, which established higher standards of sewage treatment aimed at reducing pathogen transfer. Prior to the adoption of the VA, the sewage industry was subject to low levels of fines for violating regulations, so water companies were willing to accept the risk of prosecution, and continued to violate the law. In 1998, the regulations were supplemented by the Safe Sludge Matrix, which strengthened waste management licensing.³³

Example 3: The Newspaper Publishers Association

VAs can also consist of longer-term commitments. For example, the government set quantitative targets in waste management policy by creating a VA with the Newspaper Publishers Association. The agreement was to make 60% of newsprint out of recycled content by end of 2001, 65% by the end of 2003, and 70% by the end of 2006.^{34, 35} The government also uses VA's as part of a larger framework. In 1997, in conformance with an OSPAR agreement, the UK ceased the discharge of oily drill cuttings. The subsequent use of synthetic drilling fluids caused concern due to biodegradability issues, and the decision was made to phase them out by the end of 2000.³⁶ The government instituted the phase-out of the drilling fluid through a VA between itself and UK offshore operators. This illustrates how VAs can be used in conjunction with other regulations and agreements.

Voluntary Agreements in Summary

- VA's can consist of negotiated agreements, unilateral commitments, or public voluntary schemes.
- the VA provides for a working dialogue between government and industry.
- the VA will provide for a targeted compromise between environmental objectives and the information supplied to achieve them
- the VA will frequently provide for an independent external body to monitor the agreement (such as an NGO or trade association)

2.4 A Gradation of Penalties – the introduction of Civil Sanctions

Until very recently, enforcement did not allow for the same amount of negotiation between regulator and regulated, as did implementation (via VAs). This was altered in 2010 when the regulator (in England) and Natural England began a new endeavor entitled the 'Fairer and Better Environmental Enforcement Project'. The EA and

³³ *OECD Environmental Performance Review- UK* (2002), p 70.

http://books.google.co.uk/books?id=uQ0FRFS1x-gC&printsec=frontcover&dq=oeed+environmental+performance+review+uk&source=bl&ots=3jrZSpJFre&sig=OdoUMIH5uZ9SKFyvQVazLS6sYt4&hl=en&ei=v6niS4rTM4qIsAbW_rQe&sa=X&oi=book_result&ct=result&resnum=7&ved=0CB0Q6AEwBg#v=onepage&q=oeed%20environmental%20performance%20review%20uk&f=false

³⁴ *OECD UK* at 88.

³⁵ <http://www.defra.gov.uk/environment/waste/producer/voluntary/index.htm>

³⁶ OSPAR Decision 2000/

Natural England were given the power to impose “civil sanctions”: a fine imposed on the noncompliant firm that does not constitute a violation of the criminal code. The creation of this additional power means that regulators have more flexibility, and more tools available, to handle non-compliance.³⁷

This creates a hierarchy of remedies for the enforcement agency. According to the Department of Food and Rural Affairs (DEFRA), “regulator advice and guidance” is to be the initial response in a case of environmental enforcement. In many cases, this is sufficient as an enforcement response. If this is inadequate to generate compliance, it is then possible to use civil sanctions as an alternative to criminal prosecution. These cases typically involve non-compliance despite general intent and goodwill in the pursuit of compliance. Civil sanctions recognize that some businesses try to comply, but sometimes fail to do so. Flagrant cases may still be brought to criminal courts.³⁸

The civil sanctions now available to the EA and Natural England include both fixed and variable financial penalties and enforcement notices requiring compliance and restoration of harm. For the first offense, regulators will also be able to accept a voluntary and binding commitment on the part of the firm, i.e. a negotiated solution to the noncompliance. Therefore, if a business is in non-compliance, regulators can negotiate a voluntary and binding commitment as a first step toward compliance. In these negotiated agreements, monetary penalties are imposed at a level intended to eliminate the economic benefit realized by these companies from non-compliance. Criminal sanctions are immediately available if the negotiated agreement is not met.

The public may also be involved when the EA is considering sanctions. There is usually some discussion at the earliest stages of an enforcement action, when enforcement is being considered against an offender. However, the public is not usually involved in the discussions between the EA and the offender, except in the context of a Third Party Undertaking, which is an offer specifically designed to benefit or compensate individuals who were victims of the offending business. In this situation, people who could potentially benefit from the Third Party Undertaking are consulted to determine whether they find the terms of the sanction acceptable, and whether they are satisfied with what they are being offered. If these individuals are not satisfied, then the sanction will be modified.³⁹

Civil and Criminal Sanctions - Summary

- Environment Agency uses a range of civil and criminal sanctions to reach negotiated outcomes that enforce regulatory objectives.
- Civil sanctions are available whenever there is a good faith effort at compliance
- If the civil sanction does not result in immediate compliance, then criminal sanctions for the same infraction remain available
- Public may be involved in sanction discussions.

³⁷ Defra, *Fairer and Better Environmental Enforcement Project* (21 May 2010). Available at <http://www.defra.gov.uk/environment/policy/enforcement/project/index.htm>

³⁸ Ibid.

³⁹ Personal communication with Environment Agency enforcement team.

2.5 Reputation-related Sanctions

Another method the UK employs to enforce environmental regulations is to identify and publicise information about individuals and companies that have violated the law. This is another example of a “lesser sanction” that encourages firms to comply, but retains the other options (civil sanctions, criminal sanctions) in case they do not. This enables the regulator to encourage compliance through engagement and negotiation, while still retaining options in reserve in the event that compliance is not immediately forthcoming.

In 1998, the EA began publishing an annual report called “Spotlight on Business Environmental Performance” that named the companies with the largest environmental regulation breaches in England and Wales. The reports are available online. These reports, which also include general information on sector performance, display tables naming specific companies, what environmental regulation they breached, how much they were fined, how many incidents were involved, and whether they are repeat offenders.⁴⁰ This has proven to be a very effective way to encourage industry to comply with environmental standards for fear of being shamed and ostracised. It is a powerful incentive for companies to avoid being named in these reports, especially as the public becomes more aware of the importance of environmental issues. These reports are very clear in their message, which is that violations will not be tolerated, and that the worse the breach, the more focus will be put on a particular company and industry.

In addition to these reports, the EA also publishes information on their website on the fines they have imposed on people and industry.⁴¹ Detailed information is given about most of the cases, including the name of the company or individual, what they did, and the total amount fined. This information, readily available on the main EA site, is a strong deterrent for companies who care about their reputation. There is information on thousands of cases on the EA website, organized by topic and date. However, not all of the stories provide negative publicity. In fact, they often praise companies and organisations that have made improvements on their environmental practices. This is important because, though the EA may provide negative publicity for violators, they also offer positive publicity for those who improve or have high standards.

Information-based sanctions are as important for improving environmental governance as they are for improving environmental performance. The national level Environment Agency makes all decisions regarding publicity, and this puts pressure on local politicians and regulators to avoid providing too many exceptions. In general, protectionism will not affect the decision of the EA because it is independent from both national and local government. On the other hand, local governments or regulators may be incentivised to improve their performance – when information is provided that makes it appear as if their local firms have transgressed the law. Protectionism on the part of local governments may be neutralised in this way. On occasion, a business facing potential enforcement action will look for support from its local Member of Parliament or Local Councillor so that these officials can make

⁴⁰ <http://publications.environment-agency.gov.uk/pdf/GEHO0708BOFX-E-E.pdf>
<http://publications.environment-agency.gov.uk/pdf/GEHO0705BJHA-e-e.pdf>

⁴¹ <http://www.environment-agency.gov.uk/news/default.aspx?month=11&year=2010§or=Regulation>

statements on behalf of the business before the action is taken by the EA. This type of intervention is only effective if it is clear that these representations are accurate and valid, and provide new information that prompts the EA to reconsider the proposed enforcement action.⁴²

Reputation-Related Sanctions in Summary

- Environment Agency publishes details of violators on website.
- That agency's "Spotlight on Business Environmental Performance" publicises names of biggest polluters.
- Environment Agency acts independently of local regulators in this capacity, and thereby provides incentives for local regulators and politicians to do their jobs

2.6 Administrative Penalties and Tribunals – New Options

The question of environmental law enforcement was a subject of Parliamentary environmental sub-committee scrutiny in 2005 that examined environmental offending and environmental corporate crime. Two reports were produced as a direct result of this scrutiny: the Hampton Review of corporate regulation, and Regulatory Justice: Making Sanctions Effective (also known as the "Macrory Report"). These reports led to passing of the Regulatory Enforcement and Sanctions Act 2008.

