

THE IMPLEMENTATION OF EUROPEAN COMMUNITY
ENVIRONMENTAL DIRECTIVES IN THE UNITED KINGDOM:
ANALYSIS OF THE MAZMANIAN AND SABATIER FRAMEWORK

BY

INDRANI DEBBIE GUPTA

B.Sc., The University of Calgary, 1987
B.Sc., London School of Economics and Political Science, 1992

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Department of Political Science

The University of British Columbia
Vancouver, Canada

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ABSTRACT

This study applies the Mazmanian and Sabatier model for successful policy implementation to the application of EC environmental Directives in the United Kingdom. Using two areas of air pollution – vehicle emissions and large combustion plant emissions – the applicability of the Mazmanian and Sabatier framework is assessed with regard to (a) the environmental policy arena and (b) the British policy style.

The Mazmanian and Sabatier model suggests that six conditions must be met for successful policy implementation to occur. These conditions incorporate five variables: legislation, science and technology, state institutions, target groups and external factors. The implementation of EC Directives 91/441 and 92/55, regulating automobile exhaust emissions, met all six conditions suggested by the model and was successful in achieving the stipulated policy goals. The implementation of EC Directive 88/609, controlling SO₂ and NO_x emissions from large combustion plants, failed to meet any of the conditions. Nonetheless, the UK was successful in attaining the Directive's targets.

It is suggested that the Mazmanian and Sabatier model for successful policy implementation is not useful, as a predictive tool, to the cases studied here. The framework, derived from American practice and experience, does not appear to fit with the British policy style and the implementation of EC environmental Directives in the UK.

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DEDICATION

For my parents,
without whom...

Introduction

The implementation of European Community Directives within its Member States is unique in its structure and implications. The European Community is the only international organisation that is able to legislate policy objectives that are binding on its Members, without necessarily receiving assent from them. Through its terms of membership and new voting procedures adopted under the 1987 Single European Act, the Community as a whole is able to enforce standards of performance in Member States that may oppose those standards.

Community environmental regulations are no exception in this regard. This paper seeks to compare the implementation of two EC Directives relating to the control of air pollution in the United Kingdom: EC Directive 91/441 regulating vehicle exhaust emissions and EC Directive 88/609 controlling emissions from large combustion plants (LCP). The United Kingdom is an appropriate focus for this study since, in both cases, it was long opposed to the standards proposed in the Directives and resisted their adoption for a considerable length of time. Although eventual UK support was secured, the history of the UK's policy position during the lengthy negotiations at the EC would appear to suggest that the UK would have more problems implementing the Directives than other, more enthusiastic Member States such as Germany and Denmark. However, the UK has been successful at meeting the standards stipulated in the Directives.

The Directives themselves provide interesting material for a comparative study of implementation since they differ in two important attributes. The Directive relating to exhaust emissions incorporates uniform standards applicable to new vehicles, while the LCP Directive sets differential standards of emissions for each Member State, and applies to both new and existing facilities. These differences between the Directives have required the UK to use varied

techniques for the effective implementation of the European standards.

This paper seeks to apply the theoretical framework of implementation analysis suggested by Mazmanian and Sabatier (1983) to assess the relevance of their model to (a) the environmental policy arena and (b) the British public policy style. Mazmanian and Sabatier, in their model for successful policy implementation, describe six conditions that should be met. Utilising the cases of vehicle emissions and large combustion plant emissions, this paper will determine to what extent each of these six conditions have been met. Evidence suggests that both Directives have been successfully implemented in the UK, and thus one would expect that Mazmanian and Sabatier's six conditions were met.

In assessing the applicability of the Mazmanian and Sabatier model, this study explores the relationship between the EC and its Member States in terms of its authority to 'dictate' uniform standards. It also examines the problems the UK has had in adopting standards to which it was, for a long time, opposed. In assessing the implementation process, five variables will be examined according to the six conditions suggested for successful implementation: legislation, science and technology, state institutions, target groups and external factors (such as conflicting public policies and socioeconomic conditions).

Examination of these variables will serve to elucidate the particular attributes of implementation within the United Kingdom in terms of EC environmental Directives. I argue that the Mazmanian and Sabatier model for successful implementation cannot be easily transposed to other national contexts, nor to all policy arenas. While the vehicle emission Directives appear to have enjoyed smooth implementation according to the conditions set forth by Mazmanian and Sabatier, the implementation of the LCP Directive has been no less successful despite not meeting a substantial number of the framework's conditions.

It is hoped that this study will contribute to a fuller understanding of the relationship between the European Community and its Member States with reference to public policy, as well as highlight the weaknesses within the Mazmanian and Sabatier framework for successful policy implementation.

Chapter One

Theoretical Perspectives

The study of implementation in public policy analysis is a relatively recent phenomenon. Emerging in the 1970s, with the publication of Pressman and Wildavsky's seminal study of the Economic Development Administration, theories of classic public administration were challenged. Classic public administration held that the politics of public policy occurred at the decision-making or formulation stage. Once an authoritative statement of policy had been issued by policy-makers, implementation was both assumed and automatic.

Studies on implementation (Pressman and Wildavsky, 1973; Bardach, 1977; Berman, 1978) focused on the area of public policy that stands between policy formulation and actual impacts. These studies found that implementation was often assumed, but by no means automatic. Indeed, the politics of implementation played a considerable role in creating a divergence between policy intent and policy impact.

Since the 1970s, scholars have attempted to give form to the theoretical insights and inferences suggested by these case studies (Van Meter and Van Horn, 1975; Rein and Rabinovitz, 1978; Lipsky, 1978; Berman, 1978; Sabatier and Mazmanian, 1979). This section aims to provide a brief overview of the major components of implementation theory, and to then detail the Mazmanian and Sabatier framework applied to the cases studied here.

'Implementation' is used freely in public policy literature, though its precise meaning is often confusing. The word has been used to describe the process of operationalising a policy through the creation of a program, the administering of such a

program and the local-level impacts (that may or may not be the intended outcomes of the program). In this sense, an excellent program may be poorly executed or a poor program may be efficiently applied. In the context of this study, Mazmanian and Sabatier's definition of implementation will be used. Mazmanian and Sabatier make a distinction between *policy formulation*, where the program is designed, and *policy implementation*, where the program is applied. Thus, the authors are not concerned with the merits of the program itself in terms of 'poor' or 'excellent'. Instead they focus on implementation as "the carrying out of a basic policy decision, usually incorporated in a statute..." (Mazmanian and Sabatier, 1983:20). As such, through implementation analysis, they seek to identify the crucial variables that affect the achievement of policy objectives throughout the process of policy application (Mazmanian and Sabatier, 1983:21).

Theoretical frameworks of implementation analysis seem to place varying emphasis on different variables throughout the implementation process. It is useful to organise the various theoretical frameworks of policy implementation according to contrasting perspectives of 'top-down' and 'bottom-up'. I begin by discussing these perspectives, after looking in greater depth at the findings of Pressman and Wildavsky's 1973 study. Berman's theory of implementation proposes a framework according to levels of analysis, and this is particularly useful in the context of the implementation of European Community legislation within the Member States. Accordingly, a full discussion of Berman's theory precedes the presentation of the Mazmanian and Sabatier framework. The Mazmanian and Sabatier framework represents, I believe, the most versatile and illuminating approach to the study of implementation. Incorporating both 'top-down' and 'bottom-up' factors, the authors suggest six conditions that must be met if implementation is to be successful. These are examined in terms of the European context.

1.1 Pressman and Wildavsky, 1973

The study of policy implementation by Pressman and Wildavsky (1973) was ground-breaking in raising issues that had, hitherto, been largely ignored by both policy-makers and academics. Implementation represents one of the most important contributions to the field of implementation analysis. Pressman and Wildavsky focused their study on the Economic Development Agency's (EDA) attempts to create employment for the hard-core unemployed of Oakland in the late 1960s. In 1966, the EDA agreed to offer public works grants and loans amounting to over \$23 million to alleviate severe unemployment in the city. At that time, Oakland's unemployment rate stood at 8.4 per cent, almost double the national average. The problem was even more pronounced amongst the black and Hispanic communities, where rates ran as high as 12 per cent, and these communities became a particular target of the EDA program. Although the program promised to create over 3,000 new jobs, by 1969 only 20 jobs had been created for minorities. The program was described as one of 'big promises and little action' by the Los Angeles Times (Pressman and Wildavsky, 1978:4). The high hopes with which the project had begun were, three years later, destroyed by the difficulties faced in its application. The failure of the EDA to implement a job-creation program is the focus of Pressman and Wildavsky's study. As the authors state

Promises can create hope, but unfulfilled promises can lead to disillusionment and frustration. By concentrating on the implementation of programs, as well as their initiation, we should be able to increase the probability that policy promises will be realized. Fewer promises may be made in view of a heightened awareness of the obstacles to their fulfilment, but more of them should be kept. (Pressman and Wildavsky, 1978:6)

Pressman and Wildavsky's study closes with a series of prescriptive warnings about the pitfalls of implementation. Three conclusions are drawn from their study. The first is that policy implementation should not be divorced from the formulation, evaluation and reformulation processes. Instead policy formulation, implementation, and evaluation should be considered simultaneously by decision-makers. In later editions of their study, they suggest policy formulation and implementation have a mutually adaptive effect. Each, in essence, shapes the other. Policies are continuously transformed by implementing actions, while the policy itself makes assumptions about the problem that inevitably affect both the implementation and the outcome (Majone and Wildavsky, 1984:170–174). Thus, policy implementation is a learning process. Implementation should not be seen, they assert, as the culmination or end-point of policy but as an integral part of an ongoing, evolutionary process of policy-making.

Secondly, Pressman and Wildavsky assert that successful policy implementation should take due account of the "complexity of joint action". Few policy programs are simple and straightforward. Most involve a myriad of different perspectives, participants and decision-points.

...we do not begin to appreciate the number of steps involved, the number of participants whose preferences have to be taken into account, the number of separate decisions that are part of what we think of as a single one. Least of all do we appreciate the geometric growth of interdependencies over time where each negotiation involves a number of participants with decisions to make, whose implications ramify over time (Pressman and Wildavsky, 1978:93).

Each decision made during the implementation process has often unpredictable consequences on numerous other participants. Decision-making also involves delay, and as time progresses, participants' perspectives and positions change. Thus, the assumptions upon which success was predicated at the outset of the implementation process may no longer be applicable to

participants and target groups by the time they become involved. The 'complexity of joint action' will inevitably affect successful implementation.

Finally, Pressman and Wildavsky point to the necessity for a careful analysis of the causal assumptions behind an original policy decision. Without sound causal theory, it is unlikely that policy goals will be met. Identifying relevant causal factors is important to the formulation of appropriate policy as well as successful implementation. For instance, if the policy objective of reducing nitrogen oxide (NO_x) emissions is implemented through the application of pollution abatement technology to power plants, success is likely to be limited. Although power plants contribute to NO_x levels in the atmosphere, they account for only a small percentage of emission sources. The majority of NO_x emissions are attributed to vehicle exhaust gases. The causal theory in the implementation process is flawed such that, even if successfully implemented, the policy is unlikely to meet the policy objective of reducing overall NO_x levels.

The significant contribution of the Pressman and Wildavsky study is that it views the implementation as a process of evolution and learning. The application of a policy program is as much the product of the policy itself, as it is of the institutions and personnel that have jurisdictional responsibility over its implementation, and the behaviour of the participants and target groups at whom the policy is directed. Effective policy implementation can only occur when the program, the institutional environment in which it is implemented, and the affected individuals are taken into account. Thus, due attention must be paid to both the intent of the decision-makers as well as the actions of the local implementers and reactions of target groups. In other words, Pressman and Wildavsky suggest that implementation analysis should incorporate both top-down (the intent of decision-makers) and bottom-up (the behaviour of local actors) approaches.

1.2 'Top-Down' and 'Bottom-Up' Models of Policy Implementation

The top-down and bottom-up implementation analysis approaches rely on a difference of perspective (top or bottom), but assume that the implementation process is an essentially hierarchical, structured and vertical one. The leading proponents of the top-down frameworks (Van Meter and Van Horn, 1975; Sabatier and Mazmanian, 1979) argue that implementation analysis must begin with the statute or policy statement of the authoritative decision-maker, usually central government. The outcomes of implementation can then be measured against the policy objectives of those decision-makers. Important to this perspective is (a) the articulation of clear objectives in the statute and (b) the reliance on a sound causal theory, with reference to scientific evidence and technological capability.

The top-down theorists explore the behaviour of implementing institutions, organisations and relevant interest groups in relation to stated policy objectives. By contrast, proponents of the bottom-up approach (Elmore, 1978; Lipsky, 1978) assert that decision-makers "are forced largely to acquiesce to the preferences of street-level bureaucrats and target groups" (Sabatier, 1986:25).

Lipsky admits that the bottom-up framework is particularly suited to policy areas where (i) the jobs of policy implementers are defined in terms of wide discretion, (ii) policy implementers are faced with a multiplicity of goals and work tasks and (iii) policy implementers are engaged in implementing policy shifts in the context of their ongoing practices (Lipsky, 1978:399-400). Despite its limited applicability, Lipsky's framework provides "an alternative approach to the study of policy implementation" by focusing on "those who are charged with carrying out policy rather than those who formulate and convey it" (Lipsky, 1978:397).

Parallels exist between top–down/bottom–up approaches and what Sharp terms 'programmed' and 'adaptive' frameworks of implementation analysis (Sharp, 1981). The premises are essentially the same insofar as Sharp asserts that the scholars employing the programmed implementation framework are concerned with the clarity of policy goals, the degree of compliance from target groups and the ability to structure and control the policy environment (Sharp, 1981:103), echoing the top–down approach. The programmed implementation framework views the implementation process as a "centralised, directive model of organizational change" (Sharp, 1981:101). By contrast, the 'adaptive implementation' theorists (Van Meter and Van Horn, 1975; Lipsky, 1978; Berman, 1980) emphasise a model based on a "process that allows policy to be modified, specified and revised...according to the unfolding interaction of the policy and its institutional setting" (Berman, 1980:211). The adaptive implementation process describes "a disorderly learning process" rather than "a predictable procedure" (Sharp, 1981:104), echoing the assumptions of the bottom–up approach.

1.3 Berman's Model of Policy Implementation: Macro- and Micro-Levels

Berman (1978) distinguishes clearly between 'levels of implementation' by using the concepts of macro– and micro–implementation. In his study of the implementation of federal social programs in the United States, Berman describes macro–implementation problems in terms of the execution of policy at the federal level "so as to influence local delivery organisations to behave in desired ways" (Berman 1978:164), or the ability to create an 'implementation machine' (Nakamura and Smallwood, 1980:16). Micro–implementation, on the other hand, describes how local organisations "devise and carry out their own internal policies" in response to federal actions (Berman, 1978:64). As such, this level of

implementation refers to the standard operating procedures of the implementing agencies and methods of enforcing statutory objectives.

Berman suggests four clusters of variables that influence the implementation of policy at the macro-level (Berman, 1978:166). The first concerns the degree to which goals can be agreed upon amongst the various organisations and agencies involved in the policy execution process. The second involves differentials of authority and influence amongst the relevant agencies, and the third relates to resource deficiencies amongst them. Finally, communication difficulties between agencies and organisations can have a considerable impact on implementation at the macro-level.

At the micro-level, Berman classifies implementation according to four potential outcomes (Berman, 1978:178). These relate to the extent to which firstly, the local implementing agency changes in response to implementation, and secondly the amount of change the project undergoes in order to accommodate the standard operating procedures of the local agency (Berman, 1978:172). Thus micro-implementation is "a function of the adopted project and the characteristics of the implementing organisation" (Berman, 1978:173). Micro-implementation depends not only on project and organisational characteristics, but also on what happens to the organisation because of the project and the manner in which it is implemented. Unfortunately, Berman does not elaborate on the variables which affect organisational or project characteristics to elicit the outcomes described. The discussion does not address the relationship of the outcome to adaptations in the project and/or the organisation. By focusing on outcomes alone, at the micro-level, Berman describes general patterns in project or organisation change without addressing the causal factors related to such changes.

Although Berman's study focuses on the United States with its federal system of governance, the macro- and micro- distinctions are useful in the European context insofar as the Community can be seen as emulating a federal system. I would suggest, however, the creation of a middle category – that of meta-implementation – to analyze the cases presented here. Macro-implementation problems refer to policy execution within the European institutions, while micro-implementation problems occur at the local delivery level. Meta-implementation accounts for the level at which the national governments of Member States operate, forming a distinct and important part of the overall policy implementation process within the European Community.

Analysing implementation in terms of macro-, meta- and micro-levels is a useful method of organising the framework for this study. The actors involved in the implementation process are examined in relation to the variables and options identified at each level. Berman's framework suggests both a lateral and vertical analysis of implementation, exploring the lateral relationships between the relevant actors at each successive stage of the implementation process. In this sense, Berman's framework builds upon, and extends, the top-down and bottom-up approaches to implementation analysis.

1.4 The Mazmanian and Sabatier Model

Mazmanian and Sabatier (1983) base their framework (Figure 1) around three factors: the tractability of the problems being addressed by the statute, the ability of the statute to structure the implementation process and a variety of non-statutory variables. The authors assume that (a) policy implementation analysis must adopt a top-down approach insofar as the starting point is the authoritative statement of policy objectives, and (b) the policy objectives are framed within the context of a statute or similar document.

The tractability of problems being addressed by the statute is based on the availability of valid technical theory and technology. Sound causal theories provide both a justification of the policy objectives and a valuable resource for implementing officials in pursuing those objectives. The diversity of target group behaviour is another important factor in the consideration of tractability. The more diverse the range of behaviour being regulated by the statute, the more difficult it will be to ameliorate the problem(s).