The Macrory Report recommendations have largely been accepted by the government. The report argues that only the most serious, flagrant environmental cases should be prosecuted. This would only involve purposeful or grossly negligent cases of environmental violations. Other forms of sanctions or administrative penalties should be used for other offences, such as carelessness or inadvertent behaviour by organisations that are trying to follow the rules, but are simply incompetent.

These proposed administrative penalties and other sanctions could consist of: fixed monetary penalties, variable monetary penalties, enforcement undertakings or various notices, such as restoration, remediation, or stop notices. Offenders could appeal these penalties to a new Environmental Tribunal. An important difference between this proposed system and the current one is that these cases are not seen as convictions, and they save time for both regulators and offenders. They also cost less, and enable the separation of enforcement between criminal and civil cases, therefore allowing a clear line to be drawn between criminal and civil violators. Another hope is that the criminal violations committed by people and corporations who show little concern for the polluting effects of their actions- only doing it for profit, and to purposefully avoid being regulated- will be highlighted, will stand out from civil cases, and will be seen more harshly.

Due to these proposals, an environmental tribunal is being created, and many enforcement cases will be handled administratively in that forum. Therefore, the caseload of the EA will reduce considerably. It will also provide the EA with new methods to deal with offenders. However, the creation of the tribunal will also require the redrafting of EA policy to determine when to use criminal or civil prosecutions.

⁴² Personal communication with the Environment Agency enforcement division.

There will be a legal challenge when the EA redrafts its policy, especially regarding how penalties will be assessed for civil cases. The main point of the civil regime proposed in the Macrory Report is to allow the EA to focus more time and resources on serious crimes, and to persuade courts to impose more serious fines on more brazen offenders. The EA, as a regulator, can be seen as having been successful because there have been numerous prosecutions that bring offenders to court and punishes them. However, this system may also be seen as a failure because by the time these cases are taken to court, the environment has already been damaged.

Environmental Tribunals in Summary

- More cases will be handled administratively via creation of specialist environmental tribunals
- Specialist tribunals will have greater expertise in dealing with environmental issues, ,wide flexibility for doing so and a gradation of penalties to work with

Environmental Enforcement in the UK: A Summary

The UK Case Study illustrates how law enforcement may be handled via the creation of a basic structure of regulation (monitoring and enforcement), and then using this structure to negotiate from to create more cooperative outcomes.

Independent Agency: The Environment Agency in the UK is wholly independent of local and national political pressures, providing for an independent agency charged solely with the enforcement of environmental standards. This independence insulates the regulator from political pressures, but also creates its own problems of unsupervised discretion.

Civil and Criminal Sanctions: The agency has the ability to assess different levels of civil sanctions (fines) in advance of criminal sanctions. This gradation of penalties is important for maintaining additional incentives after a firm has been previously sanctioned. This enables the agency to negotiate with the firm, while retaining the authority to bring further actions.

Negotiated Agreements: A very significant part of the UK approach is to provide for negotiated cooperative resolutions of regulatory problems, bargaining from the starting point of the standard environmental enforcement system. Regulators are vested with wide-ranging authority to negotiate outcomes with firms in a cooperative manner, and this provides the basis for encouraging the firm to share information and to agree outcomes that are readily monitored and enforceable.

Reputation-based Enforcement: The regulator has the responsibility for publishing information on non-compliance on the EA website and/or in its annual business performance report. Since the EA is independent, this information places pressure on both the regulated firm, and also on any politicians or regulators that are not doing their jobs in encouraging compliance at the firm.

Environmental Tribunals : Environmental tribunals are being created for the purpose of handling less serious violations. Such tribunals will possess expertise in

the area of the environment, and also much greater discretion in determining the sanctions for dealing with noncompliance. Full prosecutions in criminal courts would be reserved for the most extreme cases.

3. Korea: Decentralised Monitoring and Enforcement

Korea is an example of a country that has made progress in the attainment of environmental objectives through monitoring and enforcement; however, its emphasis has been as much on developing the citizen's role in monitoring and enforcement as the governmental role. This case study will examine how broader community involvement in monitoring and enforcement can help in attaining environmental objectives.

Two decades ago Korea had an environmental problem of tremendous proportions. Since that time Korea has made great strides in the development of environmental laws and enforcement. Aside from the creation of actual regulations, the greatest progress has been made in the realm of citizen involvement and awareness. Korea has focused on the development of strength in the realm of "citizen participation": the involvement of local people and organisations in monitoring the behaviour of their neighbours and of industry. Supplementing public sector monitoring with this private sector

3.1 Progress since Democratisation

In the early 1990's, Korea began the process of democratization and decentralization. In addition, it attempted to create a new environmental law system modeled after the system in the US. This is attributed to the public's increasing awareness about and concern for the environment.⁴³ This marked the beginning of a dramatic transformation in the way the country handled environmental issues, particularly air, water, and waste management.⁴⁴ Korea gradually began to alter its entire approach to managing the environment. In particular, in the realm of air management, there were major cuts in sulphur oxide and particulate pollution. The equivalent of US \$20bn was invested in a new water infrastructure, and a river basin management was created to improve water management. In addition, marked progress was made in nature/biodiversity protection and in waste management, including recycling, incineration and sanitary landfill infrastructure.⁴⁵

New environmental legislation was also adopted.⁴⁶ By 2005, 18 new acts of environmental legislation were adopted, with more bills pending. New legislation is being used to encourage economic instruments in environmental protection, such as the Special Act on Metropolitan Air Quality Improvement for capital region. There is also an Act on Promoting the Purchase of Environmentally-Friendly Products being

⁴³ Cho, Hong Sik, 'Against the Viability of Private Enforcement: Focusing on Korean Environmental Law' (2007) *Journal of Korean Law*, Vol 7 No 1, 82.

⁴⁴ *OECD Environmental Performance Reviews- Korea* (2006).

http://books.google.co.uk/books?id=gqtWFNnX8cYC&pg=PA41&lpg=PA41&dq=oeed+environmental+performance+review+korea&source=bl&ots=JHI7Js0qm1&sig=2m522e2iZ5U1stSkf4i7mOoyBig&hl=en&ei=7eXiS5u0FNOOsAaPjZBC&sa=X&oi=book_result

⁴⁵ *Ibid.*

⁴⁶ *Ibid.*

introduced as mandatory public green procurement.⁴⁷ This new legislation all falls under the supervision of the Ministry of Environment. In addition to new legislation, improvements were made at different levels of government. At the territorial level, river basin environmental offices and a metropolitan air quality management office were created under the Ministry of Environment to improve management at the local level.⁴⁸

Another major improvement that occurred in Korea during the period of democratization is that private citizens became more concerned with the environment and the environmental policy process.⁴⁹ Both central and local governments introduced citizen participation in matters such as monitoring and reporting of environmental violations. Local Agenda 21 has also spread rapidly, and has encouraged many people to become involved in the movement.⁵⁰

Although Korea currently has progressive laws in place, it continues to be faced with under-enforcement issues. This is largely due to legislation design, abuse of administrative discretion, limited funding, and court problems. Limited funding may be the most acute cause of under-enforcement, and this may be a reflection of lack of awareness of environmental problems. Obtaining adequate funding is sometimes a symptom of lack of general public knowledge of an issue, so a lack of funding in Korea could be due to the fact that citizens have only become aware of environmental problems in the past 15 years.⁵¹

Recent Korean Progress in Summary

- Since early 1990's, changed its approach to environmental enforcement
- Significant recent progress but recognised under-funding of enforcement

3.2 Government Structure and Enforcement

Historically, Korea has had a tradition of a strong central government.⁵² Currently, the central organisation in charge of environmental concerns is the Ministry of Environment (MoE). It was previously known as the Environmental Administration, but was changed to the Ministry of Environment in 1990. However, until 1994, it was a junior ministry, and did not have cabinet status. After 1994, its responsibilities were expanded by absorbing many of the environmentally related duties of other ministries.⁵³ The MoE coordinates with other ministries that may have environmental management responsibilities.

⁴⁷ Ibid.

⁴⁸ *OECD Korea*

⁴⁹ Jeong, Hoi-Seong and Wang-Jin Seo, 'Democratization, Decentralization and Environmental Governance in Korea' Work-in-Progress, set for publication this year at Kyoto University,

⁵⁰ Ibid.

⁵¹ Cho, Hong Sik, 'Against the Viability of Private Enforcement: Focusing on Korean Environmental Law' (2007) *Journal of Korean Law*, Vol 7 No 1.