Tractability of the Problem

1. Technical difficulties
2. Diversity of target group behaviour
3. Target group as a percentage of the population
4. Extent of behavioural change required

Ability of the Statute To Structure Implementation

1. Clear and consistent objectives
2. Incorporation of adequate causal theory
3. Initial allocation of financial resources
4. Hierarchical integration within and among implementing institutions
5. Decision rules of implementing agencies
6. Recruitment of implementing officials
7. Formal access by outsiders

Non-Statutory Variables Affecting Implementation

1. Socioeconomic conditions and technology
2. Public support
3. Attitudes and resources of constituency groups
4. Support from sovereigns
5. Commitment and leadership skills of implementing officials

Stages (Dependent Variables) in the Implementation Process

Policy outputs of
implementing agencies

Compliance with policy
outputs by target groups

Actual impacts of
policy outputs

Perceived impacts of
policy outputs

Major revision in
statute

Figure 1 Variables Involved in the Implementation Process

Source: Mazmanian and Sabatier, 1983:22

The size of the target group is another significant factor. If the target group is small, and isolatable, then statutory objectives are more likely to be met. However, if the behaviour being modified involves a large percentage of the population, then success will tend to be elusive. The final consideration in determining the tractability of the problem is the extent of behavioural change required for success. If the statute requires limited changes in target group behaviour, objectives are more likely to be met. I would further suggest that the nature of behavioural change is also a factor. Negative behavioural change, for example banning the use of the private automobile in areas where there are high levels of air pollution, is less likely to meet with success than positive behavioural changes such as encouraging consumers to purchase lead-free petrol by subsidising its retail value.

The ability of a statute to structure the implementation process is Mazmanian and Sabatier's second broad determinant of success. The statute should consist of clear and consistent objectives. These provide valuable resources to the implementing officials and supporters of the policy. Incorporation of sound and adequate causal theory within the statute can also be an important consideration, as is the provision of adequate financial resources.

Hierarchical integration with and among implementing institutions prevents competition over jurisdiction and resources, and is thus crucial to successful implementation. In a similar vein, the decision-rules, or routinised administrative behaviour, of implementing agencies must be consistent with the policy program. The implementation process will be further facilitated by the presence of a committed leadership, and to this end, the recruitment of implementing officials is a consideration. Finally, the framework suggests that formal access to groups outside the policy implementation process is necessary. By this, Mazmanian and Sabatier refer predominantly to the provision of 'citizen suits'.

Thus statutes that provide liberal rules of standing for citizen participation as formal interveners in agency proceedings and as petitioners of judicial review (in the form of mandamus actions requiring agency officials to comply with statutory provisions) are more likely to have their objectives attained (Mazmanian and Sabatier, 1981:14)

The third broad category of determinants for success accounts for factors external to the policy implementation process. Such variables as media coverage, public opinion, general socioeconomic conditions and technological developments will play a role in the attainment of policy objectives. Mazmanian and Sabatier also include in this category, the commitment of implementing officials and their leadership skills, as well as the level of support from the governing executive (sovereigns).

Based on this framework, Mazmanian and Sabatier set out six conditions that must be met, if successful policy implementation is to occur (Sabatier and Mazmanian, 1983:7).

1. The enabling legislation or other legal directive mandates policy objectives that are clear and consistent or at least provides substantive criteria for resolving goal conflicts.
2. The enabling legislation incorporates a sound theory identifying the principal factors and causal linkages affecting policy objectives, and gives implementing officials sufficient jurisdiction over target groups and other points of leverage to attain, at least potentially, the desired goals.
3. The enabling legislation structures the implementation process so as to maximise the probability that implementing officials and target groups will perform as desired. This involves assignment to sympathetic agencies with adequate hierarchical integration, supportive decision rules, sufficient financial resources, and adequate access to supporters.
4. The leaders of the implementing agency possess substantial managerial and political skill and are committed to the statutory goals.
5. The program is actively supported by organized constituency groups and by a few key legislators (or a chief executive) throughout the implementation process, with the courts being neutral or supportive.

6. The relative priority of statutory objectives is not undermined over time by the emergence of conflicting public policies or by changes in relevant socioeconomic conditions that undermine the statute's causal theory or political support.

1.5 Framework of Analysis

The six conditions suggested by Mazmanian and Sabatier represents, I believe, the most comprehensive tool for implementation analysis. It takes into account both the top-down and bottom-up perspectives of the theoretical literature and provides a useful checklist for determining successful implementation. Furthermore, it is a predictive tool insofar as it implies that the degree to which these conditions are met, the greater the probability of achieving the policy objectives. This paper will draw on the work of Berman (1978) in structuring the levels of analysis, but will focus on the extent to which the Mazmanian and Sabatier framework holds true for the implementation of two EC Directives in the UK.

Mazmanian and Sabatier, in outlining the six conditions for successful implementation, start with the attributes of the statute articulating the policy objectives, move through the characteristics of the implementing agencies, constituency groups, target groups and state institutions, and end with the impact of external variables. For the sake of clarity and comparison however, I have chosen to analyze policy implementation in these cases according to the attributes of legislation, science and technology, state institutions, target groups and external factors.

In terms of legislation, the degree to which the statute structures the implementation process will be examined at both the European and national levels in the first section of Chapter Four. Evidence of clear and precise policy objectives will be sought at all three levels, and the extent to which the legislation provides substantive criteria for the resolution of goal conflicts will be determined. The section on science and technology will

examine the existence of sound causal theory. The theory should identify the principal causal factors, and the linkages between them and the target group behaviour. Both factors and linkages should, at least implicitly, be \hat{F}^{Po} the provisions of the statute. From a comparative perspective, the degree of consensus on scientific theory within the scientific community and amongst policy-makers, and the technological capabilities was an important consideration in the process of negotiations on the Directives within the EC. Furthermore, the causal theory will identify the extent of behavioural change required for the problem to be ameliorated.

The third section will address the role of state institutions in the implementation process. Questions such as whether implementing officials and agencies have sufficient jurisdiction over target groups; whether officials and agencies have sufficient sources of leverage and recourse to sanction; whether or not officials and agencies possess adequate managerial, political and leadership skills to guide the implementation process; and whether the courts play a significant role in adjudicating and enforcing implementation must be addressed.

The disposition of target groups will be analyzed in terms of their support for policy objectives. The level of opposition and support from these constituencies may have varied over time and these variations will have a significant impact on the degree to which successful implementation can be achieved, and sustained. Finally, external variables will be examined in an effort to determine their impacts on the success of policy implementation. I will explore the existence of conflicting policies, the prevailing socioeconomic conditions and the level of support for the policy demonstrated by the governing executive (sovereigns).

In terms of environmental policy in Europe, and the EC Directives under consideration, both the top-down and bottom-up approaches are relevant to the study. The

top-down approach allows the success of implementation to be judged, according to the specific standards provided for in the Community's legislation. However, particularly in the context of the UK, the bottom-up approach is important. Wide administrative discretion and street-level decisions have traditionally guided the implementation of environmental protection regulations in Britain (Richardson, 1982; Vogel, 1986). Although not identified by Lipsky as a policy area where such a framework would prove useful, environmental policy is very much a product of discretionary implementation in the UK.

...one of the principles followed by successive Governments has been that the primary responsibility for dealing with pollution problems should rest as far as is practicable with authorities operating at a local or regional level....implementation is delegated to...local level. Authorities may exercise a considerable degree of discretion as to the limit they impose on the release of local pollutants, so that account may be taken of local resources and social priorities, the uses to which the surrounding areas are put and the capacity of the environment to absorb pollutants. (DoE, 1978:2)

By all accounts, the problems of implementing EC Directives will likely increase as the realisation of a continental internal market draws closer. EC environmental Directives only complicate the process further. Environmental protection problems transcend traditional policy sectors, incorporating such diverse issues as trade, economy, individual rights, agriculture, transport and energy. Thus environmental protection Directives issued by the EC must be applied to a vast array of economies, cultures and political systems simultaneously. It is unlikely that such a process will be easy, nor that such problems will diminish in time.

Nonetheless, if we are to assume that implementation is judged to be successful when the standards articulated through legislation are met, then both Directives under study here have been successfully implemented in the UK. However, the degree to

which the conditions, suggested by Mazmanian and Sabatier, have been met vary considerably. It is hoped that this study will serve to clarify the framework suggested by Mazmanian and Sabatier, and illustrate its weaknesses in terms of judging the implementation of EC environmental Directives in the UK.

Chapter Two

The European Union and The United Kingdom

2.1. The European Union and Environmental Protection

Environmental policy was not acknowledged as a European Community concern until 1972, fifteen years after the signing of the Treaty of Rome.¹ At a meeting of the Heads of State and Government held in Paris, it was felt that "economic expansion should equally result in an improvement in the quality of life, and that to this end particular attention should be given to environmental protection" (Johnson and Corcelle, 1989:2). The establishment of the first Community Environmental Action Programme was realised in 1973.

From its belated acknowledgement in 1973, environmental policy has become one of the most important areas of EC activity in recent years. In recognition of this expanding area, the 1987 Single European Act (SEA) included an important new chapter giving environmental protection constitutional status. The activism of the European Commission and the 'greening' of the European Parliament have been instrumental in maintaining the steady flow of legislative documents on environmental protection emanating from the European Council of Ministers (Johnson and Corcelle 1989:2-3).

Through recent developments in environmental policy-making at the Community level, Member States have found their own autonomy in policy-making

¹ The European political, monetary and economic entity is now officially termed the European Union (EU) after the signing of the Maastricht Treaty (Treaty on European Union) on 7 February 1992 and coming into force following German ratification on 1 November 1993 (the last Community Member to do so). Prior to this time, the organisation was known as the European Community (EC). Throughout this paper, EU and EC will be used interchangeably.

gradually recede in the face of collective decision-making. Some Members are now subject to regulations and bound to implement legislative measures that they do not necessarily support. This then, is the unique character of the EC as a supranational institution – its ability to force Member States to conform to standards and patterns of behaviour that may be antithetical to national policies, traditions and culture.

2.2. The European Union and The Debate Over Jurisdiction

The European Union is a unique phenomenon. It has, since its creation in 1957, engendered considerable political rhetoric and scholarly inquiry into the limits of its jurisdiction *vis-a-vis* the national sovereignties of its Member States. The dynamics of this jurisdictional debate are no more clearly illustrated than in the arena of European policy-making and implementation. Indeed, as one scholar notes "case studies in individual policy areas are the necessary basis for a better understanding of the European Community as a whole" (Arp 1993:150).

The environmental policy arena has provided fascinating and clear examples of this struggle between supranational jurisdiction and national sovereignty. This battle between authority and autonomy arises from four related factors. Firstly, the political constitution of the European Union and the relationship between the EU and its Member States is by its very nature a source of conflict over jurisdiction. Secondly, the founding principle of the establishment of a Common Market and (thirdly) the related rules of subsidiarity place severe constraints on national legislative functions. Finally, new voting procedures adopted under the 1987 SEA have exacerbated tensions that further impinge on Member States' national autonomy.

The political origins of the struggle between autonomy and authority lie in the conditions of membership. Members of the European Union have all transferred some degree of legislative and executive authority to the supranational institution. Member State constitutions permit such a transfer and this is, indeed, a condition of membership.

...[S]pecific responsibilities and the authority to discharge them have been transferred from the Member State to the Community, whose competence now extends among other things to commercial and trade policy, agriculture, transport and the protection of the environment (EC Commission 1992:23).

Unlike other international institutions, the EC is more than the sum of its parts. Regulations are generally the result of intergovernmental negotiations and agreements, but are by no means reliant on them.

The ability of the EC, as a supranational institution, to legislate measures that are binding on its Member States is thus one source of tension between the need for EC authority and the protection of national autonomy. The second, and related, source of contention is the founding principle of the establishment of a Common Market. The purpose of EC regulations is to harmonize standards and thus "ensure that different national standards and regulatory procedures do not interfere with free trade and business competition" (McCormick, 1991:129).

The first EC regulations addressing environmental protection were not instituted through concern about environmental degradation but through a desire to set uniform standards for internal trade. The vehicle emission regulations, for example, were negotiated under Article 100 of the Treaty relating to the attainment of a common market (Arp, 1993:152). It was not until the 1987 SEA that environmental protection was accorded constitutional recognition under Article 130 of the new Treaty.

Subsidiarity is the third complicating factor in the relationship between the EU and its constituent Member States and represents one of the general principles of Community action. In effect, subsidiarity allows the EU to take direct action at the national level, when national authorities' action has been "less efficient". Specific reference to this principle is made in the Treaty provisions relating to environment (EC Commission 1992:23). Indeed, as the Commission notes, "no national authority can declare a provision of Community law null and void" (EC Commission 1992:25). Thus, in all cases, EC legislation takes precedence over national legal provisions.

The erosion of national sovereignty, as perceived by some Member States, is furthered by the fourth factor of voting procedures. The 1987 SEA saw the introduction of Qualified Majority Voting into some aspects of EU decision-making, including those arising under Article 100 involving the realisation of a common market. Previous voting procedures were based on unanimity, effectively imbuing all Member States with the right to veto any legislation. Since 1987 however, voting rights have been weighted amongst Member States and a qualified majority is sufficient to ensure the passage of legislation. This aspect of the EU, more than any other, represents the most overt subjugation of national sovereignty since it can potentially lead to circumstances where a Member State is forced to enact legislation to which it is vehemently opposed.

2.3. European Union Policy-Making: Institutions and Practice

The net result of the struggle between EU jurisdiction and Member States' national sovereignties is that policy-making has become a prolonged, arduous and complicated process. It is at this policy formulation stage alone, that Member States are able to protect their own interests and ensure that legislative proposals are acceptable to their

respective domestic constituencies. It is at this stage that Member States are forced to 'show their hand' and declare their national positions on policy proposals. Policy-making for both the Vehicle Emissions Directive and the Large Combustion Plant Directive were clear examples of this struggle. The UK, in both cases, strongly resisted the measures being proposed, and succeeded in winning important concessions against Danish, German and Dutch pressure to adopt more stringent standards.

The legislative institutions of the EC are comprised of four constituent parts: the European Commission which acts as the bureaucracy, the European Council of Ministers which represents the executive, the directly elected European Parliament as the legislature and the European Court of Justice as the judiciary (EC Commission, 1992:24). However, the balance of power amongst these constituent elements is considerably different to that found in most national jurisdictions.²

The Commission bureaucracy is, for all intents and purposes, the driving force behind the EC as a whole (Peters, 1992:76). It has a monopoly on initiating legislation and a responsibility for ensuring that adopted legislation is properly applied (EC Commission, 1992:24). Composed of 23 Directorates-General governing each policy area, the Commission can be called upon to submit proposals at the request of the Council. However, as is more often the case, the Commission initiates proposals that are put forward to Council for consideration. It is worth noting that the Council, although the 'political' centre of the EU, cannot act without policy initiation from the Commission bureaucracy (Peters, 1992:89).

² For a more substantial discussion on the workings of the Community's institutions see S.S. Andersen and K.A. Eliassen (eds) [1993] Making Policy in Europe, p. 19–33 and W. Nicoll and T.C. Salmon [1994] Understanding the New European Community, p.61–99.

Decision-making and final policy formulation occur at the Council of Ministers, which is composed of representatives from the Member States, varying according to the policy area. Thus, the Council is usually the site of protracted wrangling, negotiating and articulation of national policy positions. The difficulties of negotiation have been exacerbated by changes in the voting rules brought in with the 1987 SEA. The 1987 Act introduced Qualified Majority Voting (QMV) on issues pertaining to the completion of the internal market and this is increasingly used in Council decision-making (Peters, 1992:83). The QMV procedure effectively eliminates the right of veto for Member States, and renders EC policy-making dependent on coalition formation amongst national delegations.³

The 1987 SEA also served to enhance the participation of the European Parliament in the EU policy-making process. Prior to 1987, the Parliament's role was predominantly consultative. Parliament would render an opinion on Commission proposals before the Council took action, "but this opinion had little influence" (Peters, 1992:92). A new 'cooperation procedure' introduced under the terms of the 1987 Act enables Parliament to essentially override Council decisions in concertation with the Commission.⁴

³ QMV rules allocate 10 votes each to France, Germany, Italy and the United Kingdom and 8 votes to Spain. Belgium, Greece, the Netherlands and Portugal each have 5 votes, while Denmark and Ireland have 3. The smallest Member State, Luxembourg, has 2 votes. The total voting complement is 76. 54 votes constitute a qualified majority, and 23 a blocking coalition (Peters, 1992:83).

⁴ Parliament is now obliged to review Council decisions. If it is not satisfied with the Council's position, Parliament can suggest amendments to the proposal. If these amendments are supported by the Commission, Council can only overturn them with a unanimous vote. QMV renders the amendments to the proposal accepted. The 'cooperation' procedure, together with QMV, were instrumental in the process of adopting the EC Directives regulating vehicle exhaust emissions (Peters, 1992:92).

EC legislation must be approved by the Council before the Commission can be called upon to ensure its proper application. EC legislation is binding on Member States and the persons or institutions to which it is addressed. There are three legislative tools available to the Council: Regulations, Directives and Decisions. Regulations address precise obligations to specific organs, institutions or persons within the Member States leaving little scope for the exercise of national legislative competence (Siedentopf and Hauschild, 1988:10). Decisions confer rights and or obligations only on those to whom they are addressed (EC Commission, 1992:24).

The Directive, which constitutes the most favoured option for instituting environmental protection measures, has created problems for Member States in terms of implementation. The Directives on environmental protection are no exception. Environmental policy in the EU relies mainly on Directives since they are used in cases where a substantial change in Member State national legislation is envisaged, in order to put the policy into effect (EC Commission, 1992:25).

Three levels of governance are typically involved in the implementation of EC Directives, in marked contrast to the usual policy formulation and policy implementation procedures within national jurisdictions. The institutions of the EC form the macro-level, the national authorities of the Member States represent the meta-level and the application of policy in local contexts is performed by local agencies at the micro-level. The introduction of an 'extra' level in the implementation of Community legislation, together with the unique relationship between the EC and its Member States, has generated issues that have been receiving considerable academic and scholarly attention in recent years.

2.4. Macro-Implementation: The EU and Policy Implementation

Haigh asserts that the implementation of Community legislation is inevitably more complex than the implementation of purely national legislation.