⁵² Jeong, Hoi-Seong and Deokho Cho, 'From Confrontation to Partnership: Urban Environmental Governance in Korea' (2002) *International Review of Public Administration* Vol 7 No 2.

⁵³ Jeong, Hoi-Seong, 'Citizen Involvement in the Environmental Policy Process in Korea' (2002) *The Good Society* 11.2. p 50.

The central government delegates most duties to lower organizations, such as regional and municipal bureaus, and these local-level organisations carry out the responsibilities. Metropolitan cities- cities under the direct control of the central government- provinces, cities, and counties have their own assemblies, and these assemblies can enact their own ordinances. But in general, the central government delegates most duties. There is also a specific committee, the Environmental Conservation Committee, under the Prime Ministry, that performs interdepartmental coordination of environmental issues. It coordinates policy objectives between the Ministries of Finance and Economy, Health and Welfare, Industry and Resources, Construction and Transportation, and other governmental branches. The Environmental Conservation Committee coordinates mid-to-long term environmental plans, and decides priority and the allocation of money to projects.⁵⁴

Recently, local level governments have been given greater environmental decision-making power. This system is not functioning perfectly yet, and local government must build experience in implementing and enforcing environmental protection measures. Local bureaus also need to work on compliance issues involving small factories and enterprises.⁵⁵ Currently, Korea spends over 2% of its GDP on environmental expenditure. However, permit and enforcement systems have deteriorated over the past few years. Beginning in 1994, the Ministry of Environment gain control of permitting, inspection, enforcement, and prosecution of major emitters. This was done through its regional offices. However, in 2002, enforcement responsibilities were shifted to local authorities in the areas of air, water quality, and municipal waste management. Since then, the number of inspections, and the fraction which leads to prosecutions, has decreased.⁵⁶ This transfer was part of an entire restructuring process in the government pursuant to the Act on Promoting the Devolution of Central Government Authority. Alongside this, a presidential commission was created to encourage the transfer, to local authorities, the power to enforce laws. Municipalities and provinces would share enforcement duties, except in large cities such as Seoul and Daegu, where the city would have full enforcement responsibilities. This is not the first time Korea has initiated devolution of enforcement powers; it also occurred in the early 1990's and before 1984.

Korea became very active in the realm of sustainable growth following the 1997 economic crisis. It streamlined and simplified permitting procedures so that many emissions and discharge permits were obtainable after 7-10 days. However, permits are not always sufficient to control pollution because environmental permits are issued for each environmental medium, and there is no integrated permitting system that provides complete coverage of production. This system lacks efficiency in prevention and control of pollution because there are no comprehensive inspections at firms.⁵⁷

Government Structure in Summary

- Central government delegates most duties to regional and municipal levels.
- Local governments gain more control, especially relating to environmental laws

⁵⁴ Jeong, Hoi-Seong and Deokho Cho, 'Urban Environmental Governance in Korea' (2001) World Planning Schools Congress 11-15 July, Shanghai, China.

⁵⁵ Ibid.

⁵⁶ *OECD Korea* at 149.

⁵⁷ Ibid.

3.3 Public/Private Partnerships and monitoring

In the 1990's, many public-private partnership platforms between business and environmental NGOs were developed to address many issues. Some businesses have adopted environmental management systems, and industry has engaged in voluntary approaches in environmental monitoring, particularly in oil spill remediation, chemical management, and energy saving. NGOs are allowed to participate in environmental inspections.⁵⁸

A Presidential advisory board, the Presidential Commission on Sustainable Development, was established in 2000. The group consist of 76 people from government, industry, NGOs and academia. In addition to creating sustainability strategies to recommend to the government, the commission also facilitates public-private cooperation.⁵⁹

3.4 Public Awareness and NGO involvement

Since the beginning of the democratisation process in the 1990's, citizen awareness of and participation in environmental issues has increased. According to Dr. Hoi-Seong Jeong, who seems to be the leading expert on compliance and enforcement issues in Korea, public awareness and input has been instrumental in changing the way Koreans approach environmental law. This has mainly occurred in the form of NGO activity and citizen's awareness.

Public concern and public awareness have led to greater involvement of public organizations, and research institutes were opened to study environmental protection.⁶⁰ This is mainly due to greater public awareness that enforcement of laws has increased. Citizens are more aware of the issues, and can bring claims against violators.⁶¹ A well-informed citizenry is an essential component to a complete environmental monitoring system, and the Korean government recognizes that public knowledge can be a huge advantage to itself and to society.⁶²

Central and local governments have introduced systems to encourage participation in environmental governance. This includes citizen advisory committees for environmental policy making, and reward systems for monitoring and reporting environmental violations, available to the general public.⁶³ Dr. Jeong highly emphasises citizen participation because environmental issues cannot be overcome without adequate understanding on the part of citizens. In addition, most environmental policies cannot be implemented properly without support and knowledge from the local community. Individual citizens can now bring suits in court

⁵⁸ Ibid at 121.

⁵⁹ Ibid at 207.

⁶⁰ Jeong, Hoi-Seong and Deokho Cho, 'From Confrontation to Partnership: Urban Environmental Governance in Korea' (2002) *International Review of Public Administration* Vol 7 No 2.

⁶¹ Ibid.

⁶² *OECD Korea* 18

⁶³ Jeong, Hoi-Seong and Deokho Cho, 'Urban Environmental Governance in Korea' (2001) World Planning Schools Congress 11-15 July, Shanghai, China.

if they know an environmental law is being violated.⁶⁴ Citizens are becoming part of the enforcement process, as monitoring by civilian groups and continuous monitoring systems have been introduced.

Korea's active citizenry is largely attributable to the spread of democratization in the past few decades. It has taught people that they can make decisions concerning their own communities. People now realize that to have strong environmental management systems, a country must first: (1) establish a strong information network that can also function as a medium for policy enforcement and reduction in administrative corruption. (2) administrative services can be improved by giving the public easy access to information on projects and policies, and (3) environmental laws and regulations should be written in clear, understandable language, and should be more integrated.

Since the 1990's, central and local governments have encouraged public participation mechanisms, such as environmental policy-making committees and reward systems for citizens who monitor and report violations of environmental law. More specifically, by the late 1990's, most local governments had created a Local Agenda 21 program that has encouraged the participation of local people.

Increasing public interest in environmental issues also prompted the central government to improve public relations. For example, in an attempt to gain public understand and support for new programs, it made an effort to inform citizens of its environmental policies and projects. The government is required to hold public hearings or briefings before implementing some laws and regulations. One example of this is the requirements of the Environmental Impact Assessment (EIA) Act. This Act requires developers, before beginning a project, to the first draft of their EIA and explains it to residents. Then, if a certain number of residents request a hearing, a public hearing is required.

Policy advisory bodies were also created and expanded to encourage democratic citizen participation. For example, the National Park Commission, which has the ability to designate and abolish national park areas, and review decisions relating to national parks, consists of nine governmental representatives and 10 civilians.

There have also been three different types of public-private forums created to help supplement insufficiencies in the public sector, and to also help gain public trust in the government. The first type of forum is meant to supplement public sector resources, such as the civil monitoring and reporting system. The Honorary Environmental Monitors System, which started in 1987, is overseen by regional offices, and offers a reward system for the reporting of illegal polluting activities. In addition, the regional office names people who have shown a strong devotion to environmental protection. As of 2002, there were 20,000 civilian inspectors.

The second type of public-private forum is a cooperative system to promote understanding between government and residents. In Korea, all environmental facilities are public, so the government is responsible for the construction and operation of these facilities. The cooperative forum allows residents to supervise the

⁶⁴ Ibid.

installation, operation, and management of environmental facilities. They are also involved in decisions relating to the facilities. The third type of public-private forum that developed recently occurred between the government and NGOs. These two sectors created joint environmental campaigns and educational programs to increase citizen participation and awareness. It has become popular for the government and NGOs to hold joint environmental events, such as World Environment Day and World Water Day. There have also been joint environmental campaigns, seminars, and workshops between NGOs and the Ministry of the Environment, such as a movement to reduce food waste in restaurants.⁶⁵

It is through NGO development, public awareness, and democratization that Korean environmental enforcement and compliance has developed into the system they have today. Citizen and community participation is vital if a country wishes to increase monitoring and enforcement. Public advocacy for the environment, including lawsuits, have given the citizens more direct contact and involvement with environmental issues, and has steered the government to change its policies. The number of NGOs has increased dramatically in Korea. In 1980, there were only 33 NGOs in Korea, and most of them were not legally registered with the government. By 1999, there were already 442 NGOs, most of which were registered with related governmental sectors.⁶⁶

Figure 2 provides a chart showing the different types of citizen participation in Korea.

Citizen Participation in Environmental Compliance
-Over past two decades, large increase in citizen awareness and participation.
-Government has encouraged participation, including creation of citizen advisory committees, public hearings and briefings.
- Honorary Environmental Monitors System recognizes and rewards people for identifying polluters.
- Joint government and NGO events

3.5 Private Enforcement of Environmental Laws⁶⁷

As mentioned in the initial discussion there has been under-enforcement of environmental law in Korea by government branches. Under-funding has been chronic, and the government was left with insufficient resources to pursue standard regulatory approaches. To supplement the inadequate public enforcement efforts, private enforcement action has often had to play a role in preventing breaches of law.

In the 1990's, due to public outcry, Korea changed its environmental law system to a US-based model. It revised existing legislation and promulgated new laws to fight pollution and other environmental issues. Korea's Basic Environmental Policy Act (BEPA) is modelled after the National Environmental Policy Act (NEPA) in the US. BEPA includes medium-specific statutes, such as the Act on the Assessment of Impacts of Work on Environment, Traffic, Disasters, etc. based on similar statues

⁶⁵ Jeong, Hoi-Seong, 'Citizen Involvement in the Environmental Policy Process in Korea' (2002) at 5

⁶⁶ Jeong, Hoi-Seong, *Urban Environmental Governance in Korea* 1

⁶⁷ Cho, Hong Sik, 'Against the Viability of Private Enforcement: Focusing on Korean Environmental Law' (2007) *Journal of Korean Law* Vol 7 No 1, 81.

from the US. By March 2005, the Ministry of Environment had jurisdiction over 39 environmental statutes, and more were being created. Environmental regulations and statutes are enforced through criminal and administrative sanctions, and civil liability.

Under the new system, private enforcement can occur when concerned citizens sue the government, not polluters directly, to stop government inaction or wrongdoing. Concerned citizens who bring neighbourhood claims suing the government can go through the process with little cost to the existing enforcement scheme. They can also detect illegal conduct more easily. There is a distinction between the private cases for the protection of individual rights and cases for public purposes. The “private enforcement” discussed here refers only to cases relating to public purposes. Private enforcement in this context is sometimes a way to supplement governmental under-enforcement, although it is important the government continue to play the most important role.⁶⁸ Therefore, individuals should not be expected to enforce legal rules, even if they are personally affected by lack of governmental enforcement.

This is an example of decentralised , environmental issues and underenforcement are examples of market failure. The market price system has not been reflected and internalised by firms who create pollution and waste in an effort to compete in the marketplace. Private law can force these firms to compensate parties injured by these externalities, but civil law and private litigation are not ideal for this responsibility.

In Korea, in addition to suing firms directly, individuals have a number of routes to challenge administrative actions. For example, they can bring the case directly to court without having to first exhaust all administrative remedies. They can also submit a petition to the National Grievance Settlement Committee under the Prime Minister, or bring administrative appeals before a commission under the Minister of Legislation. In addition, 16 cities in Korea have National Environmental Dispute Resolution Commissions (NEDRCs) and Local Environmental Dispute Resolution Commissions, where citizens can bring disputes. Between 1991 and 2003, 1,345 environmental disputes came before these commissions, and 1,016 were successfully resolved.⁶⁹ When agencies make rules and administrative acts, they must follow the 1996 Administrative Procedure Act, which increases the information provided in formal records. This, in addition to the Law on Disclosure Information, provides citizens with extra information when forming their complaints.

Public law allows courts to review administrative decisions. The Korean constitution and other statutes guarantee most parties the right to bring a case for review if a decision directly affects their welfare. Administrative acts are only reviewable if they are formal exercises of public authority that effectively restrict a plaintiff’s legal rights. Reviewable acts must also be in the final stage of the administrative process, immediately effective, and not subject to any further changes. Korean courts are generally known to defer to the decisions of the agencies, and normally only take routine cases.

⁶⁸ Greve, Michael, ‘The Private Enforcement of Environmental Law’ (1990) 65 *Tulane Law Rev.* 339, 346.

⁶⁹ Greve, Michael, ‘The Private Enforcement of Environmental Law’ (1990) 96. See generally Ministry of Environment, *Green Korea 2004: Building an Eco-Community for the 21st Century*, 35 (2004).

In the realm of private law, the Korean Constitution gives Korean people a right to a healthy and pleasant environment. However, the Supreme Court has been reluctant to enforce private claims based on Constitutional and property rights unless very specific conditions are met. These conditions include the explicit identification by statutory provisions of the owner of the right, the content of the claim, and counter-parties. This makes it very difficult to bring a case under Constitutional and property rights law unless the case is based on a specific statute that gives the parties a legal interest. Instead, cases are often pursued under nuisance or tort law. Currently, there are very few precedents for this type of case.

In terms of damages, Korean Civil Code does not allow the award of unforeseen extraordinary damages, nor does it allow nominal, stigmatic, or punitive damages. In most tort cases, injunctive relief is banned by the Civil Code, and courts rarely issue permanent injunctions based on environmental claims against governmental or large corporate projects. Injunctive relief is most often granted when a plaintiff files a case for nuisance due to a neighbouring building, and the court will grant injunctive relief; however, courts may also only award damages based on the current value of the plaintiff's future losses. In an attempt to reduce the limitations of private law in the court system, courts have relaxed standards of proof, encouraged quasi-class actions, and even come up with new remedies. However, these solutions are somewhat controversial, and also put a strain on the traditional role of the court. General administrative litigation rules may only be used by Korean courts to hear an agency determinations if there is "administrative disposition, which is the equivalent of the doctrine of "ripeness" in the US.

The Korean court system has changed in recent years. Previously, for a petitioner to have standing to sue, she had to have a defined legal interest in the case; in many situations, it was very difficult to show.

Difficulty in Showing Standing

One recent case illustrates the difficulty in showing standing. When opponents of nuclear power, and people who did not want nuclear power reactors in their backyards, challenged nuclear reactor permits, the claims were dismissed due to lack of standing. The court looked at regulatory statutes and concluded that, despite the fact that there was a safety clause to protect public safety, that clause was meant for the general public, not for particular individuals. The clause was interpreted to encourage the safe design of the reactors, not to protect neighbours who may be concerned about their personal safety.⁷⁰

Over the past few years, the Supreme Court has softened its approach towards individual environmental activists. The Court has recently given standing to individuals living in an EIA area on the basis that they have a concrete, specific interest to be protected by the specific EIA that a developer may have violated.⁷¹

⁷⁰ Greve, Michael, 'The Private Enforcement of Environmental Law' (1990) 96. See generally Ministry of Environment, Green Korea 2004: Building an Eco-Community for the 21st Century, 35 (2004).

⁷¹ Ibid at 10 DBW 97 nu 3286 (April 23, 1995) (S Korea).

In 2005, further progress was made when the court held that even individuals living outside of an EIA area may have standing if they can prove a fear that their environmental interests are damaged by the alleged violations of law. In contrast to its earlier decision regarding nuclear reactors, the Court in this case reasoned that the general public interest was not the only right protected by the safety clause; concrete individuals' environmental interests were also protected.

In addition, the "Amendment Bill" removes the necessity of legal standing. Currently, anyone who has a "legally just interest" may bring a case. Under this reasoning, judges can decide whether someone has standing to bring an administrative litigation case based on Constitutional principles, relevant statutes, or any other grounds.

When courts review agency decisions, the petitioner has the burden of persuasion, and must prove abuse of discretion or illegality. Previously, courts were deferential to agency decisions, but recently, this has begun to shift. In the "Saemangeum" case, in which petitioners tried to stop the reinforcing of a sea wall due to the pollution construction, was creating, the Seoul Administrative Court ruled in favour of environmental protection. It ruled that previous estimates had been flawed, and massive damage would be caused to the area.

Environmental victims have a variety of options for recovery. Remedies range from permanent injunctions to recovery of damages from pollution. Injunctions are getting increased attention, but there are issues with the Korean litigation process. Similar to Germany and Japan, the civil law legal system in Korea does not allow for class actions, jury trials, or punitive damages, and permanent injunctions are very rare.