... not only is the chain between Community legislation and action on the ground one link longer, but the mechanics of enforcement is a matter for the Member states themselves and competent authorities within them who will not have had much say in the drafting of the Community legislation. (Haigh 1986:91)

There is no doubt that the greater political distance between implementers and decision-makers generates problems. However, the Directive as a legislative tool was designed to accommodate such problems. Since Directives are the most common form of EC environmental policy, this discussion will focus on the particular issues associated with them, to the exclusion of Regulations and Decisions.

The Directive is a unique kind of legislative tool, having "no clear precedents in the legal systems of Member States" (Siedentopf and Hauschild, 1988:8). It is only the 'ends' specified in the Directive, and not the 'means', that Member States are obliged to meet. The statutory definition of the EC Directive is provided in Article 189 (3) of the EEC Treaty

A directive shall be binding, as to the result to be achieved, upon each Member State to which it is addressed, but shall leave to the national authorities the choice of form and methods.

Furthermore, Article 5 of the Treaty obliges Member States to incorporate Directives into binding national law (Siedentopf and Hauschild, 1988:8–9).

In terms of macro-level implementation then, the Commission is responsible for formulating legislation in accordance with the Council's decisions, and directing Member States to incorporate these legislative decisions into their own national legal code. With regard to Directives, the Commission has the duty to ensure that the provisions are

transposed into national law (formal compliance), and that the national law is implemented in such a way as to achieve all the objectives of the Directive (practical compliance) (EC Commission, 1992:25). To enforce this process, the Commission can call upon the European Court of Justice through the initiation of infringement procedures provided for under Article 169 of the EEC Treaty.

When Directives have not been implemented according to the terms laid out by the EC, the Commission can serve formal notice of infringement to Member States under the terms of Article 169. If the Member State challenges the Commission, either through denial of an infringement or through a failure to correct the problem, the Commission is then authorised to take the matter to the European Court of Justice. The Court may conclude that a Member State is in breach of Community law, and may request that country to take measures to rectify the breach. However, and importantly, there are no further sanctions available to the EC (although a second infringement procedure may be initiated).

In the absence of sanction, the EC relies on political pressure to ensure compliance. The Commission claims that such political pressure is considerable and "non-compliance is very much the exception" (EC Commission, 1992:25–26). This assertion by the Commission is certainly debatable. In its 1990 annual report on the implementation of EC legislation in its Member States, the Commission noted that the situation was "far from satisfactory" (cited in ENDS Report 205 February 1992, p.32).

Many of the Commission's problems in ensuring practical compliance with the terms of its Directives is its lack of resources. It has neither the personnel nor the financial resources to ensure that Community standards, including environmental ones, are being met within the EU's Member States. Instead, it is dependent on individual and interest group activism to bring implementation failures to its attention. In a study done by Kramer, it was

found that the citizens of Europe were making increasing use of the Commission in its role of European environment watchdog. While the number of Article 169 proceedings have shown a decline in recent years, the number of complaints has more than tripled (Table 1). UK citizens are the Community's most numerous complainants, accounting for over 25 per cent of the complaints against breaches of environmental law lodged with the EC in 1990 (ENDS Report 205 February 1992, p.32).

Table 1 Infringement Procedures Relating to Environmental Directives Under Article 169, 1985-1989

YEAR	1985	1986	1987	1988	1989
# complaints	11	36	150	138	465
# proceedings	100	118	155	186	147

Source: Kramer, 1991:39–56

2.5 Meta-Implementation: The Member States and Policy Implementation

Implementation of EC Directives is, by statutory definition, determined by the legislative and administrative procedures that the Member State establishes for the realisation of the objectives set out in the Directive. This poses a problem for the uniform application of a Directive, given that there is a vast range of institutional resources, political systems of governance and policy styles across Member States.⁵ This divergence inevitably influences the manner in which the objectives of the Directive are realised.

⁵ Richardson *et al.* (1982) describe a 'policy style' as a system of societal decision-making. Policy style, in this sense, refers to both policy-making and policy implementation (p.2). Vogel (1986) prefers the term 'regulatory style' to describe patterns of regulation between government and business.

A fundamental, and initial, problem in the implementation of EC Directives at the meta-level is the widely divergent legislative systems that exist across EU Members. Countries such as Italy and the Netherlands face a lengthier legislative process for the adoption of statutes than does, for example, the United Kingdom. Thus, some Members find themselves unable to implement Directives by the formal compliance date by virtue of the manner in which their legislative processes operate.

Much of this delay is attributed to the type of legal instrument used within each national jurisdiction to give effect to the objectives of the Directive. Where such objectives can be met through administrative regulations (secondary legislation), formal compliance is relatively quick and problem-free. However, where primary legislation such as Acts of Parliament are used, formal compliance can be a lengthy and arduous process. In some national jurisdictions, no new legislative measures will be needed in cases where such policy objectives are already being met by existing domestic law. Siedentopf and Hauschild's study of the implementation of seventeen Directives within Member States illustrates the preferred legislative mechanisms employed across the EU (Figure 2). Germany shows a marked preference for primary legislation to enact the Directives, while the Netherlands, Luxembourg and Ireland favour secondary legislation procedures. Belgium, Germany, Luxembourg and the Netherlands employed no administrative acts to enact the Directives, whereas these were readily established in Denmark, the United Kingdom, Italy and Ireland.

Other processes may also hinder the implementation of Directives at the meta-level. Implementing officials may be ignorant of the terms of the Directives. This is a consequence of the political distance between local environmental control officers and decision-makers in Brussels. Local officials are not necessarily concerned with the broad objectives of the EC in the "carrying out of their day to day duties" (Haigh, 1986:92-94).

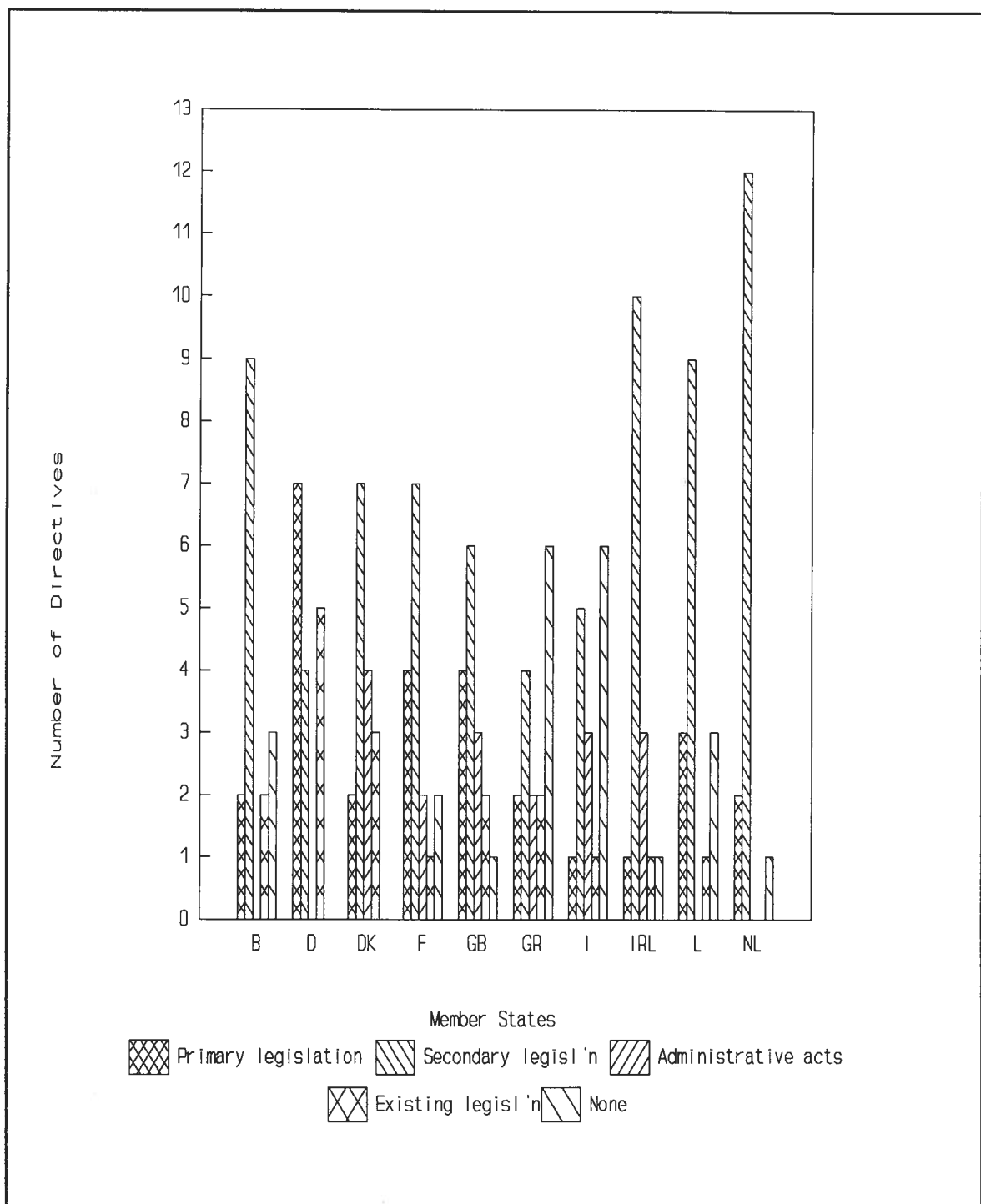


Figure 2
Incorporation Measures taken by Member States

Source: Siedentopf and Hauschild, 1988:54

Furthermore, imprecise legislation, or Directives that provide for discretionary obligations, are unlikely to be applied uniformly throughout the EU. Such legislation allows for a degree of interpretation on the part of the Member State, which will in turn be determined by national priorities, administrative arrangements and legal and political cultures. Such was the case with the EC Directive concerning water standards for freshwater fish, where Member States were responsible for designating waters and then maintaining the environmental quality standards contained in the Directive. Germany failed to designate any freshwater areas, and thus did not need to meet any of the statutory provisions of the Directive (Haigh, 1986:28).

While imprecision, discretionary administration and delays in the implementation procedure at the meta-level have accounted for problems and failures in formal compliance, other factors have contributed to a weakening of practical compliance. In their survey of comparative air pollution control measures, Knoepfel and Weidner identified several factors that contributed to differential policy outputs in various countries. The first relates to the ability for monitoring systems to be manipulated. Countries may employ different measuring equipment, variations in the size of the area being monitored and widely divergent evaluative methods to skew the results that are reported to the Commission. Although countries may seemingly meet the objectives of a Directive according to their own monitoring data, the actual impacts of the application of the Directive may be negligible (Knoepfel and Weidner, 1988:200).

The second factor relates to what the authors called 'percentile reduction'. Ambient air quality standards can be made less stringent by establishing a low percentile for which the average measured air quality value for a given time period is to be calculated. By increasing the number of peak values that do not have to be included in calculating the mean

average value, the frequency with which the statutory standard is met (or surpassed) is effectively raised (Knoepfel and Weidner, 1988:200). Other problems identified by the authors include a reliance on estimated emissions, rather than actual emissions; siting monitoring stations away from areas of high air pollutant concentrations; and attributing exceedences of statutory standards to exceptional 'externalities' such as prevailing winds, harsh climatic conditions and a high incidence of imported air pollutants (Knoepfel and Weidner, 1988:203–204).

The flexibility of application inherent in the Directive has also been the source of considerable problems in its implementation. As Arp has argued, the purpose of EC regulation has been to create uniform conditions for economic activity. Thus,

...clear standards have to be set out against which implementation of the rules can be judged. Loopholes must be avoided which might allow member states to apply the law inadequately, be it in response to political or economic pressures or due to differing national regulatory systems. The detailed nature of Community law is thus necessary to ensure the intended uniformity of effect, often under very different national conditions. (Arp 1993:161)

Because of these reasons, Directives have become increasingly precise in their language and stipulations, and specific in their means. Indeed, EC legislation "often consists of exhaustively detailed stipulations which blur the overall objective" (Arp, 1993:161). Discretionary powers over Directives that were supposedly left to the Member States, as originally envisaged in the EEC Treaty, have been eroded (Siedentopf and Hauschild, 1988:10). In some respects, Directives are so precise that they leave Member States little latitude (Haigh, 1986:81).

The legalistic precision with which Directives are imbued has made it difficult for states where national policy styles rely on vague articulations of objectives and a high degree of administrative discretion. As Arp notes, "the institutional mechanics of the EC

are...conducive to a regulatory style which emphasises legalistic precision" (Arp, 1993:161). The United Kingdom, with a policy style that is antithetical to the EC's preference for legalistic precision, is one such Member, and the conflict between British policy style and the precise nature of EC Directives is examined in the following section.

2.6 The United Kingdom, Policy-Making and Environmental Protection

The United Kingdom has the world's oldest system of pollution control. It was the first country to introduce regulations for the protection of the environment in 1273, and the first to establish a pollution-control agency in 1863. The British conservation movement dates back to the late nineteenth century and the establishment of statutory conservation agencies in the early 1900s (Vogel, 1986:31). In recent years, and particularly during the 1980s, Britain's reputation in terms of environmental protection has been described as "the dirty man of Europe" (Rose, 1990). The British government has been reluctant to adopt stringent environmental standards, has indulged in protracted political wrangling with its European partners over the need for environmental protection and demonstrated lethargy in acknowledging environmental pollution as an important domestic concern. As McCormick notes, "by almost every measure, the environment is a relatively minor issue on the British political agenda" (McCormick, 1991:7).

The perception of the UK as a laggard in environmental protection is due, for the most part, to the regulatory style that characterises British policy-making and policy implementation. The British policy style demonstrates a preference for consensual agreements, secret negotiations and gentle persuasion rather than aggressive coercion for compliance. As Ward and Samways describe, "the British style of regulation involves implementation by consent" (Ward and Samways, 1992:119).

Environmental policy-making in the UK shows no significant departure from the British policy style. Environmental regulations are generally flexible and informal and there is an extensive reliance on industrial self-regulation. Prosecutions are rare and there is a heavy reliance on a cooperative and close relationship between industry and government. The British regulatory style, in the arena of environmental protection, shows a marked reluctance to employ uniform standards for emissions or environmental quality and is, instead, heavily dependent on administrative discretion (Vogel, 1986:21).

British pollution control policy has traditionally been based on three principles: best practicable means, voluntary compliance and secrecy (McCormick, 1991:92). Best practical means (BPM) is a unique concept insofar as standards are calculated with reference to local conditions, the state of technological knowledge and the costs of pollution abatement. BPM is fundamentally "based on the idea that government should interfere as little as possible with industry" (McCormick, 1991:92). Voluntary compliance is also an important principle of environmental regulation. Pollution control agencies have, for the most part, worked in partnership with industry, seeing their role as to educate and persuade rather than to coerce through threat of prosecution. Finally, in order to foster this close cooperative relationship with industry, both regulator and regulated are protected by an implicit code of confidentiality and secrecy (McCormick, 1991:93).

In general, British governments have resisted EC-inspired environmental initiatives. This reluctance stems from four factors. The first relates to the UK's geography. British territory is surrounded by "large turbulent gales and gusty Atlantic gales" such that, it is believed, the natural environment is able to absorb (through dilution or dispersion) more pollutants than its continental neighbours. Secondly, the British style of regulation is antithetical to the legally-binding standards preferred by the EC. Thirdly, the British have

always been cautious of the costs of pollution abatement. The economics of pollution control has been an important factor in the government's reluctance to accept uniform standards. Traditionally, Britain has argued for pollution abatement regulations that are economically sustainable given the current state of technological knowledge within the UK, rather than the technology-forcing standards often favoured by more 'green' EC Members such as Germany and Denmark. Finally, the British have been sceptical about adopting regulations based on scientific speculation, preferring instead to wait for concrete evidence before regulating behaviour (O'Riordan, 1988:40–41).

I would suggest that the British policy style does not facilitate the smooth application of EC Directives. EC Directives, as has been noted, involve precise legalistic language and an 'open' and 'accountable' administrative system. EC legislation typically involves the establishment of provisions for performance review, public access to information and judicial enforcement of statutory standards. Britain's reliance on notions of 'best practicable means' and 'best available technology not entailing excessive cost' confer discretionary powers on administrators and inspectors, and thus run against the grain of EC environmental legislation with its statutory environmental standards. Similarly, the close and cooperative relationship between government and business leaves little distance between the two for open and accountable administration, judicial review or public involvement.

Nonetheless, the EC is now arguably the single most important and effective influence on British environmental policy (McCormick, 1991:273). All EC Directives, in the process of negotiation, go to the European Secretariat to the Cabinet Office. The Secretariat, staffed by personnel from the Foreign Office, serve to coordinate consultations with the relevant government departments potentially affected or interested in the terms of the Directive. Typically, interdepartmental communication is characterised by informal contact

rather than institutionalised consultation. Because of the unitary and centralised system of governance, there is virtually no consultation with local authorities or regional implementing agencies (Siedentopf and Hauschild, 1988:33–36).

2.7 Implementation in the United Kingdom

EC Directives are usually implemented under existing British statutes. The European Communities Act 1972 provides general powers for the British government to implement Community obligations. Practice has shown that there is a preference for using administrative regulations under existing Acts of Parliament to implement the objectives of EC Directives, when such primary legislation already exists (Figure 2). The majority of Directives are implemented through the issuance of government circulars addressed to the relevant authorities. These circulars indicate how existing national legislation is to be interpreted according to the terms of the Directive, but do not have the force of law (Haigh, 1986:85).

In recent years, the EC has taken a dim view of the use of administrative circulars in the implementation of Community Directives. In infringement procedures brought before the European Court of Justice, the Court

"has repeatedly emphasised the importance of correct incorporation of directives into national law by requiring binding rules and ruling out the application of a directive by administrative practice alone..." (Siedentopf and Hauschild, 1988:10)

Consequently, there has been an increasing number of statutory instruments (secondary legislation) which activate existing statutes to put into effect the terms of EC Directives. Statutory instruments (SI) must be laid before the Houses of Parliament, but typically are not debated (Boehmer–Christiansen and Skea, 1991:267). Less than 25 per cent of the 2,500

statutory instruments made each year are referred to a Parliamentary Select Committee for scrutiny (Grant, 1989:63).