Private Enforcement in Summary

- Modelled environmental regulatory system after United States.
- Poorly designed legislation and lack of funding led to citizen participation
- Korean constitution and other statutes guarantee citizen's right to bring a case if a decision directly affects their welfare.
- Legal standing: Supreme Court now allows people to bring case even if they live outside an impacted area
- Legal remedies include permanent injunctions, recovery of damages.

3.6 Korean Green New Deal⁷²

UNEP has called on the G20 to engage in a Global Green New Deal, in which countries invest at least 1% of total GDP to promote green economic sectors. There is a focus on improving energy efficiency in new/existing buildings, stimulating renewables, and enhancing sustainable transport.

To stimulate job creation and revitalize the economy, Korea started a Green New Deal stimulus package in January 2009. It consists of financial, fiscal, and taxation policies. It equals US\$38.1b, or 4% of the country's GDP, and was scheduled to be implemented between 2009 and 2012. About 80%, or \$30.7b, was allocated to

⁷² UNEP Global Green New Deal Update from G20 Pittsburgh summit (Sept 2009).
<http://www.unep.ch/etb/publications/Green%20Economy/G%2020%20policy%20brief%20FINAL.pdf>

environmental-related themes, such as energy efficiency in buildings, renewable energy, low carbon vehicles, and water/waste management.

Korea has been especially efficient at spending its green stimulus money. Nearly 20% of funds had been disbursed by the end of the first half of 2009, while most other countries had only spent 3% by this point.⁷³

Korea has been active in investment and policy reform towards long-term strategies for green growth. Its “Five year Green Growth Plan” (2009-2013) is a medium term plan to implement low carbon and green growth visions. This plan uses 2% of GDP, or US\$8.6b to be spent on climate change/energy, sustainable transport, and the development of green technology. It is expected to produce between 1.56 and 1.81 million jobs and add approximately \$150bn to the economy. Korea’s Green Stimulus spending can be broken down into sector: Renewable Energy- 6%; Energy efficient buildings- 20%; Low Carbon vehicles- 23%; Railways- 45%; Water and waste- 6%.

To provide a policy framework, policy, regulatory, and fiscal reforms are being adopted to achieve green growth. In August 2009, the government announced options for voluntary emissions reduction targets where CO2 emissions could be reduced by between 21- 30% compared to projected growth from 2005 levels to 2020. In addition, Korea is participating in regional cooperation, such as the adoption of a declaration of support of an East Asia Climate Change Partnership Fund of \$200m to support low carbon development in East Asia.

Korean Green New Deal in Summary

- Stimulus package, spending US\$38.1b, or 4% of the country’s GDP, with a focus on energy efficiency in new/existing buildings, stimulating renewables, and enhancing sustainable transport.
- Five Year Green Growth Plan (2009-2013), plan to implement low carbon and green growth visions

Environmental Enforcement in Korea: A Summary

Focus on the Industry level- courts, consumers, citizens.

Democratization: Since democratization in the 1990’s, Korea has revolutionized the way it handles environmental laws, creating stricter legislation and investing resources into the sector.

Local level: Governments are given power in making environmental decisions and can develop their own protection measures.

Public Awareness: Through NGO involvement (and, to a smaller extent, government initiatives), local people have become aware of environmental issues on a national

⁷³ Global Green New Deal Policy Brief, March 2009.
<http://www.unep.ch/etb/publications/Green%20Economy/UNEP%20Policy%20Brief%20Eng.pdf>

scale and in their own towns. This has led to pressure being put on the government to better protect the environment, create stricter legislation, and enforce laws.

Private Monitoring: private citizens and NGOs have shown great initiative in monitoring neighbourhoods and cities. They are an integral part of the enforcement process.

Private Court Cases: Korean citizens can bring cases against the government or companies regarding environmental issues.

Recommendations:

The result of this review of the objectives and options available to a country such as the PRC for environmental enforcement indicates that there is a substantial range of options available for addressing the dual problem of environmental compliance and asymmetric information.

This review suggests that the following measures might be adopted as a model for environmental compliance within the PRC:

- 1) An independent environmental monitoring agency (IEA) (similar to the UK's Environment Agency) should be considered for adoption in the PRC. The agency would be wholly independent of political and ministerial bodies, and charged only with enforcing environmental standards in all parts of PRC.
- 2) The members of the IEA should be subject to a code of ethics requiring that any discretion be exercised in line with agency principles, and subject to review by the Sanction Review Panel (set out below). Any failure of a member of the IEA to exercise discretion in accordance with the standards of professionalism and competence is subject to immediate removal. A civil service commission should enforce such a standard against all members of the IEA (as in the case of France).
- 3) The IEA should have the authority to assess a gradation of penalties against non-compliant firms, ranging from civil penalties (fines) to the lodging of criminal actions. (as in the UK)
- 4) The IEA should publish all information on environmental compliance on its website on a regular (e.g. monthly) basis, including: a) names of any firms breaching standards; b) the extent of noncompliance; c) any fines or penalties proposed or assessed; and d) any fines or penalties collected. (as in the UK)
- 5) The objective of civil sanctions should be to assess costs in the amount of any gain received by the non-compliant firm, together with any costs incurred by the community or environment impacted by the non-compliance. The penalties should be immediately assessable by the IEA, subject to its own discretion, but according to the principles set out here. (as in the UK)
- 6) A Sanction Review Panel (SRP) should be established (similar to the UK) which assesses whether the penalties being assessed by the IEA are equivalent

across jurisdictions and firms, and in accordance with the principles set out above for setting penalties.

- 7) Private associations or individuals should be empowered to bring complaints before the SRP in the event that any act of non-compliance is not adequately monitored or penalised by the IEA. An individual should be able to bring such a complaint if he/she is able to show that he/she is impacted by the noncompliance. An association (NGO) should be able to bring such a complaint if it is able to show that the representation of such an interest is part of the reason for the association's existence in accordance with its constitution. (as in France and Korea)
- 8) Private associations (NGOs) should be enabled by legislation for the purpose of monitoring and encouraging compliance with environmental standards.

References

AEED, Informations extra-financières : Leur « importance progressive » en fait une « source de responsabilité pour les acteurs », Sherpa, 30 August 2010, available at <http://www.asso-sherpa.org/archives/1032>, accessed 5 July 2011.

ARIA, a Ministry of Ecologie, Sustainable Development, Transport and Housing Portal for the collect of self-monitoring data, <http://www.aria.developpement-durable.gouv.fr/>.

Becker, G. (1968). Crime and Punishment: an economic approach. *Journal of Political Economy*, 76(2):169-217.

Billet, P et al, sous la dir. de Olivera Boskovic *L'efficacité du droit de l'environnement : mise en oeuvre et sanctions*, Paris, Dalloz: 2010.

Central Service for the Prevention of Corruption, <http://www.justice.gouv.fr/le-ministere-de-la-justice-10017/organismes-rattaches-10028/service-central-de-la-prevention-de-la-corruption-12081.html>, accessed 16 July 2011.

Cho, Hong Sik, 'Against the Viability of Private Enforcement: Focusing on Korean Environmental Law' (2007) *Journal of Korean Law*, Vol 7 No 1.

Defra, *Fairer and Better Environmental Enforcement Project* (21 May 2010). Available at <http://www.defra.gov.uk/environment/policy/enforcement/project/index.htm>

Directorate General of the Administration and Public Health, <http://www.fonction-publique.gouv.fr/article518.html?artsuite=6>.

European Environment Agency. France: Agreement on the Treatment of End-of-Life Vehicles (ELVs). http://pdfserve.informaworld.com/151105_751306972_714000664.pdf

Global Green New Deal: An Update for the G20 Pittsburgh summit, UNEP, Sept 2009. <http://www.unep.ch/etb/publications/Green%20Economy/G%2020%20policy%20brief%20FINAL.pdf>

Global Green New Deal Policy Brief (March 2009). <http://www.unep.ch/etb/publications/Green%20Economy/UNEP%20Policy%20Brief%20Eng.pdf>

Greve, Michael, 'The Private Enforcement of Environmental Law' (1990) 65 *Tulane Law Rev*, 339, 346.

Heyes, Anthony G, 'Making Things Stick: Enforcement and Compliance' (1998) *Oxf Rev Econ Policy* 14, 50-6

Jeong, Hoi-Seong, 'Urban Environmental Governance in Korea' (2001).

Jeong, Hoi-Seong. 'Citizen Involvement in the Environmental Policy Process in Korea' (2002) *The Good Society* 11.2.

Jeong, Hoi-Seong and Deokho Cho, 'From Confrontation to Partnership: Urban Environmental Governance in Korea' (2002) *International Review of Public Administration* Vol 7 No 2.