In recognition of the increased importance accorded to environmental protection by the EC, the British government passed the Environmental Protection Act in 1990. This constitutes an 'enabling' legislative framework, under which the terms of most environmental Directives can be implemented. The 1990 Act introduced a new, holistic approach to environmental protection through the use of Integrated Pollution Control (IPC). Under the terms of IPC, two approaches are mandated in industrial processes causing pollution to the environment. The first involves the use of the 'best practicable environmental option (BPEO)'. BPEO required industries to take into account pollutant emissions to air, water and land, and then employ the option that causes the least overall damage.

The second approach, to be used in conjunction with BPEO, is the 'best available technique not entailing excessive cost (BATNEEC)'. As mentioned previously, the incorporation of BATNEEC was an important concession won by the UK during EC negotiations on pollutant emissions to the air. It is worth noting the subtle change of text that occurred in the process of formal implementation. The EC text refers to 'technology' while British legislation has preferred the term 'technique'. This would appear to reflect the UK's concern with the expense that pollution abatement incurs implying that 'best available technology' would necessarily be more expensive than 'best available technique', which does not carry with it the implicit utilisation of existing technology. Such technology may be available on the European market but expensive for the UK to employ. This subtle change in text is interpreted as a "deliberate weakening" of the intent and spirit of EC Directives on environmental protection (Boehmer-Christiansen and Skea, 1991:267).

In general, however, the UK has an exemplary record on the formal implementation of EC legislation. Mazey and Richardson find the British demonstrate a high degree of compliance, in stark contrast to the "tradition of non-compliance" in other EC states such as Italy (Mazey and Richardson, 1993:19). However, attention must be drawn to the gulf that separates formal compliance and practical compliance. There is little debate over the UK's claim to one of the best records in the EC for formal implementation (Mazey and Richardson, 1993:19; Siedentopf and Hauschild, 1988:69). Ironically, criticism of the EC Commission was raised by British civil servants who were concerned that the Commission seemed solely concerned with formal compliance, and had little regard "to how exactly Community directives were being applied and to what effect" (Siedentopf and Hauschild, 1988:70). It can be seen that successful implementation at the macro- and meta- levels does not necessarily translate to effective implementation at the micro-level. The Commission may ensure formal compliance and national authorities will undertake the necessary legislative measures to make the objectives of a Directive binding within their national jurisdictions. It is at the micro-level of local application that one finds the discrepancies of policy impact, should they exist.

The inherent problems between the arenas of policy formulation and policy implementation are exacerbated by the terms of membership within the EC. This is clearly illustrated in the environmental policy arena. Using the examples of vehicle emissions and emissions from large combustion plants, I will examine the role played by the EC vis-a-vis its relationship to the UK. In both cases, the jurisdictional debate featured highly in the negotiations leading up to the agreement on the relevant Directives. While vehicle emission

negotiations were motivated by concerns about the Common Market, large combustion plant emissions began from a concern to protect the environment and international concern over the impacts of acid rain. Chapter Four looks at the implementation of these directives in the UK in terms of the factors that played a role in meeting the objectives laid down by the EC. However, it would seem prudent to precede such a discussion with an overview of the problems that gave rise to the Directives, and the manner in which the UK sought to address the application of the Directives themselves.

Chapter Three

The Problem and Its Solutions

3.1 Vehicle Emissions

The debate in the EC over vehicle emission standards has been predominantly informed by the desire to promote free and equal trading opportunities for the Community's automobile manufacturers (Haigh, 1992:6.8–2). Vehicle emissions controls were raised in the Community as a free trade issue because "[b]efore the 1980s, environmental concerns were insufficiently articulated to challenge seriously the priority given to free trade" within the EC (Arp, 1993:153). This is not to suggest, however, that environmental concerns were absent from the debate. It was simply the case that "economic and environmental concerns [were] valued differently by different actors" and that, for the most part, environmental issues were generally overshadowed by economic ones (Arp, 1993:153). Indeed, "[had] it not been for the interest shared by industry and governments to keep a common market for automobiles, Community regulation on exhaust emissions might not have survived" (Arp, 1993:153). As a result of the economic concerns over free trade, most EC Directives entailed 'optional' standards. Member States were not obliged to meet the emission limits, but could not set more stringent limits than those specified by the Directive. To do so would lead to the effective erection of a trade barrier against imported vehicles which did not comply with the higher domestic standards (Haigh, 1992:6.8–5).

Negotiations on the Directives relating to emission limits were fraught with tension and conflict. Germany and Denmark pushed for more stringent standards in the face of resistance from the UK, France and Italy. Much of the protracted wrangling reflected the domestic car industries' interests. German manufacturers such as Mercedes and BMW

produced large and relatively expensive cars that could easily absorb the technological costs of meeting higher emission standards.⁶ Indeed, many of their models designated for export to the United States were already built to comply with the higher US exhaust emission standards. The British, French and Italian manufacturers, on the other hand, were primarily concerned with their small and medium-sized vehicles, which made up the bulk of their trade.⁷ The technological adaptation required for these cars would result in a considerable increase in the price of their exports and thus have a greater adverse effect on trade.

In an attempt to forestall German moves to unilaterally set higher emission limits than those provided by existing Directives, the Commission proposed tighter standards for the Community as a whole in June 1984. A year later agreement was finally reached with the 'Luxembourg Compromise' which set varying standards according to differential engine capacities. However, formal agreement was made contingent on Greece receiving financial support from the EC for environmental protection, and eventually blocked by Denmark which wanted standards of comparable stringency to those in the United States.

The passage of the 1987 Single European Act served to break the deadlock over negotiations with the introduction of new voting procedures, and a 'cooperation procedure' that enabled the Commission and the Parliament to work together in placing pressure on the Council (Haigh, 1992:6.8–6). By 1989, utilising these new procedures, the Council was able to agree to uniform emission standards that were obligatory rather than optional, and by 1991 these became applicable to all passenger vehicles regardless of engine

⁶ Arp suggests that the introduction of three-way catalytic converters to large cars (1.8L–2.0L) would increase costs by 5 percent, while similar technological application to smaller cars (0.75L–1.0L) would lead to a 17 percent increase in cost (Arp, 1993:158).

⁷ The market share of cars under 1.4L is 84 per cent in Italy, compared with 37 per cent in Germany (Arp, 1993:158).

capacity through the adoption of Directive 91/441.

Directive 92/55 relates to the inspection and maintenance of vehicles, in order that exhaust emission standards are monitored and regulated beyond manufacturing specifications. Once manufacturing specifications had been agreed to at the EC however, little resistance was offered to the passage of this follow-up Directive.

The Directives

The EC Consolidated Directive (91/441) concerning pollution from vehicle emissions stipulate emission limit values for carbon monoxide (CO), hydrocarbons (HC), nitrogen oxides (NO_x), volatile organic compounds (VOCs) and particulates. The Directive, the last in a long line of regulations relating to passenger cars, served to consolidate existing regulations that set limits according to vehicle engine capacities by setting standards to be applied to all passenger cars (Table 2). The Directive stipulates that emission limits must be implemented by 1 July 1992 for all new models, and by 1 December 1992 for all new cars.

Table 2 Directive 91/441 (All Passenger Cars)

CO	HC/NO_x (g/km)	VOCs (g/test)	particulates^a	CO idling speed (% by volume)
2.72	0.97	<2	0.14	3.5–4.5

Source: Haigh, 1992:6.8–3

^a For compression ignition engined vehicles only

A further provision, in the preamble to the Consolidated Directive, was the encouragement of the use of tax incentives to accelerate the introduction of 'clean' cars to the European market.

...the environmental impact of the more stringent standards would be greatly increased and speeded up if the Member States were to grant...tax incentives...

This practice had been instituted in Germany and the Netherlands in the mid-1980s and drew considerable criticism from Britain and France. Tax incentive schemes were seen by their critics as providing an unfair market advantage to car manufacturers already employing catalytic converter technology, to the detriment of those (mainly British and French) that did not (Arp, 1993:156).

The consolidated Directive 91/441 applies to the manufacturing specifications of vehicles by requiring them all to be fitted with three-way catalytic converters. Directive 92/55 requires Member States to measure tailpipe emissions through the administration of periodic roadworthiness tests on all vehicles covered by the terms of the Directive.

Implementation in the United Kingdom

Legislation

Prior to 1993, the Consolidated Directive 91/441 was implemented in the United Kingdom by the Motor Vehicles (EC Type Approval) Regulations 1992 (SI No.3107). For new models, The Motor Vehicles (Type Approval) (Great Britain) (Amendment) Regulations 1992 (SI No.1341) makes EC emission limits mandatory within the jurisdiction of England and Wales. The Road Vehicles (Construction and Use) (Amendment) (No.5) Regulations 1992 (SI No.2137) makes similar stipulations for new cars first used on, or after,

31 December 1992 within England and Wales.⁸ Since 1993, Directive 91/441 and all other relevant Directives were consolidated in the United Kingdom Statutory Instruments on Vehicle Emissions 1993 (SI No.2199).⁹ All Regulations (secondary legislation) relating to exhaust emission limits are enacted under the Road Traffic Act 1972.

Jurisdiction

Responsibility for the implementation of national legislation relating to the Directive lies with the Department of Transport (DTp). Automobile manufacturers are required to receive type-approval from the DTp before full-scale production can be undertaken. The implementation of Directive 92/55 occurs at the local level where registered vehicle inspectors are empowered by DTp to carry out annual roadworthiness testing on cars over three years old. Vehicle inspectors are provided with guidance notes on the standards to be attained in such tests, through the circulation of Tester's Manuals circulated by the DTp.¹⁰ These tests now incorporate EC emission standards. Vehicles are issued with a Ministry of Transport Certificate of Roadworthiness which is required to insure vehicles. These Certificates are also necessary to purchase Road Tax badges, which must be displayed by all vehicles that are in roadworthy condition and operational.

⁸ Jill Speed, HMSO. Personal communication, 5 July 1994.

⁹ Stephen Hall, Environmental Protection Statistics Division, Department of the Environment. Personal communication, 7 July 1994.

¹⁰ David Briggs, Head of Roadworthiness Testing and Enforcement, Department of Transport. Personal communication, 5 September 1994.

Enforcement

Vehicle examiners are empowered to prohibit the further use of any vehicle considered to be in an unsatisfactory condition, by the failure to issue such a Certificate. Enforcement of Road Tax payment is undertaken by the police authorities and acts as an indirect enforcement of EC emission standards. Police authorities are also empowered to undertake spot checks on exhaust emissions at the roadside (DoE, 1978:11).

The Effect on UK Practice

The implementation of Directives 91/441 and 92/55 in the UK has been relatively smooth. Although the negotiations over standards, at the EC, were fraught with dispute and conflict, the adoption of the 91/441 standards came at a stage when the technological capabilities of domestic car manufacturers had progressed to the extent that the incorporation of catalytic converters would not create unbearable economic costs. Some UK manufacturers such as Vauxhall and Ford announced, in March 1989, that they would be marketing catalyst-equipped cars. It was only then, in May 1989, that the government announced its agreement to back catalytic converter technology, thus enabling the UK to meet stricter Community emission standards (Rose, 1990:173).

The implementation of inspection and maintenance programs has also been relatively smooth in the UK, in stark contrast to similar programs in the US.¹¹ The DTp undertook consultations with various interest groups in November 1991, and the response was "generally supportive" of the incorporation of EC emission standards into the annual

¹¹ For discussions on the implementation of inspection and maintenance programs in the US, see Mazmanian and Sabatier, 1983, Chapter 4 and Mills and White, 1978.

roadworthiness testing program.¹² Indeed, emission testing in the UK predated the incorporation of Directive 92/55. The Directive served to tighten the standards to which vehicles were forced to comply rather than create a new system of testing.¹³ Roadworthiness test failures of the EC emission standards are set out in Table 3.

The low failure rates for heavy goods vehicles and public service vehicles reflect the special preparation that such vehicles are subject to, prior to their annual roadworthiness testing. Private vehicles, accounting for the largest proportion of vehicle emissions within the UK show an improvement in failure rates since the implementation of the EC Directive 92/55.

Table 3 Emission Standards Failure Rates As A Percentage of Total Vehicles Tested, for Different Classes of Vehicles, 1991-1994.

Class of Vehicle	1991/92	1992/93	1993/94 ^a
Heavy Goods Vehicles	n/a	1.9	2.5 ^b
Public Service Vehicles	n/a	2.4	2.7 ^c
Private Vehicles	13	10.9	7.7 ^d

Source: David Briggs, Head of Roadworthiness Testing, Department of Transport. Personal communication, 5 September 1994.

^a 22 million vehicles were tested in 1993/94.

^b 1.25% of total vehicles were HGVs

^c 0.39% of total vehicles were PSVs

^d 98.36% of total vehicles were private vehicles

¹² David Briggs, Head of Roadworthiness Testing and Enforcement, Department of Transport. Consultations were undertaken with the Automobile Association, the Royal Automobile Club and the Consumers' Association. There is no public record of the results of these consultations, though DTp describes the response as "generally supportive". Personal communication, 5 September 1994.

¹³ David Briggs, Head of Roadworthiness Testing and Enforcement, Department of Transport. Personal communication, 5 September 1994.

3.2 Large Combustion Plant Emissions¹⁴

Negotiations over sulphur dioxide (SO₂) emissions were instigated by concerns over acid rain deposition in Scandinavia and Germany. In 1982, Germany brought the issue to the attention of the Commission, and the Framework Directive relating to the regulation of air pollutants was agreed to in April 1984 (EC Directive 84/340). Like the negotiations over vehicle emission regulations, Germany was once again the principle instigator and the most enthusiastic proponent of strict emission controls for large combustion plants, the largest emitters of SO₂. Once again, Britain proved to be the most consistently reluctant party to the negotiations.

Britain's acceptance of the agreement was of great importance since it was the largest emitter of SO₂ in the Community (Table 4). UK Government estimates have shown that 71 per cent of British SO₂ emissions are from power stations. 32 per cent of NO_x emissions originate from power stations while 45 per cent are from vehicle emissions (Friends of the Earth, 1990:3). These figures point to an obvious need to address emission reductions within the UK. However, the UK government has been guided by a concern to protect the coal industry and, during the Directive negotiations, preparing for the privatisation of the electricity industry.

Like the vehicle emissions proposals, uniform reductions of SO₂ emissions were proposed by the Commission in November 1983. Under the terms of the original proposal, all Member States would have to undertake 60 per cent reduction in SO₂ emissions

¹⁴ The protracted debate over acid rain, sulphur dioxide emissions and negotiations on the Large Combustion Plant Directive within the European Community is well documented. For a full discussion of the issues see S. Boehmer-Christiansen and J. Skea Acid Politics, 1991; N. Haigh Manual of Environmental Policy: the EC and Britain, 1992; M.E. Wilcher The Politics of Acid Rain, 1989.

and cut NO_x emissions by 40 per cent. These reductions, based on 1980 emission levels, would have to be completed by 1995. Due to its reliance on coal-fired electricity generation and the high sulphur content of its indigenous coal, Britain vehemently opposed the proposed reduction targets, arguing that such a programme would place disproportional costs on the United Kingdom (Weale, 1992:70).

Table 4 Pollutant Emissions for the Member States, 1980

Member State	NO _x	SO ₂
Belgium	110	530
Denmark	124	323
Germany	870	2225
Greece	36	303
Spain	366	2290
France	400	1910
Ireland	28	99
Italy	580	2450
Luxembourg	3	3
Netherlands	122	299
Portugal	23	115
United Kingdom	1016	3883

Source: Haigh, N., Manual of Environmental Policy Release 4, p.6.10–2; Boehmer–Christiansen and Skea, 1991:238.

Lengthy negotiations ensued, and it was not until five years later that consensus was finally reached among Council members. The compromise proposal involved, for the first time, a system of differential reductions for each Member State (Johnson and Corcelle, 1989:139).¹⁵ The United Kingdom was able to secure lower reductions on the basis of the high-sulphur indigenous coal used in its power plants. Most Member States, including France, Germany, the Netherlands, Luxembourg and Belgium, agreed to a three phase target that would require SO₂ reductions of 40, 60 and 70 per cent (based on 1980 emissions) in 1993, 1998 and 2003 respectively. The EC Directive however, allows less stringent reduction targets for the UK at 20, 40 and 60 percent for each of the three target years. Ireland, Italy, Portugal, Greece and Spain were also able to secure considerable derogations from the 40–60–70 reduction programs by virtue of their weaker economies and need to pursue industrial growth (Table 5). Similar derogations were allowed for NO_x emissions (Table 6).

The Large Combustion Plant (LCP) Directive was finally agreed to in November 1988. Separate provisions were made for new and existing plants. Existing plant SO₂ emission reductions were based on national emission totals, which were to be reduced in three stages and varied according to differing domestic circumstances in the Member States. Phase I targets were to be met by 1993, while Phases II and III were to be attained by 1998 and 2003 respectively. NO_x emissions reductions were to be phased in two stages. Phase I targets were to be met by 1998, and Phase II by 1998. New plants were subject to specific emission limits, although Britain was once again able to secure a derogation for new plants burning indigenous high sulphur coal.

¹⁵ OECD data on SO₂ emissions, together with Phase I EC reduction targets, is given for each of the Member States in Appendix I. Data for NO_x emissions is provided in Appendix II.

For new plants burning indigenous solid fuel, specific emission limits for SO₂ have been set by the DoE that are higher than those set out in the Directive. For plants with a rated thermal input of between 50 and 100 MW, the emission limits are set at 2250 mg/m³, rather than the EC standard of 2000 mg/m³. For plants of 100 MW or greater, the limits are based on the amount of sulphur removed as a percentage of that contained in the fuel. Plants between 100 and 166 MW must remove more than 40 per cent of the sulphur contained in the fuel, and plants greater than 500 MW must remove over 90 per cent. Plants between 166 and 500 must remove sulphur on a sliding scale between 40 and 90 percent, determined by numerical formulae provided by the DoE (DoE, 1991:7).

The Directive

The Large Combustion Plant Directive (88/609) was proposed by the Commission on 15 December 1983. Final agreement was not reached until 24 November 1988. The Directive sets different requirements for new and existing plants. Emission limits were applied to SO₂ and NO_x emissions from plants with a thermal input of 50 MW or more.

Existing plants are regulated by total national emission limits through phased reductions and with different limits for different Member States (Table 5; Table 6). Existing plants are defined as those for which the original construction licence, or operating licence, was granted before 1 July 1987. Formal compliance was to be achieved by 30 June 1990, and by 31 December 1990 all Member States were to submit to the Commission a national programme, including timetables for the implementation of the phased reductions set out in the Directive (Haigh, 1992:6.10–1).

For new plants, i.e. those licensed after 1 July 1987, specific emission limits were set according to the rated thermal output of the plant (Figure 3; Table 7). These limits

were based on the 'best available technology not entailing excessive cost (BATNEEC)'. Derogations from the limits were allowed in certain cases, such as Spain's larger plants and British plants burning indigenous high sulphur fuel.

Table 5 Emission Limits for SO₂, Directive 88/609

	Emission ceilings [KTonnes/yr]			% Reductions (1980 base yr)		
	1993	1998	2003	1993	1998	2003
Belgium	318	212	159	-40	-60	-70
Denmark	213	141	106	-34	-56	-67
Germany	1335	890	668	-40	-60	-70
Greece	320	320	320	+6	+6	+6
Spain	2290	1730	1440	0	-24	-37
France	1146	764	573	-40	-60	-70
Ireland	124	124	124	+25	+25	+25
Italy	1800	1500	900	-27	-39	-63
Luxembourg	8	1.5	1.5	-40	-50	-60
Netherlands	180	120	90	-40	-60	-70
Portugal	232	270	206	+102	+135	+79
United Kingdom	3106	2330	1553	-20	-40	-60

Source: Annex I, Council Directive 88/609/EEC

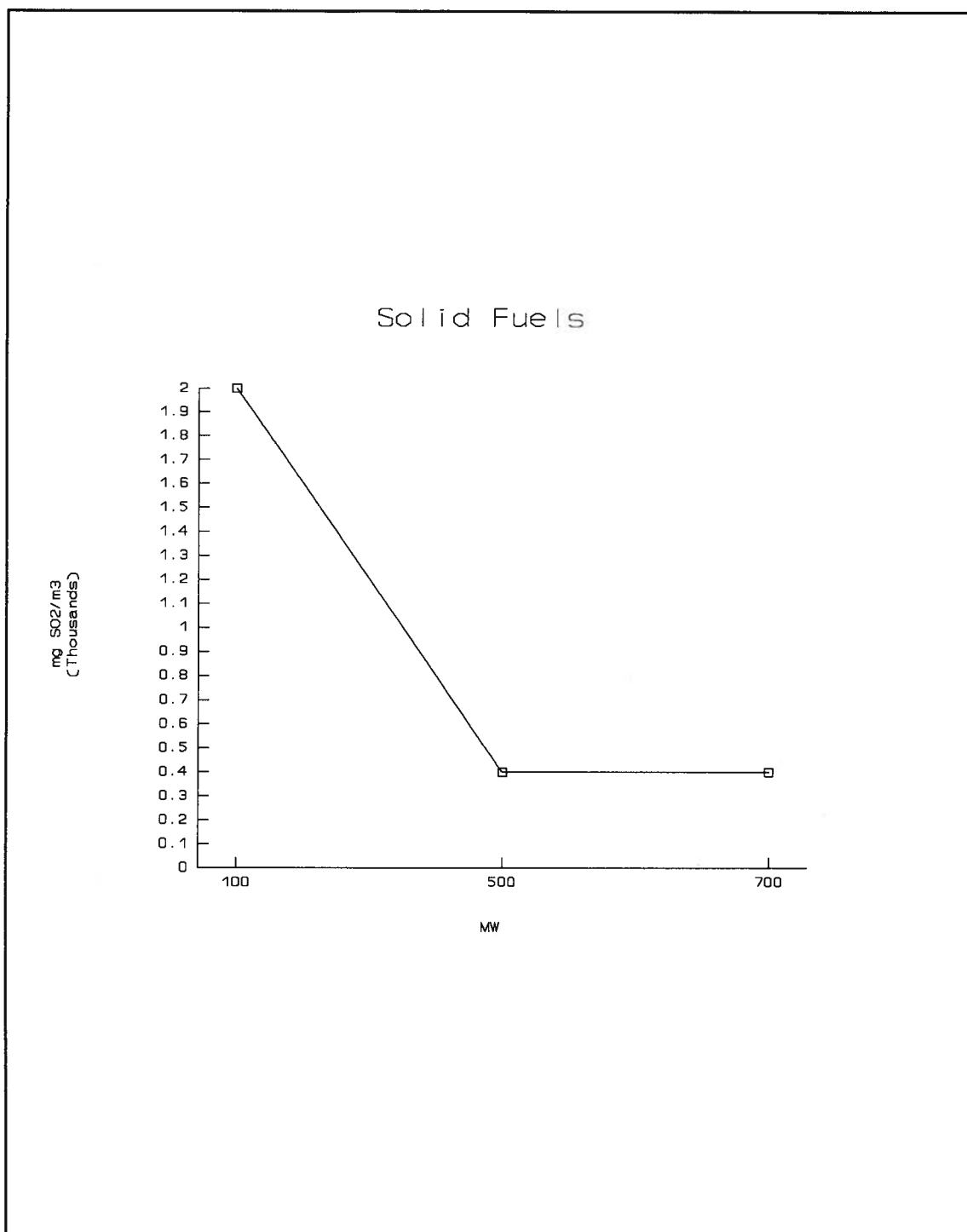


Figure 3
Emission Limit Values for SO₂ for New Plants

Source: Annex III, Council Directive 88/609/EEC

Table 6 Emission Limits for NO_x, Directive 88/609

	Emission ceilings [KTonnes/yr]		% Reductions (1980 base year)	
	1993	1998	1993	1998
Belgium	88	66	-20	-40
Denmark	121	81	-3	-35
Germany	696	522	-20	-40
Greece	70	70	+94	+94
Spain	368	277	+1	-24
France	320	240	-20	-40
Ireland	50	50	+79	+79
Italy	570	428	-2	-26
Luxembourg	2.4	1.8	-20	-40
Netherlands	98	73	-20	-40
Portugal	59	64	+157	+178
United Kingdom	864	713	-15	-30

Source: Annex II, Council Directive 88/609/EEC

Table 7 NO_x Emission Limits for New Plants, Directive 88/609

Type of fuel	Limit values (mg/Nm ³)
Solid in general	650
Solid with less than 10% volatile compounds	1300
Liquid	450
Gaseous	350

Source: Annex VI, Council Directive 88/609/EEC

Implementation in the United Kingdom

Legislation

Formal compliance with the Directive is met through the provisions of the Environmental Protection Act 1990 and the use of Integrated Pollution Control (Part I of the Act). Environmental Protection (Prescribed Processes and Substances) Regulations 1990 (SI 199 No.472) requires all combustion plants to possess authorizations for pollutant emissions. The Large Combustion Plant (New Plant) Directions 1991 issued by the Secretary of State for the Environment requires plants to accommodate the provisions of the EC Directive. The Directions have taken advantage of the derogation allowed for the burning of high-sulphur indigenous coal (Haigh, 1992:6.10–5).

In order to meet national emission limits by controlling the emissions from existing plants, the UK has drawn up a programme of implementation which was submitted to the Commission by the compliance date. Apparently, the United Kingdom was the only Member State to comply with the implementation date (Haigh, 1992:6.10–5).

Jurisdiction

At the meta-level, the Department of the Environment is responsible for the implementation of the Environmental Protection Act 1990. Her Majesty's Inspectorate of Pollution (HMIP), under the Department of the Environment, is responsible for implementing the terms of the Directive at the local level, through its powers to issue authorizations to large combustion plants within its jurisdiction. Regional offices of HMIP have been established in Leeds, Bristol and Bedford to facilitate this process. The Secretary of State for the Environment can direct HMIP about conditions which are to be included in the authorizations, and in this manner EC emission limits can be complied with.

Enforcement

A breach of the authorization conditions renders the operator of the plant liable to prosecution. A person found guilty of such an offence would be liable to a fine not exceeding £20,000 on summary conviction, or an unlimited fine and up to two years imprisonment on conviction on indictment. Failure to comply with the court order would render the operator in contempt of court and liable to sequestration of assets and an unlimited term of imprisonment. The legislative provisions also enforce corporate liability (DoE, 1990:5).

The Effect on UK Practice

Large combustion plants fall under the scheduled processes listed in Part I of the 1990 Environmental Protection Act. Such processes will have to comply with the provisions for integrated pollution control (IPC) according to the 'best practicable environmental options (BPEO)' (Carden, 1991:151). Integrated pollution control (IPC) is a radical new approach to environmental regulation in the UK and warrants closer attention.

Sections 7(2)(a) and 7(7) of the 1990 Environmental Protection Act state that pollution abatement technology should

include the objective of ensuring that the best available techniques not entailing excessive cost will be used for minimising pollution which may be caused to the environment taken as a whole by the releases having regard to the best practicable environmental option available as respects the substances which may be released.

Two issues are of particular interest in the use of best practicable environmental option (BPEO) and best available technique not entailing excessive cost (BATNEEC) as policy objectives. The use of "best" as a standard is highly subjective, dependent upon individual Inspectors' interpretation of local circumstances and the characteristics of each plant.

Furthermore, the best techniques must also take into consideration cost (DoE, 1991:3). Utilising BPEO and BATNEEC, no one technique for pollution abatement is specified and no uniform standard applied. Instead, standards are set for each plant through the issuance of operating authorizations from HMIP (Appendix III; Appendix IV).

The onus is on the operator to determine, according to BPEO and BATNEEC, the most appropriate means for reducing emissions. The operator must "take into account the latest techniques for pollution prevention", must be "encouraged to develop improved techniques" and "will need to demonstrate compliance with BPEO criterion" (DoE, 1991:3). Furthermore, considerable costs are incurred by the operator during the process of application through the levying of fees by HMIP for the granting of authorizations (see below). These requirements on the part of the operator have involved a considerable change in behaviour from the manner in which such processes were regulated prior to the introduction of the 1990 Act.

Applications for authorizations were to be made to HMIP between 1 April 1991 and 30 April 1991. HMIP is authorised to levy a fee for the process of application and this charge is related to components of the process rather than the application as a whole. The initial application fee is £1,200 per component, with an annual fee of £500 per component (Carden, 1991:155).

The 1990 Environmental Protection Act also provides for judicial review of HMIP decisions relating to the granting of operating authorizations. Plant operators can appeal to the Secretary of State for the Environment for a review of the conditions stipulated in the operating licences granted by HMIP. Reacting to the new practices required under IPC, most operators have utilised these provisions both as a means of delaying the implementation of the Directive, and as a tool for the clarification from HMIP. Appeals by

operators must be lodged within six months of the granting of HMIP authorizations, and a large number of operators have taken advantage of this provision. ICI, for example, has appealed the emission limits set for one of its chemical plants, arguing that the standards are too stringent "to be justified on the grounds of the requirement to use BATNEEC" (ENDS Report 213, p.19).

The terms of the Directive do not specify the means by which emission reductions should be achieved. Plants may be retrofitted with flue gas desulphurisation equipment (FGD), switch to low sulphur coal, or focus on emission reductions from specific high emitters only (Johnson and Corcelle, 1989:141). The costs of retrofitting are estimated to raise the production cost of energy by 10 per cent (Johnson and Corcelle, 1989:140).

The UK, despite having secured lower national emission reduction targets and derogations from the limits imposed for new plants, on the basis of the use of high-sulphur indigenous coal, has opted to meet its target through the utilisation of imported low sulphur coal. Original plans to retrofit power stations with FGD have been shelved (Haigh, 1992:6.10–6).

In terms of enforcement, HMIP seems to be demonstrating greater willingness to prosecute persistent offenders, though these have "generally been either smaller companies or simple processes" (ENDS Report 213, p.41). It remains to be seen whether or not HMIP is able to achieve similar results with larger operators should the situation arise. Preliminary indications are that HMIP will, from the recent record of five successful prosecutions against British Steel for exceeding permitted emission levels in 1991/92 (ENDS Report 213, p.41).

The success with which the UK has met the terms of the Directive, in terms of existing plants and national emission targets, are set out in Tables 8 and 9. With regard to SO₂ emissions, DoE estimates for 1991 and 1992 were 2747 and 2674 KTonnes

respectively. This is well below the 1993 target of 3106 KTonnes stipulated in the Directive (DoE, 1994a:13). Although NO_x emissions have not met with quite the same degree of success, they are still estimated at 742 KTonnes (1992) and thus meet the 1993 Directive target of 864 KTonnes (DoE, 1994a:22).

Table 8 Estimated Emissions of SO₂, 1990-1992 and EC Emission Targets (KTonnes/year)

	Target	1990	1991	1992
Large combustion plants ^a	3106	3175	2747	2674

Source: Department of the Environment, 1994a:13

^a Large combustion plants include power stations, refineries and proportion of iron and steel and other industrial combustion processes.

Table 9 Estimated Emissions of NO_x, 1990-1992 and EC Emission Targets (KTonnes/Year)

	Target	1990	1991	1992
Large combustion plants ^a	864	942	749	742

Source: Department of the Environment, 1994a:22

^a Large combustion plants include power stations, refineries and proportion of iron and steel and other industrial combustion processes.

In accordance with the terms of the Directive, these statistics are collected by an extensive regional monitoring network and reported annually to the EC. Compliance with standards for new plants is harder to ascertain because the implementation process involves the granting of operating licences by HMIP Inspectors. Since many of these licences are

currently under judicial appeal (ENDS Report 213, October 1992, p.18), it may be too early to determine the degree of compliance with these standards. The EC is expected to publish a report on the implementation of this Directive later this year.

The preceding chapter has served to establish the provisions of the EC Directives and the extent to which the UK has been successful in meeting them. The process of implementation has been described, including the problems encountered at both the formulation and implementation stages. It is clear that although each Directive has been implemented through very different methods, the UK has been successful in meeting the standards established at the macro- Community level.

The following chapter seeks to explain the implementation of each Directive according to the attributes of the Mazmanian and Sabatier framework. It is hoped that through such an analysis, the roles played by legislation, science and technology, state institutions, target groups and external factors will be determined to the extent with which they comply with the six conditions laid down in the Mazmanian and Sabatier framework.

Chapter Four

Applying the Framework

As noted in Chapter One, Mazmanian and Sabatier outline six conditions that should be met if implementation is to be successful. While the authors look at the implementation process as a series of related conditions, I prefer to examine implementation from the five variables included in their framework: legislation, science and technology, state institutions, interest groups and external factors. By examining the implementation process in this manner, I believe that comparative patterns are more clearly elucidated. Through the use of these variables, it is hoped that a clearer understanding will be reached as to the extent to which each of the Directives was able to meet the Mazmanian and Sabatier conditions of successful implementation.

4.1 Legislation

The Directive, as a legislative tool, specifies standards that must be attained. It is left to the national authorities to determine the means by which these standards are met within their respective domestic jurisdictions. As such, the Directives lay down clear goals but do not structure the implementation process at meta-level. In the case of the vehicle emissions Directive (91/441), specific emission limits are set for carbon monoxide, hydrocarbons, nitrogen oxides and particulates, and a time limit imposed for the attainment of these limits. These are to be met by the manufacturer of the vehicle and can only be done in a consistent manner through the application of a three-way catalytic converter to the vehicle engine (see Section 4.2). While the application of such technology is not mandated by the Directive, current technological knowledge leaves manufacturers with few alternative

options. At the macro-level then, policy objectives are clearly defined. These same goals are incorporated into UK practice at the meta-level, through the United Kingdom Statutory Instruments on Vehicle Emissions 1993 (SI No.2199), enacted under the Road Traffic Act 1972. The practice of licensing pre-production vehicles prior to manufacture is a long standing one (DoE, 1978:11).

Directive 92/55 relates to the inspection and maintenance of vehicles in an effort to regulate tail-pipe emissions beyond manufacturing specifications. This Directive has been implemented, at the meta-level, under the terms of The Road Traffic Act 1988. This Act requires annual roadworthiness testing of all vehicles by necessitating a Ministry of Transport Certificate for the purposes of insurance and road tax. EC emission standards are incorporated into the testing standards. These standards are circulated, through the Department of Transport's Tester's Manual, to all licensed inspectors. Vehicles failing to meet emission standards are not issued with a certificate, and operation of vehicles without test certificates is an offence under the 1988 Act.

The Directive concerning emissions from large combustion plants (88/609) also sets statutory limits for SO₂ and NO_x pollutants. National emission targets are set for existing plants, while new plants are subject to specific limits according to their thermal input and type of fuel employed. However, the Directive includes provisions for derogations from these statutory limits in cases where there is "a substantial and unexpected change in energy demand" [Article 3(5)], or where new plants are using indigenous high-sulphur solid fuel [Article 5(2)]. Furthermore, Article 8 makes specific reference to exemptions for the electricity supply industry in cases where compliance with the terms of the Directive will jeopardise the nation's electricity supply.

The stringency of emission limits are contingent on the derogations permitted in the Directive. The UK, in publishing its program of implementation, has taken full advantage of these derogations with regard to the use of indigenous high-sulphur coal in its power plants. To this end, the Directive has been implemented under the terms of integrated pollution control in the Environmental Protection Act 1990, The United Kingdom's Programme and National Plan, and Inspectors' Guidance Notes circulated by the Department of the Environment.

The National Plan sets emission quotas for SO₂ and NO_x according to industrial sectors, with the electricity supply industry being permitted more lenient reductions than other industrial sectors (Appendix III; Appendix IV). Unlike the provisions for new plants, no limits have been set for existing plants according to their rated thermal input. Rather, industrial sector-specific quotas have been established in order to meet the national emissions reductions articulated in the Directive. Specific limits are set for new plants in the Guidance Notes to Inspectors, according to their rated thermal input. Here too, the UK has taken advantage of derogations permitted for plants using high-sulphur coal.