Jeong, Hoi-Seong and Deokho Cho, 'Urban Environmental Governance in Korea' (2001) World Planning Schools Congress 11-15 July, Shanghai, China.

Jeong, Hoi-Seong and Wang-Jin Seo, 'Democratization, Decentralization and Environmental Governance in Korea' Work-in-Progress, set for publication this year at Kyoto University,

Jordan, Andrew et al, 'Policy Innovation or "Muddling Through"? "New" Environmental Policy Instruments in the United Kingdom' (2003) *Environmental Politics* 12:1, 192.

Jordan, Andrew et al, referencing: R Salmons, 'Case Studies of Negotiated Environmental Agreements: The UK: Agreement with the Farm Films Producers Group' (2000) (London: CSERGE).

Krarp, Signe and Stephan Ramesohl, 'Voluntary agreements on energy efficiency in Industry — Not a Golden Key, but Another Contribution to Improve Climate Policy Mixes' (2002) *Journal of Cleaner Production* Vol 10 Iss 2, 109-20.

http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B6VFX-44KDMGW-3&_user=125795&_coverDate=04%2F30%2F2002&_rdoc=1&_fmt=high&_orig=search&_sort=d&_docanchor=&_view=c&_searchStrId=1401647316&_rerunOrigin=google&_acct=C000010182&_version=1&_urlVersion=0&_userid=125795&md5=8d5c60dd54951f01239fed3ee83a8b66

Laffont, J.J., Tirole, J. (1993). A Theory of Incentives in Procurement and Regulation, MIT Press:Cambridge.

Laurent, Éloi 'Carbon Tax: The French Connection' (2009) *The Economists' Voice*: Vol. 6 : Iss. 13, Article 2.

<http://www.bepress.com/ev/vol6/iss13/art2/>

Lin, T. and Swanson, T. (2010), *Economic Growth and Environmental Regulation*, Routledge:London.

Milgrom, P. and Roberts, J. (1992). *Economics, Organisation and Management*, Prentice Hall: NJ.

Ministry of Ecology and Sustainable Development (now the Ministry of Ecologie, Sustainable Development, Transport and Housing), The inspectorate of Classified Installations, "Environmental policing of industrial and agricultural facilities" (2005), available at http://www.installationsclassees.developpementdurable.gouv.fr/IMG/pdf/plaquetteIC_anglais.pdf, accessed 13 July 2011.

Ministry of Ecologie, Sustainable Development, Transport and Housing's Portal for classified installations: <http://installationsclassees.ecologie.gouv.fr/>.

Ministry of Environment, Green Korea 2004: Building an eco-community for the 21st century 35 (2004).

Ministry of Justice and the Liberties, <http://www.justice.gouv.fr/>.

Ministry of Foreign and European Affairs, Office of the Ambassador for Bioethics and Corporate Social Responsibility (2010), *La responsabilité sociale des entreprises : l'engagement de la France*, available at http://www.diplomatie.gouv.fr/fr/IMG/pdf/Synthese_RSE_Engagement_France_FR_oct_2010final__2_.pdf, accessed 1st of July 2011.

Observatoire sur la Responsabilité Sociale des Entreprises (ORSE) (2004), International Social Reporting, “The practices of French Companies”, Report by the Working Group, available at http://www.orse.org/site2/maj/phototheque/photos/docs_reference/Etude_ORSE_n7_indicateurs_sociaux_1104.pdf, accessed 1st of July 2011.

OECD (2009), Ensuring Environmental Compliance: Trends and Good Practices, OECD Publishing. doi: 10.1787/9789264059597-en.

OECD Environmental Performance Reviews- France (2005)
http://books.google.co.uk/books?id=AUKePGUe8EQC&printsec=frontcover&dq=oeed+environmental+performance+review+france&source=bl&ots=PqqNWLuB5g&sig=65JR9pgAiJka5E7_uWFFi-ISpy4&hl=en&ei=2ajiS4KPKJCosQbK8o0e&sa=X&oi=book_result&ct=result&resnum=2&ved=0CA4Q6AEwAQ#v=onepage&q=oeed%20environmental%20performance%20review%20france&f=false

OECD Environmental Performance Reviews- Korea (2006).
http://books.google.co.uk/books?id=gqtWFNnX8cYC&pg=PA41&lpg=PA41&dq=oeed+environmental+performance+review+korea&source=bl&ots=JHI7Js0qm1&sig=2m522e2iZ5UlstSkf4i7mOoyBig&hl=en&ei=7eXiS5u0FNOOsAaPjZBC&sa=X&oi=book_result

OECD Environmental Performance Review- UK (2002)
http://books.google.co.uk/books?id=uQ0FRFS1x-gC&printsec=frontcover&dq=oeed+environmental+performance+review+uk&source=bl&ots=3jrZSpJFre&sig=OdoUMIH5uZ9SKFyvQVazLS6sYt4&hl=en&ei=v6niS4rTM4qlsAbW_rQe&sa=X&oi=book_result&ct=result&resnum=7&ved=0CB0Q6AEwBg#v=onepage&q=oeed%20environmental%20performance%20review%20uk&f=false

Stott, David, ‘Environmental Enforcement in the UK’ (2009) *J Environ Monit* 11, 470-74.

Szarka, Joseph, ‘The Politics of Bounded Innovation: “New” Environmental Policy Instruments in France’ (2003) *Environmental Politics* 12: 1, 93-114.

United Nations Environment Programme (UNEP), The Global Reporting Initiative, KPMG, Unit for Corporate Governance in Africa, University of Stellenbosch Business School (2010), Carrots and Sticks – Promoting Transparency and Sustainability. An update on trends in Voluntary and Mandatory Approaches to Sustainability Reporting, available at <http://www.globalreporting.org/NR/rdonlyres/649A345D-8BD7-413D-A696-7E12F6EA37C5/4198/Carrots2010final.pdf>.

Vlachou, Andriana, ‘Environmental Regulation: A Value-Theoretic and Class-Based Analysis’ (2005) *Cambridge Journal of Economics* 29, 577-9.

Volpi, Giulio and Stephan Singer, ‘EU-Level Agreements: A Successful Tool?’ in P Ten Brink (Ed), *Voluntary Environmental Agreements* (Sheffield, Greenleaf Publishing Ltd, 2002), 145.

Annual Report No. 276 Voluem II (XIII Legislature) First Reading
<http://www.senat.fr/commission/fin/pjlf2009/articles/09/091.html>