The 1990 Environmental Protection Act empowers HMIP Inspectors to regulate SO₂ and NO_x emissions for existing plants through the provisions of integrated pollution control (IPC). IPC relies on the concepts of 'best practicable environmental option (BPEO)' and 'best available technique not entailing excessive cost (BATNEEC)'. BPEO and BATNEEC are not clearly defined as uniform standards and appear to allow considerable administrative discretion in the establishment of emission limits for the granting of licences for new and existing plants. It would seem that the goals specified for existing plants in the Directive are vague insofar as they suggest reduction targets on a national basis, rather than for individual plants. For new plants, specific limits according to plant capacity have been

specified by the Directive, but have been circumvented by the UK through derogations allowed for cases where there is an indigenous source of high-sulphur fuel. These factors have allowed individual inspectors, through the application of integrated pollution control, considerable discretion in regulating individual large combustion plants.

4.2 Science and Technology

Mazmanian and Sabatier argue that legislative measures taken to enact policy objectives must incorporate sound causal theory, and the statutory mandate should identify the causal linkages of the problem being addressed. In other words, legislation should be based on scientific evidence and incorporate available technology in prescribing behavioural change. Both issues of vehicle emissions abatement and LCP emissions control have been fraught with disputes over scientific evidence and technological knowledge played out, for the most part, in the negotiations leading up to the adoption of the Directives.

In terms of vehicle exhaust emissions, there is little dispute as to the public health risks associated with continued high levels of exhaust pollutants in the atmosphere (Rose, 1990:179–180). However, the technology required to abate such emissions was strongly disputed amongst Member States. The German delegation in particular, proposed statutory emission levels that would require the fitting of three-way catalytic converter technology to vehicle engines. German manufacturers had already been applying such technology to vehicles marked for export to the United States, where stringent emission limits were in force, and thus would benefit from the adoption of such standards within the EU (Arp, 1993:154). The UK on the other hand, had invested considerable efforts in the development of the lean-burn engine. This technology would enable emission limits and fuel

efficiency to be addressed simultaneously.¹⁶

The negotiating position of the UK was heavily influenced by the British automobile industry's desire to develop lean-burn technology and thus, at Council discussions, the UK delegation pushed for lower emission limits (Boehmer-Christiansen and Skea, 1991:206). The Luxembourg Compromise of 1985 was a concession to British demands. In time however, lean-burn engine technology proved difficult to develop successfully, and British manufacturers resigned themselves to accepting three-way catalytic converter technology. Hence, agreement was finally reached for uniform standards to be applicable to all passenger vehicles, giving rise to Directive 91/441. The acquiescence of British industry to three-way catalytic converter technology has meant that the Directive has faced little problem – in terms of science and technology – in being implemented at the meta-level.

Negotiations over acid rain damage, and the need for SO₂ emission abatement from industrial plants, was similarly disputed at the EC. Swedish studies, during the 1960s, on the deleterious effects of acid rain attributed much of the cause to imported SO₂ emissions from the UK (Waterton, 1993:3). British scientists pointed out that there was no direct evidence to prove the Scandinavians' claim. There were disputes over the proportion of emitted SO₂ that returned to the earth's surface as acid rain, with UK researchers asserting that limiting emissions would not necessarily lead to diminished acid rain. Furthermore, the British suggested that sulphur deposits locked up in various chemical forms in the soil could

¹⁶ Dunne tested different cars, over varying road conditions, for tailpipe emissions and fuel efficiency. The results showed that fuel efficiency declined with the application of three-way catalytic converters, but dramatic reductions in HC, NO_x and CO were achieved relative to non-catalytic converter vehicles. The lean-burn engine prototype vehicle was the most fuel efficient, but attained lower emission reductions than the three-way catalytic converters (Dunne, 1990:209).

be more liable for the 'acid rain' damage being observed (Boehmer–Christiansen and Skea, 1991:42).

In addition to the controversy surrounding the scientific evidence of the harmful effects of SO₂ and NO_x emissions, there were difficulties in determining the appropriate technology for emission abatement. Fuel scrubbing physically separates the sulphur from fuel sources with high sulphur content. This technology can only be applied to solid fuels and is relatively expensive (Cooke and Pragnell, 1990:227). Alternatively, sulphur can be removed during the combustion process, but requires specific combustion processes and operating conditions to work effectively (Cooke and Pragnell, 1990:228). By far the most common method for removing sulphur dioxide from industrial emissions is through flue gas desulphurisation (FGD). This technology is applicable to a wide variety of processes and can achieve up to 90 per cent removal rates (Cooke and Pragnell, 1990:231). Removal of nitrogen oxides is an equally complex process (Cooke and Pragnell, 1990:234–36).

Unlike the vehicle emissions regulations, there is no general consensus on the best way to attain the Directive's standards. Thus meta-level implementation is made more complex. The application of BPEO and BATNEEC to SO₂ and NO_x emission abatement varies widely in technology and cost since much depends on the size of the plant and the particular dynamics of the industrial process itself. The UK government's original SO₂ emission reduction plans, published in September 1989, were to retrofit the largest plants, used for national electricity generation, with FGD equipment. An estimated 12 000 mega watts of generating capacity was to be targeted, at a cost of £2 billion, in order to meet the terms of the Directive. However, in April 1990 and with the impending privatisation of the electricity supply industry, the government announced drastic reductions in the desulphurisation program, with only 8 000 watts targeted at a cost of £1.2 billion (Friends

of the Earth, 1990:5). National SO₂ reduction targets were to be met, instead, by redistributing abatement to other industrial sectors. Thus, the electricity generators were only required to achieve 9 per cent reductions in SO₂ by 1993, while refineries were subject to reductions of 63 per cent and other industries to 56 per cent (Appendix III). Similar leniency is demonstrated in specified reductions for NO_x emissions (Appendix IV).

Both National Power and PowerGen have found it more profitable to import low sulphur coal than to undertake the costly process of retrofitting FGD (Haigh, Manual of Environmental Policy Release 4, p.6.10–6; Weale, 1992:70). The electricity generators argued that retrofitting 8 MW of generating capacity with FGD would only be commercially viable if the price of indigenous coal was low enough (Waterton, 1993:31). Greenpeace's analysis of the situation concluded that retrofitting only 8 MW would render the UK unable to comply with EC targets (cited in Waterton, 1993:32). The importation of low sulphur coal, on the other hand, regardless of expanded retrofitting programs, would ensure that targets were met.

It is worth noting that Directive 88/609, insofar as it applies to existing industrial processes, is inherently more difficult to implement than the standards for new plants or for new cars (Directive 91/441). Technological applications to new plants are absorbed into start-up costs that will determine the feasibility of a new operator entering the market. Plants that do not meet new environmental standards will be unable to enter the market. Similarly, uniform standards applied to new cars will see the costs of technological application passed on in the retail price of the vehicle. In cases where technological applications are applied to existing processes or products, the costs incurred can jeopardise the economic viability of the operator or producer. In such cases, resistance is likely to be more pronounced and implementation more difficult. Nonetheless, the UK has successfully

met the terms of the Directive as it applies to existing plants, through the establishment of national emission limits.

4.3 State Institutions

This section limits itself to an examination of those institutions having direct jurisdiction over the implementation of the Directives. In particular, the discussion will focus on the Ministry or Department with overall jurisdiction at the meta-level, the local implementing agency at the micro-level, and the particular characteristics of micro-level institutions, such as personnel and standard operating procedures, that influence the successful application of the EC Directive.

The Vehicle Emissions Directive, enacted in the UK under the Road Traffic Act 1972, falls under the jurisdiction of the Department of Transport (DTp). The DTp was briefly incorporated under the Department of the Environment in 1970, but was returned to full autonomy in 1974. The DTp has traditionally had regulatory powers over the automobile industry and monitoring exhaust emissions, through a close cooperative relationship with the automobile manufacturing industry.

Until 1988, much of the British automobile manufacturing industry was government-owned. Indeed, until 1988, the DTp had strongly opposed EC proposals on vehicle emission standards since these would have threatened the industry's attempts to develop lean-burn engine technology (Boehmer-Christiansen and Skea, 1991:110). DTp's position was also influenced by its desire to protect the government-owned, and already troubled, British Leyland from having to absorb the increased costs of utilising catalytic converter technology and thereby diminish its international competitiveness (Boehmer-Christiansen and Skea, 1991:126).

Annual roadworthiness tests are an established practice in British life and conformity to EC standards is implemented through these tests, carried out by accredited and authorised vehicle examiners. The Directives involve only a small change in the nature of the annual tests, and the application of new, stricter standards. Implementation of the Directive standards in the UK does not require the establishment of new standard operating procedures, but rather a minor adjustment to existing ones. As such, the Directive has been relatively smoothly implemented at the meta- and micro-levels.

The implementation of the LCP Directive, on the other hand, illustrates a very different story. Responsibility for the implementation of the Directive fell to the Department of the Environment (DoE), established in 1970 and a relative newcomer to British administration. The DoE's responsibilities are varied and diverse, including such areas of public policy such as "planning, local government, housing, inner-city issues, sports and recreation, royal parks and ancient monuments" (McCormick, 1991:13). Much of the DoE's activities in recent years have been concerned with the contentious issue of local government finance reforms through the implementation of the Poll Tax (Weale, 1992:15). Environmental protection thus, does not rank high in the list of Department priorities, taking up only 10 per cent of the Department's staffing allocation (McCormick, 1993:270).

Prior to 1987, environmental protection functions were scattered through a variety of government departments and inspectorates (Table 10). Jurisdictional responsibilities were unclear, and often overlapping, between these disparate organisations. The integration of these pollution control agencies had first been suggested by the Royal Commission on Environmental Protection in its 1976 Report. The Report noted that the plethora of agencies with control over some aspect of environmental protection had led to, in Lindblom's words, a "muddling through" approach to domestic regulations. The

Table 10 UK Pollution Control Arrangements Prior to the Formation of HMIP

Type of pollution & mode of regulation	Legislation	Level of primary responsibility for pollution control	Enforcement agency
Air pollution (registered works) must use Best Practicable Means (BPM)	Alkali Act, Health & Safety at Work etc. Act	Central government	Industrial air pollution controlled by DoE
Air and noise pollution (unscheduled works) discretionary judgement backed by BPM guidelines, and response to EC Direct's	Control of Pollution Act Part III, Clean Air Acts, Nuisance Provisions of Public Health Act	District authorities	Environmental health departments of local authorities
Water Pollution some use of BPM, but much discretion	Control of Pollution Act Part II	Regional authorities	Regional water authority
Marine Pollution informal arrangements, specific EC Directives	Food and Environment Protection Act	Central government	Ministry of Agriculture, Fisheries and Food
Waste Disposal to Land informal arrangements subject to general guidelines	Control of Pollution Act Part I	County authorities	Waste disposal authorities
Land Use Planning DoE circulars, codes of practice and court rulings	Town and Country Planning Acts etc.	District authorities (County authorities for waste and minerals)	Local authority planning departments

Source: O'Riordan and Weale, 1989:282

jurisdictional fragmentation had resulted in a situation where "no one authority had responsibility for looking at pollution in the round" (O'Riordan and Weale, 1989:283).

HMIP was assigned the task of implementing the terms of the 88/609 Directive through the provisions of integrated pollution control, under the 1990 Environmental Protection Act. HMIP's relative youth is an important factor in the difficulties it has experienced in implementing the LCP. Before the establishment of HMIP in April 1987, air pollution was for the most part, controlled by the Industrial Air Pollution Inspectorate under the Health and Safety Executive (HSE). The HSE had considerable powers in the area of workplace safety, and "was of central concern to the trade unions whose political support was essential to the maintenance of Labour in power" (O'Riordan and Weale, 1989:279). IAPI's practices, following on from those of its predecessor the Alkali Inspectorate, involved discretionary approaches to environmental protection through the principle of 'best practicable means'. This approach

...depended much upon confidentiality, professional expertise and the cajoling negotiative powers of officials for its success. The essence of the principle of best practicable means is that inspectors should seek to achieve a reasonable compromise between the demands of environmental protection on the one hand and economic cost on the other, taking into account the technical means to achieve control and the character of the surrounding environment (O'Riordan and Weale, 1989:281)

Thus, in implementing environmental standards, British inspectorates had traditionally relied on negotiation around achievable and flexible limits, rather than the implementation of uniform, and inherently more rigid, ones. Consequently, inspectors avoided recourse to formal litigation and judicial enforcement of environmental standards. Between 1920 and 1967, the Alkali Inspectorate brought only three cases before the courts, for violations of air pollution regulations (McCormick, 1991:12). HMIP, in implementing the statutory standards of EC Directives, faces a far more difficult task and

has adopted a more aggressive arms-length approach in an effort to enforce them. It has also demonstrated a greater willingness to prosecute persistent offenders, albeit small operators and simple processes.

The reasons behind the delay in establishing HMIP are various. Some scholars suggest that the formation of a centralised inspectorate agency was antithetical to the Thatcher administration's desire to pursue deregulation and decentralisation of government (McCormick, 1991:19). However, it has also been suggested that it was indeed within the Conservative Party's interests to establish a stream-lined agency in place of a range of agencies with often overlapping jurisdictions, so that public spending could be kept to a minimum and managerial efficiency increased (O'Riordan and Weale, 1989:289). Others claim that environmental protection was never high on the agenda of the British government, and that HMIP could not have come about without the surge of public interest in environmental protection in the mid-1980s, and the need to coordinate the increasing number of regulations issued by the EC (Jordan, 1993:410). Weale suggests that resistance to institutional integration reflected vested interests

...partly from industry, which had a good working relationship with the Health and Safety Executive, partly from local authorities who were also anxious not to have good working relationships disrupted, and partly from within the civil service itself, where awkward questions of pay scales would be raised by the creation of a new inspectorate (Weale, 1992:104-105).

Whatever the exact reasons behind the fifteen year gap in integrating regulatory agencies, the HMIP was created in 1987 from four existing inspectorates: the Alkali Inspectorate, later renamed Her Majesty's Industrial Air Pollution Inspectorate; the Radiochemical Inspectorate; the Hazardous Waste Inspectorate and the relatively recently formed Water Quality Inspectorate (Speakman, 1990:254-255). Water pollution control,

however, was given over to the National River Authority in 1989 in response to EC legislation (see below). From the beginning, HMIP was plagued with limited resources and inadequate staff. When the agency was first established, 66 of the 214 posts were vacant. A year later, 32 posts still remained unfilled. In May 1990, Chris Patten, Secretary of State for the Environment admitted that 44 positions were unfilled at HMIP (Friends of the Earth, 1990:136). In its first three years, four leading officials in the department resigned. Such staffing problems have been attributed to the low financial resources available to HMIP. The salaries offered by the agency are insufficient to attract high calibre personnel, and fall well below those offered in industry, other EC countries and European and international institutions (Friends of the Earth, 1990:136; Siedentopf and Hauschild, 1988:62).

In addition to the problem of staffing, was the problem of statutory standing. It was not until the passage of the 1990 Environmental Protection Act, which came into force in April 1991, that the agency was imbued with any statutory powers to enforce EC environmental standards, three years after its birth. Finally, HMIP has had continuing difficulties with the larger and more powerful National Rivers Authority (NRA), whose jurisdiction covers pollutant emission to water bodies (Weale, 1992:105). The NRA was created in 1989 from existing regional water authorities, in response to the EC's demand for an independent water pollution control agency. A sense of competitiveness exists between the two agencies over jurisdictional issues (Weale, 1992:107). In 1992 the government announced plans to streamline pollution control functions further with the establishment of an Environment Agency. This agency seeks to amalgamate the functions of HMIP, NRA and local government waste regulation departments, but has yet to be set in place (McCormick, 1993:273).

The relative youth of HMIP, and the process of its formation, has meant that the agency has yet to 'find its feet' within the Whitehall machinery. Although HMIP was envisaged as a holistic approach to environmental regulation, through the use of integrated pollution control, its organisational arrangement remains "essentially medium-specific" (Weale, 1992:105). As such, many of the standard operating procedures within the respective agencies that amalgamated to form HMIP persist. Based on the traditional British style of regulation, these procedures involve close cooperation with industry, negotiated consent and mutually agreed standards of operation. It has been suggested that some branches of the Inspectorate are likely to maintain their 'cosy' relationship with regulated industries (Ward and Samways, 1990:227).

The difference between the implementing agencies involved in the two Directives is enormous. The vehicle emissions regulations involved a simple adjustment to standard operating procedures. Jurisdictional delineations are clear and adequate powers of sanction are available for non-compliance through the failure to pass the annual roadworthiness tests. LCP emissions on the other hand, have involved a new agency in the HMIP, and new (some say revolutionary) operating procedures under the terms of integrated pollution control. The process of institutional integration has disturbed well-established relationships between the regulator and the regulated. The implementation of the LCP Directive has, unlike the vehicle emissions directive, involved new personnel with new responsibilities seeking to attain new standards under radically different legislation, in the absence of standard operating procedures.

4.4 Target Groups

Mazmanian and Sabatier, in the discussion of their framework, are ultimately concerned with the willingness and ability of the target group to alter its behaviour, and the degree to which the policy goals are supported by organised constituency groups. The relationship between the British government and target groups of environmental regulation has had an important impact on the direction and character of the environmental policy arena in the UK.

Close relations between government departments and industry are an important element of the British policy-making process. Regulations will be enacted only when the regulated industry is able to undertake the changes necessary, and more usually, willing to do so. A high degree of compliance is, according to Mazey and Richardson, a characteristic of the British policy style.

British groups are by tradition used to a high degree of compliance with laws in the context of a highly centralised state and will therefore go to great lengths to ensure that the original decision is acceptable to them... (Mazey and Richardson, 1993:19–20).

In terms of target groups, the vehicle emissions Directive sought, principally, to change the output of automobile manufacturers. Associated Directives sought to change the behaviour of motorists insofar as to make them unable to operate vehicles with high levels of pollutant emissions. As noted, the major automobile manufacturers were opposed to stringent emission standards and this was reflected in the Department of Transport's (and indeed the government's) resistance to such measures in the EC. Even as late as 1989

Austin Rover, the only remaining large-scale British car maker, had no interest in the equipment necessary to redesign its engines for unleaded petrol and to fit catalytic converters. Ford UK also opposed the introduction of catalytic converter technology and looked instead to the prospect of a new

plant to build lean burn engines in an attempt to revive its flagging fortunes. Both companies had an incentive in avoiding strict standards which could easily be met by Japanese companies already pressing for greater import quotas to Europe's protected car market. (Rose, 1990:173)

Britain's eventual agreement to stringent standards for all passenger cars, in 1991, was a result of two factors: the changing relationship between industry and government; and the failure to realise lean-burn engine technology. The automobile manufacturing industry in Britain is made up of a handful of large companies which, until the late 1980s, were government-owned. As such, they were an important source of jobs, foreign exchange and public revenue. As part of Thatcher's privatisation policies, these industries were denationalized in the late 1980s. The greater political distance between industry and government, created by privatisation, allowed the government room to manoeuvre in its position at the EC, and forced industry to comply with new EC-derived regulations.

The change in ownership proceeded hand-in-hand with the acknowledgement on the part of industry, that lean-burn technology was proving more difficult to realise than had at first been hoped. However, the 'time bought' by prolonging British resistance to stringent standards at the EC had allowed the industry to 'catch-up' with technological developments on the continent and abroad, making the application of catalytic converter technology more feasible. This then, paved the way for the UK's acceptance of EC standards and the smooth implementation of the Directive at the meta- and micro-levels. With the industry conceding to EC standards of manufacture, vehicle owners were able to purchase 'clean' cars at competitive prices in the domestic market. Since vehicle owners were already subject to annual roadworthiness testing, the new limits on exhaust emissions required little

change in consumer behaviour.

The automobile manufacturing industry was by far, the most important target group in the implementation of Directive 91/441. In this respect, it is worth noting that industry seeking to benefit from stricter emission standards were not taken into account. Johnson–Matthey, a manufacturer of catalytic converters based in Britain, was forced to relocate and build a new factory in Belgium as a result of the UK's initial resistance to EC standards (Rose, 1990:171).

The LCP Directive, by contrast, was aimed at a large array of industries using large combustion plants, estimated to be about 2,500 processes in all. The most important of these was the electricity supply industry which remained largely nationalised until 1991, under the Central Electricity Generating Board (CEGB). Much like the nationalised car manufacturers, CEGB was instrumental in delaying agreement on the LCP. CEGB was Britain's largest electricity producer, responsible for the production of 80 to 90 per cent of Britain's electricity. As a result, it was also the largest emitter of SO₂, at 60 per cent of total British emissions. CEGB argued that cutting sulphur emissions would be of no proven benefit to the environment, would cost £2 billion and raise electricity costs by 10 per cent (McCormick, 1991:141). It was only after CEGB agreed, with government financial assistance, to retrofit some of its largest generators with FGD equipment in 1988, that the UK was able to agree to the LCP Directive.

Despite the industry's privatisation in 1991, the two new electricity supply companies – National Power and PowerGen – continue to receive preferential treatment in terms of the implementation of the LCP Directive (Appendix III; Appendix IV). As a result of HMIP authorizations to these companies in 1993, no power station will be required to install emission abatement equipment beyond that which is already planned.

Authorizations issued by HMIP in April 1993 to individual National Power and PowerGen power stations...set limits for 1993 SO₂ and NO_x emissions which were more relaxed than their actual emissions for 1992, and their allocated reduction targets under the UK national plan. HMIP's justification for this is that generators may wish to operate a particular station so intensively that its specific emission allocation under the national plan is exceeded, while being offset by greater reductions at other of its installations (Haigh, N. Manual of Environmental Policy Release 4, p.6.10–6/7)

Smaller industries, operating large combustion plants and represented by the Confederation of British Industry (CBI), have expressed dismay at the implementation of the LCP Directive through integrated pollution control. Although many express enthusiasm for uniform standards of operation, CBI argues that too many elements remain vaguely defined. Complaints have been made about the unevenness of application, with some HMIP inspectors keeping close to the guidance notes while others apply them more liberally, according to the constraints of the particular circumstances. The CBI continues to complain about the costs of pollution abatement and the limited capital available to make such investments in the current economic climate (Cridland, 1992:6).

The relatively small number of companies affected by the vehicle emissions directive has certainly facilitated the successful implementation of EC Directive 91/441. The creation of political distance between government and industry through privatisation, and the acceptance by industry of catalytic converter technology, were important in easing the process of meta- and micro-level implementation. The total amount of change required of the target group, in terms of their limited numbers and actual behaviour (production) is much lower and more feasible than that required by the implementation of the LCP Directive. In the latter case, a large number of processes are subject to procedures that they have never before had to undertake. The 1990 Environmental Protection Act obliges them to apply for

authorizations from HMIP, and to apply the best available techniques of which many are ignorant. The application of BATNEEC and BPEO to the industry as a whole, rather than to individual processes, has further complicated implementation. Furthermore, given the diversity of processes subject to regulation, and the relative novelty of the standards to be used, the uniformity of application is also being called into question.

4.5 External Factors

In discussing external factors, Sabatier and Mazmanian make reference to variables that, although outside the policy implementation process, impinge on the program's ability to be implemented successfully. To this end, they explore the impact of factors such as the emergence of conflicting public policies and changes in socioeconomic conditions. Both play a considerable role in the implementation of the two Directives in this study.

Competing public policies have had a considerable impact on the progress of environmental protection within the British polity. Consider O'Riordan's damning indictment of the Thatcher era

In general...environmental matters have taken a low priority against the great Tory political engines of economy, privatisation, tax cutting, defence spending and reform of local government and the health and education services. This is largely because environmental issues demand investment of public money, a dollop of supervisory bureaucracy, and a scale of accountability and openness that did not suit Thatcherite political priorities. Only Britain's commitment to European Community directives and the growing toughness of the European Commission, backed by the European Court of Justice, forced the government to obey the law on air and water pollution... (O'Riordan, 1991:180-181)

Many of the government's priorities in other sectors of the economy have served to undermine not only the application of the Directives, but also their actual impacts.

Economic Policy

In their study, Knoepfel and Weidner showed that SO₂ emission reductions were as much a function of economic and other public policy variables, as it was of environmental policy itself. Citing Knoepfel and Weidner's study, Weale suggests

By engineering the economic depression of the early 1980s, Mrs. Thatcher's government inadvertently secured an improvement in atmospheric quality since there were fewer factory chimneys emitting to the atmosphere and lower electricity generation. The flip-side of this interrelationship is that environmental commitments can be undermined by an unregulated upswing in economic activity (Weale 1992:21).

The economic boom of the late 1980s had caused an increase in SO₂ emissions, undermining the official projections used during the negotiations over national emission limits at the EC (Weale, 1992:21). Thus, the UK risked a failure to meet national emission targets, not through any conscious efforts to neglect the terms of the Directive, but through the indirect impacts of economic activity.

Economic activity also influences the actual impacts of regulating vehicle exhaust emissions. Manufacturing specifications in accordance with Directive 91/441, together with inspection and maintenance programs implemented under Directive 92/55, does not take into account increases of pollutant emissions through the absolute increase in the number of vehicles on UK roads. In periods of economic prosperity car ownership is greater as the population's disposable income increases. Since 1987, car sales have grown. In 1988–1989 alone, domestic car sales increased by 15 per cent (Ward *et.al.*, 1990:233). Actual reductions in vehicle exhaust emissions is thus undermined by the absolute increase in road traffic.

Transport Policy

The increase in road traffic is addressed through government road policy, which has addressed projected increases in the number of vehicles on Britain's roads through proposals for road building programs. Road traffic is forecast to increase by up to 140 per cent by the year 2025 (Hillman, 1992:227). In May 1989, in response to these projections and under pressure from the CBI, the Automobile Association, the Royal Automobile Club and the Road Haulage Association, the government announced an increase in public expenditure on road building from £5 billion to £12 billion over the ensuing decade (Ward *et.al.*, 1990:233). Faced with increased overcrowding of roads, particularly in the South East, government transport policy has been aimed at lowering transport costs, enhancing road safety, reducing congestion and avoiding wasteful delays and fuel consumption (Hillman, 1992:227). Policy objectives do not seem to be motivated by concern for environmental air quality through the expansion of public transit services and the encouragement of cycling and car-pooling as transport alternatives. Instead, current transport policy objectives serve to cancel out any beneficial effect on the application of catalytic converter technology to automobile manufacturing (Friends of the Earth, 1990:6).

Privatisation

The privatisation of nationalised industries has been a central feature of the Conservative Party's administration over the last decade and a half. The government claimed that privatisation would bring with it improvements in environmental quality.

...it suggested that privatisation of the electricity industry would improve environmental quality by allowing an increased investment in small-scale, less polluting, electricity plants by new entrants to the industry. This claim now looks unlikely to be born out, since there have been few entrants... (Ward and Samways, 1992:120)

Indeed, the electricity supply industry continues to be monopolistic insofar as there are only two national power generating companies in England and Wales.

The privatisation of the electricity industry drew much criticism from the energy conservation industry (represented by the Association for the Conservation of Energy), environmental pressure groups and the opposition parties. The government contended that privatisation would enable market forces to promote conservation. As real energy costs rise, conservation becomes economically rational. Furthermore, despite calls from its critics, the government refused to write in specific targets on energy conservation and emission control into the Electricity Bill that heralded the privatisation program. Instead a weak clause was incorporated, asserting that environmental questions should be considered when planning new generating capacity (Ward *et.al.*, 1990:230–231).

The cost of pollution abatement technology was an important consideration in the run-up to the privatisation of the electricity supply industry. Strict financial controls were placed on the then nationalised industry (CEGB) in order to make the industry more profitable prior to flotation. Considerations of the industry's profitability "became an important factor in determining the degree of acceptability of major environmental protection expenditure" (Boehmer-Christiansen and Skea, 1991:123).

This is not to suggest, however, that privatisation has spelled doom for the progress of environmental protection. Indeed, privatisation has succeeded in placing political distance between the regulator and the regulated. Previously, government was responsible for regulating its own industries, and this 'cosy' relationship was not conducive to strictly enforced environmental quality standards. The private industries of PowerGen and National Power are now at arms-length to the government pollution control agencies and thus, it is hoped, more vulnerable to strict regulation. However, as noted previously, both power

companies appear to be receiving preferential treatment at the hands of HMIP.

The privatisation of the automobile manufacturing industry has been more successful, in this regard. The political distance between the now private companies and the Department of Transport has allowed the government to be more flexible in its negotiating position at the EC, and made the industry increasingly subject to the pressures of the international market. Both of these factors were important in facilitating the UK's acceptance of the Directives' standards for vehicle exhaust emissions, and the smooth implementation of the Directive in the domestic sphere.

The Role of Sovereigns

Mazmanian and Sabatier identify the role of sovereigns as one of the determinants of successful policy implementation. By this, they refer to the degree of support provided by key legislators or chief executive members throughout the policy implementation process, as well as the strength and political commitment of implementing officials in attaining policy objectives. Within the context of the United Kingdom, the DoE played a key role in the implementation of the LCP Directive, while implementation of the vehicle emissions Directive fell within the jurisdiction of the Department of Transport (DTp).

The DTp, a long-standing government department, had sole jurisdiction over the implementation of Directives 91/441 and 92/55. Representing the interests of British automobile manufacturers, the Department prolonged the UK's opposition to EC vehicle emissions standards until domestic industry had agreed to market catalyst-equipped vehicles. Having secured agreement from industry, the implementation of 91/441, together with Directive 92/55 relating to roadworthiness testing, was relatively smooth. The essential point here, is that DTp was permitted autonomy over this aspect of public policy decision making

because (a) the debate was framed as a Community trade issue and (b) implementation of the Directive was not likely to have an impact on other sectors of British public policy.

This situation was in stark contrast to the departments involved in the implementation of the LCP Directive. The DoE has jurisdiction over protection of the environment as one of its statutory functions. The Secretary of State for the Environment can potentially have considerable influence over government policy, insofar as it represents a Cabinet position. As such, the Secretary of State is involved in virtually all aspects of governmental decision-making. The Secretary of State plays an important role in the negotiations and implementation of environmental Directives, in conjunction with the European Secretariat to the Cabinet which is responsible for coordinating EC policy in the UK.

While the DoE retained overall jurisdiction over the implementation of the Directive, considerable impacts were likely to be felt within the powerful Department of Energy (DEn) which had jurisdiction over the energy industries (oil, natural gas and coal) in Britain. In addition, concerns over the profitability of the soon-to-be privatised electricity generator, the Central Electricity Generating Board (CEGB), made the LCP Directive a concern of both the Department of Trade and Industry (DTI) and the Prime Minister herself (Waterton, 1993:3–4). The Treasury was also likely to be opposed to the Directive since the cost of retrofitting CEGB generators with FGD would have, at that time, been borne by the government and increased the Public Sector Borrowing Requirement. As such, compliance with the LCP Directive would have gone against the Conservative government's commitment to reducing national debt (Waterton, 1993:22). Given the overriding concerns of industry profitability, government spending, national energy policy and the commitment of the Prime Minister to utility privatisation, the DoE had little influence at the Cabinet level. Chris

Patten, Secretary of State for the Environment during the introduction of the Directive was, for example, described as lacking

the forcefulness to make anything other than a superficial impression upon his Cabinet colleagues. His crusading efforts were unable to overcome the empires of an inherently competitive departmental system of government, nor the ideological dragons in the Cabinet (Robinson, 1992:229).

Some scholars have suggested that far from promoting stricter environmental regulation, the DoE has served to reflect government disinterest since "few Secretaries of State for the Environment have shown any particular interest in the environment" (McCormick, 1993:270). Past Secretaries, including Nicholas Ridley, Michael Heseltine, Patrick Jenkin and Kenneth Baker, possessed political strengths not founded in the environmental sphere and "became preoccupied with other aspects of DoE's work (Robinson, 1992:137). Michael Heseltine, for example, devoted most of his energies, as Secretary of State for the Environment, to the cleaning up of Britain's inner-cities.

Outside the realm of government departments, further conflict over the LCP Directive was experienced in the Select Committee procedures. After the introduction of the draft proposal at the EC in 1983, two inquiries were held on the subject in each of the Houses of Parliament. The House of Lords Committee on the European Communities criticised the EC for failing to provide concrete scientific evidence for its proposed controls, arguing that implementation of the Directive would result in distortions of competitive trading between Member States.¹⁷ The House of Commons Environment Committee met with a variety of groups and interests over the issue of acid rain, including Greenpeace,

¹⁷ It is worth noting that this Committee also suggested that the government's commitment to lean-burn energy technology, in relation to EC legislation on regulating vehicle exhaust emissions, would be untenable in the long-run (Waterton, 1993:21).

Friends of the Earth, the World Wildlife Fund, the National Society for Clean Air, British Coal and CEGB. Their conclusions, in contrast to those of the House of Lords Committee, suggested that the government's stance on the acid rain debate was deeply flawed and recommended that current government policy position be reversed (Waterton, 1993:22). Despite these conclusions, made by the House of Commons Environment Committee in its 1984 Report on Acid Rain, governmental agreement to the LCP Directive was not secured until 1988.

The role of sovereigns, in supporting the policy objectives of the Directives has been limited. Nonetheless, Directive 91/441 relating to vehicle exhaust emissions appears to have enjoyed more support than the LCP Directive. In part, this can be attributed to the manner in which the exhaust emissions issue was framed. The Directive was the last in a long line of EC measures to curb vehicle exhaust emissions and establish uniform Community standards, and was thus neither radical nor unexpected. In addition, once the automobile manufacturers agreed to market catalyst-equipped vehicles, the way was cleared for government acceptance of the more stringent and uniform standards proposed by the EC. Finally, support was forthcoming from the DTp because the implementation of the Directive did not impinge on other departmental jurisdictions.

The LCP Directive experienced greater difficulty in garnering support from sovereigns. The implementation of the Directive was, from the beginning, likely to impose greater costs on more operators than the vehicle exhaust emissions Directive. It was thus likely to cause greater political concern for elected representatives. The implementation of the Directive was also likely to have a greater impact on several powerful government departments, including the Department of Energy and the Treasury. These departments, in particular, were pursuing their own political agendas and the implementation of the Directive

was in direct conflict with the direction of policy they pursued. Add to this the weakness of the DoE and the Ministers who headed that Department, and it is not difficult to see why the LCP Directive suffered considerable problems in gaining support from key members of government.

Chapter Five

Assessing the Success

In their framework, Mazmanian and Sabatier proposed six conditions for the successful implementation of public policy. These conditions incorporate elements of the 'top-down' approach in their concern for a structured process, with clear delineations of jurisdiction; and considerations of the 'bottom-up' approach in addressing issues such as the ability and willingness of target groups to alter behaviour, and the commitment of implementing officials to the policy objectives. This study is concerned with exploring the predictive ability of the Mazmanian and Sabatier framework in a variety of national contexts and policy arenas. In assessing the applicability of the framework to the implementation of EC environmental Directives, and to the British context, it would seem prudent to address each of the six conditions in turn.

1. The enabling legislation or other legal directive mandates policy objectives that are clear and consistent, or at least provide substantive criteria for resolving goal conflicts.

Directive 91/441 relating to the regulation of vehicle exhaust emissions can certainly be characterised as incorporating clear and consistent policy objectives, through the articulation of specific and uniform emission limits for passenger vehicles. Building on previous Directives, and in conjunction with other Directives on the monitoring and enforcement of exhaust emission regulations, the Directive represents the culmination of a long process of incrementally tighter controls. As such, the implementation of the Directive in the United Kingdom was consistent with previous policy practice in this area. Goal conflicts were not a feature of this Directive although the goals of the Directive, in terms of

environmental air quality standards, appear to be in conflict with the aspirations of government transport policy objectives. The environmental benefits of limiting emissions from individual vehicles seem to be undermined by the government's desire to expand road building programs and increase the use of private vehicles as a mode of transport.