Le Grenelle Environnement
www.legrenelle-environnement.fr

Figure 1

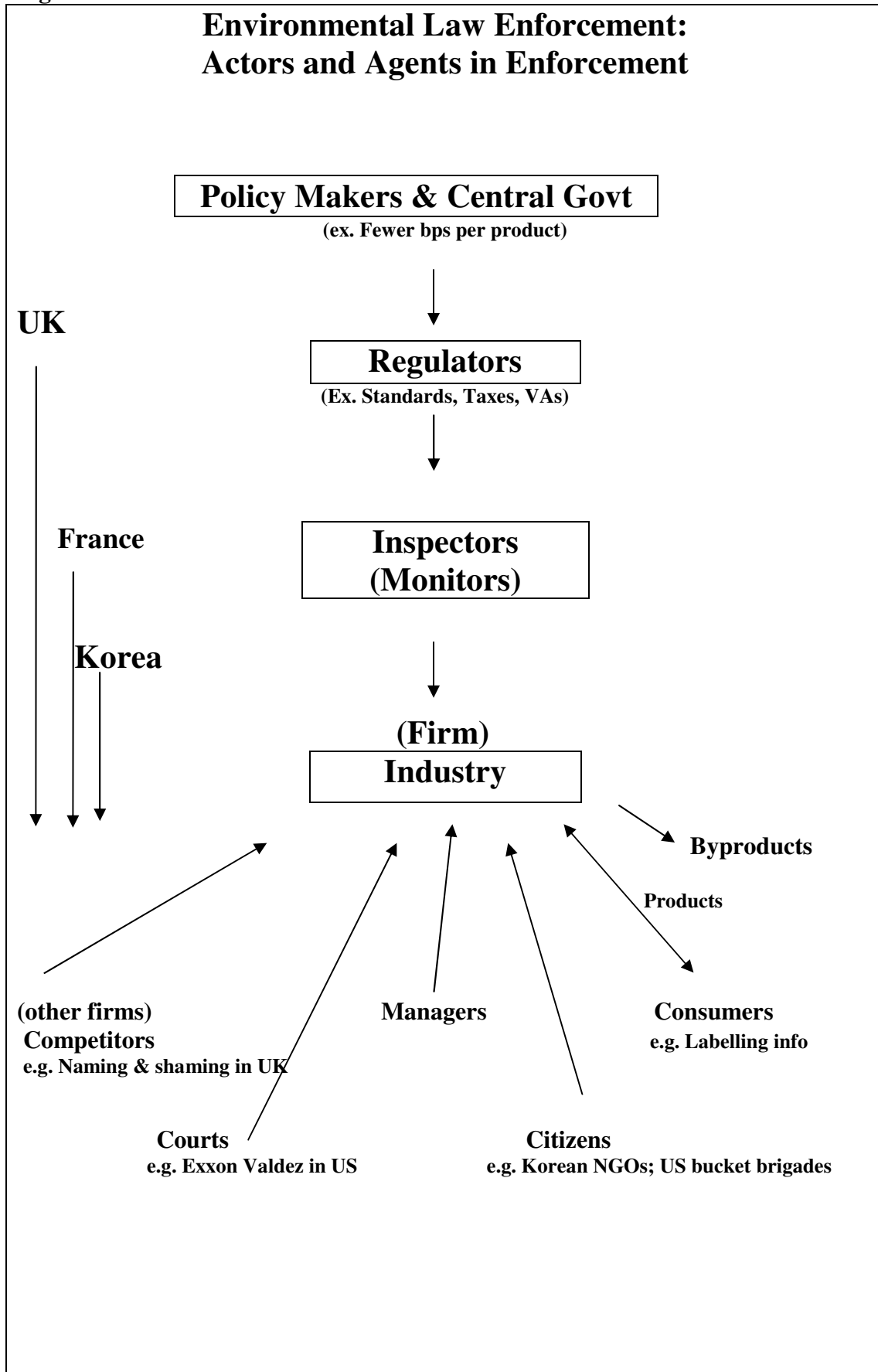


Figure 2

Techniques to Ensure Compliance with Environmental Norms in France

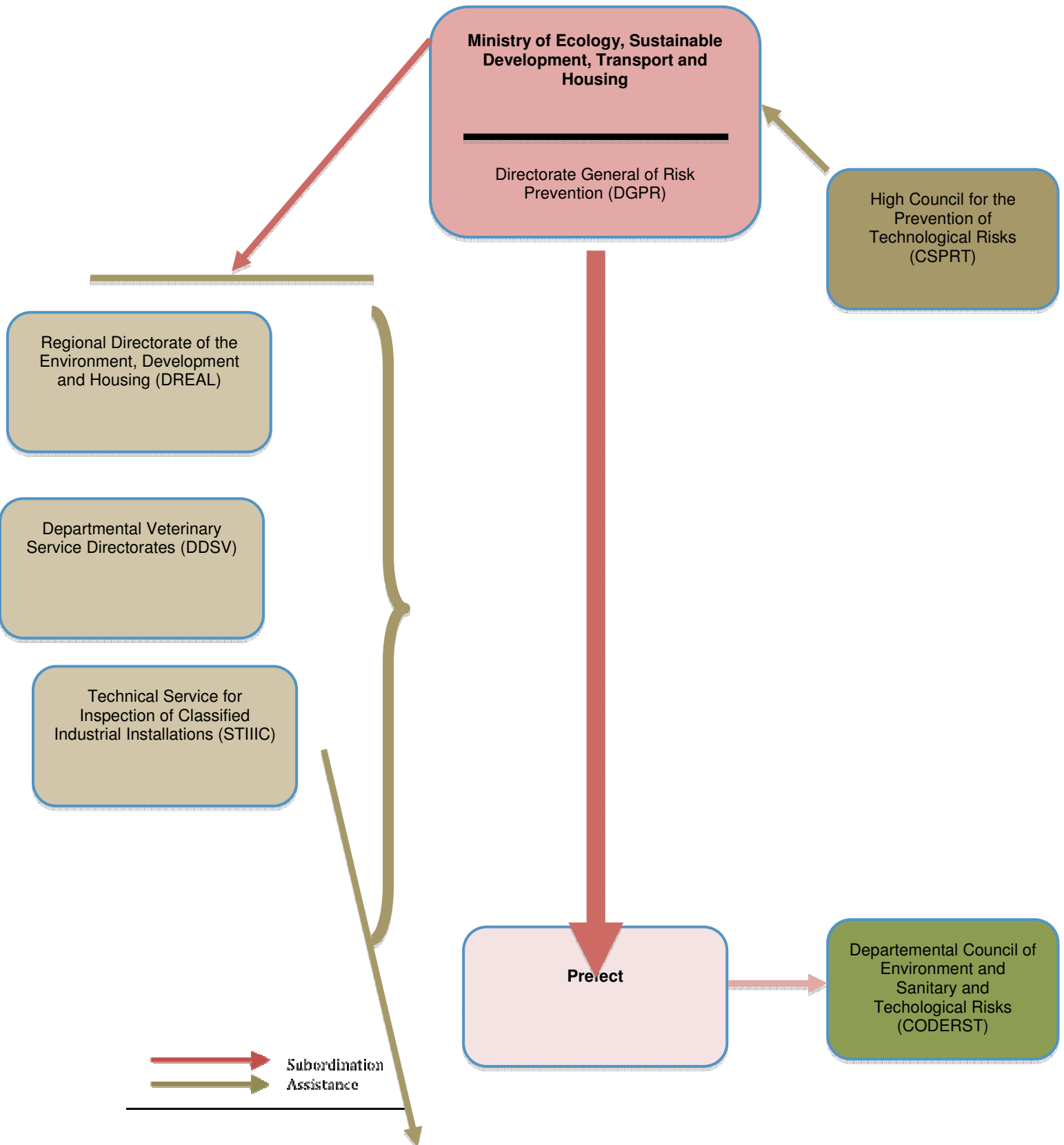
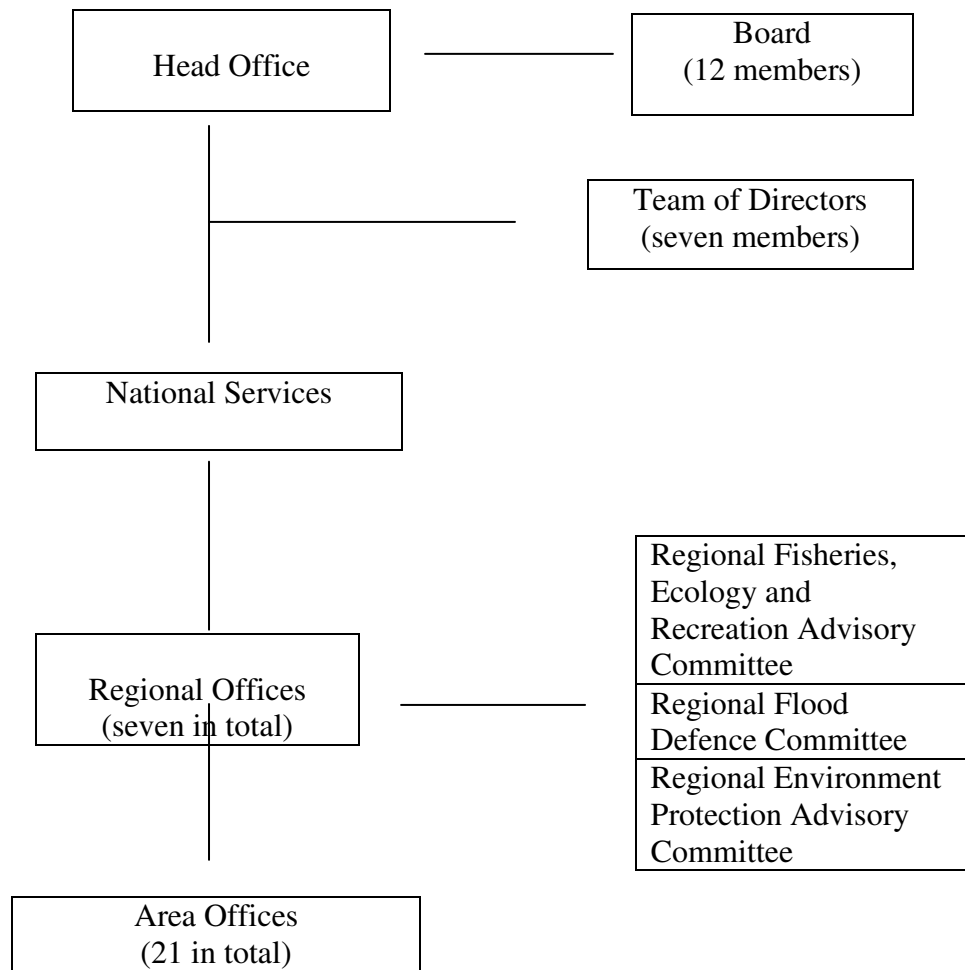
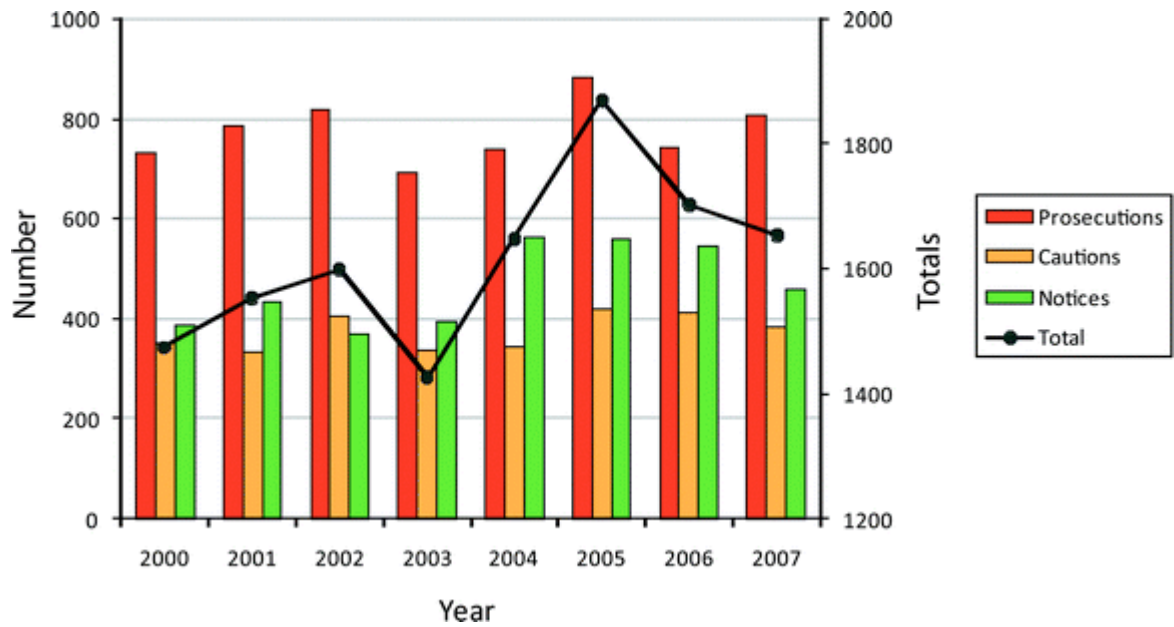