Directive 88/609 relating to emissions from large combustion plants did not enjoy the same degree of clarity or consistency. Differential limits were set for each Member State, though this would not appear to contravene the first Mazmanian and Sabatier condition insofar as these limits were clear. Furthermore, while specific national emission limits were set for existing plants, and strict standards articulated for new plants, derogations from these standards were permitted for a variety of reasons. The Directive was unable to set clear, consistent and uniform standards for the Community as a whole because of the difficulties inherent in their application to a wide range of economic capacities and levels of industrial growth. In addition, the utilisation of high-sulphur solid fuel in Member States such as the UK further hindered the ability to establish uniform limits.

The implementation of the LCP Directive under the terms of BPEO and BATNEEC in the 1990 Environmental Protection Act does not establish criteria for determining standards. Conforming to "best", whether that be an environmental option, available technology or economic viability, is at least, a subjective criterion. Standards are determined as much by concerns about limiting pollutant emissions, as they are about ensuring the economic capacity of the industrial plant. Thus, for example, requiring a plant to fit pollution abatement technology to ensure emission reductions, is not considered the 'best available technique not entailing excessive cost' if such action were to jeopardise the economic viability of the plant. The standard of "best" must be taken into equal consideration with the standard of "practicable", where practicable is interpreted as economic viability.

The net result of BPEO and BATNEEC is that standards continue to be determined by individual HMIP inspectors, for individual cases, and are far from clear or consistent.

Furthermore, legislation in the United Kingdom does not establish substantive criteria for resolving goal conflicts, even though these are implicitly acknowledged in the body of the legislation. BPEO and BATNEEC both imply that consideration should be paid to costs of pollution abatement, the overall environmental impact on all media and the techniques available. Whether this suggests techniques available to the individual plant or the industry as a whole remains unclear.

2. The enabling legislation incorporates a sound theory identifying the principal factors and causal linkages affecting policy objectives, and gives implementing officials sufficient jurisdiction over target groups and other points of leverage to attain, at least potentially, the desired goals.

Directive 91/441 identifies the principal pollutants in vehicle exhaust emissions (HCs, NO_x, VOCs and particulates) and sets specific limits for each of them. Provisions are made in other associated Directives on the methods that should be employed in measuring and monitoring such emissions. The motivation for the setting of uniform limits came, primarily, from the need to establish equal trading opportunities amongst Member States. Thus, the environmental benefits of limiting automobile emissions did not enter the debate until the process of regulating vehicle exhausts had become an established Community practice. In contrast to the LCP Directive, then, the link between regulating vehicle exhaust and protecting the environment was not a feature of the debate.

It is generally accepted, within the automobile manufacturing industry, that the most effective technology available to meet these objectives is the three-way catalytic converter. Although other technologies have been researched and suggested, the catalytic

converter is by far the most practical and readily available option. On this, there is now consensus throughout the industry. The Department of Transport has had jurisdiction over car-makers for many years, and relationships between government and industry are well-established through standard operating procedures. These have served to facilitate the successful implementation of the Directive.

The same cannot be said of Directive 88/609. It was not until the late 1980s that the UK finally accepted the scientific link between SO₂ emissions and acid rain depositions, acknowledging the need for incremental reductions. For a long period of time the degree to which LCP emissions affected environmental air quality characterised the debate within the scientific community, and prolonged the negotiations over the terms of the Directive. While specific pollutants have been ear-marked for regulation (SO₂ and NO_x) the technology available for the abatement of such pollutants is varied. Although FGD equipment is by far the most common technology employed to limit SO₂ emissions from large combustion plants, other technologies may prove more cost-effective or appropriate for different combustion processes and fuel inputs.

Implementing officials within HMIP are faced with applying new administrative procedures than those to which industry has been traditionally accustomed, through the granting of operating licences. As such, relationships between regulator and regulated have become strained. Nonetheless, HMIP inspectors do, at least potentially, have considerable power of sanction over industries that fail to meet emission limits. However, given the entrenchment of the electricity supply industry in the domestic polity, and its colossal political power and strength as the primary source of national electricity supply indicated by data provided in Appendices III and IV, sanctioning powers of HMIP do not appear to seriously deter industry from its desired course of action.

3. The enabling legislation structures the implementation process so as to maximise the probability that implementing officials and target groups will perform as desired. This involves assignment to sympathetic agencies with adequate hierarchical integration, supportive decision rules, sufficient financial resources and adequate access to supporters.

The relatively few car manufacturers in Britain facilitated the implementation of regulations relating to their behaviour. Monitoring of the correct application of Directive 91/441 is made easier when there are a small number of target groups to oversee. Furthermore, relations between government, under the Department of Transport, and industry have historically been close. Thus, the probability that desired performance will be realised is high. Directive 92/55, relating to the inspection and maintenance of vehicles through roadworthiness testing, applies to a wider target group. According to Mazmanian and Sabatier, this Directive would therefore be more difficult to implement. However, the amount of behavioural change required of vehicle users was minimal, since the administration of roadworthiness testing had long been a feature of British motoring. The implementation process, insofar as it remained consistent with existing practices, thus maximised the probability that officials and target groups would perform as desired.

Directive 88/609, as applied through the 1990 Environmental Protection Act, incorporates a well-structured implementation process. Individual plants must apply for authorizations from HMIP, and HMIP makes these authorization conditional on the utilisation of pollution abatement equipment, provisions for monitoring emissions and a commitment to emission limits. However the process has, in practice, not operated smoothly. The agency lacks financial resources, hierarchical integration and qualified personnel to ensure that policy objectives are met consistently. The onus has been on industry to apply for authorizations, and many have failed to meet the application deadline.

4. The leaders of the implementing agency possess substantial managerial and political skill and are committed to statutory goals.

There is little information on the particular characteristics of the Department of Transport, or the vehicle examiners empowered to carry out vehicle emission testing. However, few problems have been documented in the application of the Directive in the UK, in terms of the managerial and political skill of the Department. Their commitment to statutory goals was contingent on the enthusiasm exhibited by industry for stringent exhaust emission standards. Once this was achieved, the commitment of implementing officials was secured.

The problems of HMIP as an implementing agency have been well documented. From the beginning, the agency has had problems in retaining committed personnel with sufficient political and managerial skill, to ensure that the terms of the Directive under the 1990 Environmental Protection Act are met.

5. The program is actively supported by organised constituency groups and by a few key legislators (or a chief executive) throughout the implementation process, with the courts being neutral or supportive.

Although it is difficult to ascertain whether enthusiastic supporters of these Directives exist within the parliamentary system, some general comments can be made about the fifth condition suggested by Mazmanian and Sabatier. The position of Secretary of State for the Environment carries with it considerable potential influence and power. However, since 1979, only one of the six Secretaries has demonstrated any genuine interest in environmental protection. Chris Patten, considered sympathetic to the environmental cause was, however, unable to use his position as Secretary of State for the Environment to full effect. Some influential political personalities have had influence on the environmental debate in parliament and the political parties, but this has been the exception rather than the rule.

MPs consistently rated issues such as defence, foreign affairs and trade and industry above concerns for the environment (Robinson, 1992:127).

The absence of enthusiastic environmentalists within the ranks at the DoE is not surprising. The British political system traditionally prefers to assign political pragmatists rather than technical experts or specialists to government posts. Furthermore, the interdepartmental competitiveness of the British Cabinet system and the weak standing of the DoE, has hindered the ability of both the Department and the Secretary of State to achieve environmental goals that conflict with other government policy objectives. Given this tradition, and the marked absence of 'green' Secretaries of State, it is fair to assume that no consistent support has been provided for the goals of the LCP Directive, by the DoE.

Parliamentary Select Committees have played an important role in terms of support for policy objectives. The House of Lords Committee, during the early stages of the debate, was sceptical of the need to reduce LCP emissions and supported the government's position to protect the electricity supply industry prior to flotation. In stark contrast, the House of Commons Committee was severely critical of the government's policy position. Hearing evidence from a variety of interest groups on both sides of the debate, their 1984 report concluded that the government should reverse its position and act to reduce LCP emissions of SO₂ and NO_x.

At the Department of Transport, a different tale is told. The emission limits set by the EC were derived from a concern about the European car market as a whole rather than about the environmental impact of automobiles. The Directive was based on assumptions about trade and the economy, and was thus relatively well received within the Department and leaders in industry. Informal consultations with motoring and consumer organisations conducted by the Department of Transport, on the implementation of roadworthiness testing,

indicated widespread support for the policy objectives articulated in Directive 92/55.

The English courts have not featured highly in the implementation of these Directives, with respect to individual claims. Indeed, the courts in the UK rarely play a role in the enforcement of environmental legislation. Nonetheless, this trend would appear to be changing, at least in relation to the LCP Directive. HMIP appears to be demonstrating more willingness to involve the judiciary in the enforcement of environmental standards. However, the provisions for judicial review in the 1990 Environmental Protection Act seem to have worked to the benefit of industry, and against the interests of environmentalists. Industry has exercised its right to judicial reviews of HMIP decisions in the granting of operating licences, as much to delay the implementation of the LCP Directive as to seek clarification of environmental standards.

6. The relative priority of statutory objectives is not undermined over time by the emergence of conflicting public policies or by changes in relevant socioeconomic conditions that undermine the statute's causal theory or political support.

Both Directives in this study have suffered from the government's pursuit of other policy objectives. In terms of the vehicle emissions Directive, the actual impact of catalytic converter technology on the abatement of exhaust emissions is undermined by the projected traffic increases and government proposals to expand Britain's road network to accommodate more vehicles. An economic upswing will also serve to increase car sales, as was the case in the late 1980s. Privatisation, however, appears to have had a positive impact on the implementation of Directive 91/441.

Economic policy also has an important influence on emissions from industrial processes. In periods of economic recession, energy consumption is lower, and pollutant emissions from power generating plants are diminished. During times of rapid economic

growth however, the reverse will be true. While economic policy has an indirect effect on the abatement of SO₂ and NO_x emission from large combustion plants, privatisation has had a more substantial impact on the implementation of Directive 88/609.

In an effort to maintain a profitable nationalised industry prior to flotation, the government was unwilling to undertake steps to abate pollutant emissions since they would involve considerable capital investment. The strategic importance of the electricity supply industry has also enabled it to receive favoured treatment by HMIP, undermining the objectives of the Directive and calling into question the uniformity of implementation.

Conclusion

This study has explored the implementation of two EC Directives relating to the regulation of air pollution within the United Kingdom. Berman's discussion of levels of implementation has provided a useful tool in the analysis of the application of EC Directives to its Member States. Incorporating a third, meta-level, of analysis has enabled the implementation process to be structured in accordance with the stages of implementation that European legislation entails.

Both vehicle emission regulations and LCP emissions reductions were successfully implemented by the UK in terms of the policy objectives laid down in the respective Directives. This would appear to suggest that, according to the Mazmanian and Sabatier framework, all six conditions were met by the UK. This has clearly not been the case. Such findings call into question the applicability of the framework to different national contexts and a variety of policy arenas, and also highlight some of the weaknesses of the framework as a predictive tool.

Certainly, with reference to the Directives on vehicle exhaust emissions, many of the conditions were amply met during the implementation of its provisions within the UK. The enabling legislation mandated policy objectives that were clear and consistent with past policy objectives regulating automobile exhaust. Although debate continued on the appropriate technology required to achieve such policy objectives for some time, it would be fair to say that there is now unanimity on the use of three-way catalytic converter technology as the most reliable and appropriate method of meeting emission standards. The Department of Transport has long-established and cooperative relations with the relatively few British automobile manufacturers, ensuring sufficient jurisdiction over target groups. This relationship has maximised the probability that the target groups will perform as

desired. Relevant interest groups were generally supportive of the policy objectives. Although transport policy appears to undermine the environmental benefits of the Directives goals, if one is to assume that trade concerns were more important than those of environmental protection, then few other public policies conflicted with the aims of the Directive.

The LCP Directive, on the other hand, meets few of the conditions for successful implementation as suggested by Mazmanian and Sabatier. The enabling legislation, the 1990 Environmental Protection Act, incorporated standards that were far from clear and consistent. Relying on an interpretation of 'best', through the use of BPEO and BATNEEC, these standards leave individual inspectors with considerable discretion in the setting of emission limits for individual plants. Although inspectors are issued with guidelines from the Department of the Environment, these are far from binding in their application. The leverage that HMIP inspectors have over target groups, which are numerous and varied in size, is debatable. Certainly the strategic importance of the two largest electricity generators appears to dwarf the sanctioning powers of HMIP. HMIP, and indeed the Department of Environment, have been plagued with institutional reorganisation, limited financial resources and inadequately trained or committed staff. To exacerbate the implementation of the LCP Directive further, HMIP inspectors have been subject to new decision rules and administrative procedures through the application of integrated pollution control. Support for the Directive's goals from industry or political sovereigns is limited. Finally, the implementation of the Directive has been considerably undermined by the government's other public policy commitments – energy policy, economic policy and privatisation in particular.

Applying the Mazmanian and Sabatier model to the implementation of the LCP Directive in the UK would have led to predictions that the policy goals would not meet with success. However, reality has proved different to theoretical prediction. I would suggest,

therefore, that there are weaknesses within the framework itself. First, the framework attempts to account for many variables but does not indicate the weighting of importance between them. By saying that 'everything matters', Mazmanian and Sabatier's framework proves to be of limited use when some conditions are met, and not others. The implementation of the vehicle emissions Directive in the UK met most of the conditions laid down in the framework, but the LCP Directive met very few. Yet both were successfully implemented.

The success of the LCP Directive can be attributed, in part, to the British policy style. Systems of environmental regulation have traditionally been built on negotiations between regulator and regulated and considerable administrative discretion. These attributes of the British style have played an important role in the implementation of the LCP Directive by involving individual HMIP inspectors, individual operators and standards of 'best' in the granting of operating licences. The Mazmanian and Sabatier framework appears to indicate that such a style of policy implementation would not lead to the achievement of policy goals. They suggest, instead, that statutory standards which are legally enforceable and actively supported by implementing officials, target groups and relevant constituency groups will alone result in successful implementation. I argue that such a framework is well suited to the American system of governance, upon which the model is based. However, it is ill-matched to the British style of policy implementation and thus is not a useful or reliable predictive tool.

The implementation of European Community Environmental Directives in the United Kingdom has provided an interesting case to which the Mazmanian and Sabatier framework has been applied. The unprecedented role of the EC, with reference to public policy within its Member States, provides a unique scenario for implementation analysis. This

study has focused on the implementation of two EC Directives – the first regulating vehicle exhaust emissions and the second controlling LCP emissions – in the United Kingdom. The first required Community standards to be applied uniformly to all new vehicles, while the second employed differential standards for each Member State and applied to both new and existing facilities. Implementation analysis for each Directive has shown that the vehicle emissions regulations conform to the framework insofar as the six conditions proposed by Mazmanian and Sabatier were met. The second, however, fails on almost all six. It is thus fair to conclude that the framework is not applicable to all policy arenas, nor to all national contexts.

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APPENDIX I

Emissions from Stationary Sources of SO₂ for Member States, 1990-1991 and EC Phase I (1993) Targets.

Member	Target	1990	1991
Belgium	318	n/a	n/a
Denmark	213	170	n/a
Germany	1335	861	n/a
Greece	320	n/a	n/a
Spain	2290	n/a	n/a
France	1146	1055	1161
Ireland	124	181	n/a
Italy	1800	n/a	n/a
Luxembourg	1.8	n/a	n/a
Netherlands	180	175	171
Portugal	232	201	n/a
UK	3106	3651	3442

Source: OECD, 1993:17

n/a indicates statistics not reported

APPENDIX II

Emissions from Stationary Sources of NO_x for Member States, 1990-1991 and EC Phase I (1993) Targets.

Member	Target	1990	1991
Belgium	88	n/a	n/a
Denmark	121	143	n/a
Germany	696	697	n/a
Greece	70	n/a	n/a
Spain	368	n/a	n/a
France	320	427	419
Ireland	50	68	n/a
Italy	570	n/a	n/a
Luxembourg	2.4	n/a	n/a
Netherlands	98	216	222
Portugal	59	52	n/a
UK	864	1220	1169

Source: OECD, 1993:17

n/a indicates statistics not reported

APPENDIX III

SO₂ Emission Quota/Limits For Large Combustion Plants (LCP) From 1991-1993 In Accordance With The LCP Directive [KTonnes]

POWER STATIONS

LCP-SO₂ Emissions	1980	1991	1992	1993
National Power = quota		1595	1583	1497
PowerGen = quota		1085	1077	1019
England & Wales = sub-total	2776	2680	2660	2516
% Reduction from 1980				9
Power Stations in Scotland = quota	142	109	106	104
% Reduction from 1980				27
Power Stations in N. Ireland = quota	88	92	86	80
% Reduction from 1980				9
United Kingdom = sub-total	3006	2881	2852	2700
% Reduction from 1980				10

REFINERIES

England & Wales = quota	218	86	86	86
Scotland = quota	50	14	14	14
United Kingdom = sub-total	268	100	100	100
% Reduction from 1980				63

OTHER INDUSTRY

England & Wales = quota	543	273	257	241
Scotland = quota	78	39	37	35
United Kingdom = sub-total	621	312	294	276
% Reduction from 1980				56

Source: DoE, 1991:Annex A

APPENDIX IV

NO_x Emission Quota/Limits For Large Combustion Plants (LCP) From 1991-1993 In Accordance With The LCP Directive [KTonnes]

POWER STATIONS

LCP-NO_x Emissions	1980	1991	1992	1993
National Power = quota		430	424	418
PowerGen = quota		264	260	256
England & Wales = sub-total	783	694	684	674
% Reduction from 1980				14
Power Stations in Scotland = quota	76	67	66	63
% Reduction from 1980				17
Power Stations in N. Ireland = quota	38	20	20	20
% Reduction from 1980				47
United Kingdom = sub-total	897	781	770	757
% Reduction from 1980				16

REFINERIES

England & Wales = quota	34	27	26	25
Scotland = quota	9	7	7	7
United Kingdom = sub-total	43	34	33	32
% Reduction from 1980				26

OTHER INDUSTRY

England & Wales = quota	164	110	106	103
Scotland = quota	23	16	16	15
United Kingdom = sub-total	187	126	127	118
% Reduction from 1980				37

Source: DoE, 1991:Annex A