Figure 3
Organization of the UK Environment Agency (England and Wales)



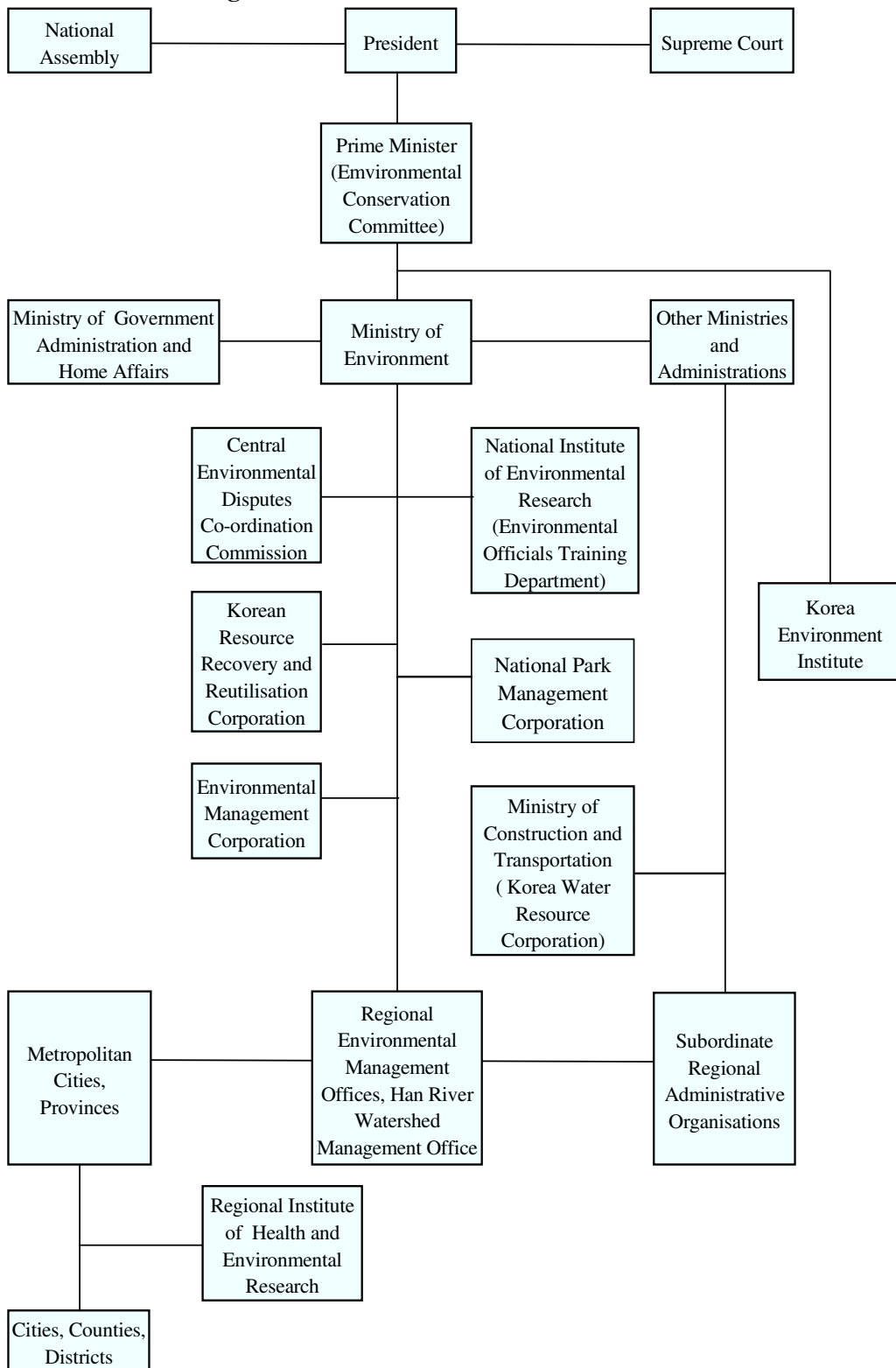
Source: Environment Agency website
 (www.environment-agency.gov.uk/aboutus/organisation/35671.aspx)

Figure 4
Statistics on the number of prosecutions, cautions, and notices from 2000-2007 in the UK



Source: D Stott, 'Environmental Enforcement in the UK' (2009) *Journal of Environmental Monitoring* 11 470-474.

Figure 5
Environment Related Organization Structure of Korea



Source: HS Jeong, D Cho, 'Urban Environmental Governance in Korea' (2001) *World Planning Schools Congress* 11-15 July, Shanghai, China. P 12.

Figure 6
A Typology of Citizens' Participation

Type	Major Group	Policy Stage	Information Flow	Number of Issues	Interests Represented
Citizens' self-governing	Residents	Whole stages	Residents ↔ residents	Single issues	Broad, private, social
Victims' demand	Victims; business, government	Implementation	Residents → government	Single project or issue	Narrower, Private
Experts' policy advice	Experts (NGOs); government	In general, formation	Experts (NGOs) → government	Specific policy area	Broader, social, intergenerational, multi-species
Government's public relations	Residents (victims); government	Mainly implementation; sometimes formation	Government → residents	Single policy or project	Broad, private, social
Public-private co-production	Residents (NGOs); government	Implementation	Residents (NGOs) ↔ government	Specific project or service	Narrow, private, social
Multi-stakeholders partnership	Civil society (NGOs) government, business	Whole stages	Government ↔ civil society ↔ business	Whole policy issues	Broader, social, intergenerational, multi-species

Source: HS Jeong and D Cho, 'From Confrontation to Partnership: Urban Environmental Governance in Korea' (2002) *International Review of Public Administration* Vol 7 No 2, 57.