FEDERAL CHOICE OF POLICY INSTRUMENTS 
IN THE CANADA GREEN PLAN

by

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ABSTRACT

The Green Plan, Canada's six year environmental agenda, has now guided Canadian environmental policy for over a year and a half. In that time span, a large number of environmental initiatives have been announced under the Green Plan, and an even larger number are still promised. However, not every initiative contributes equally to preventing or abating pollution. The extent to which an initiative contributes directly to an improvement in environmental quality depends on the level of coercion of the policy instrument it employs. Initiatives which involve relatively coercive policy instruments, in particular regulatory action, are more likely to achieve their goal in the immediate future than initiatives which rely largely on persuasion such as guidelines and public education.

The classification of the policy instruments in the Green Plan reveals a strong preference on the part of the federal government for non-coercive over coercive instruments. Only 13 per cent of the Green Plan initiatives involve regulatory action. The majority involve increasing capacity which means that the initiatives centre around research, studies, monitoring and plan development.

The Fraser River Action Plan, a Green Plan initiative announced in June 1991, reflects the same federal preference for capacity increasing instruments as the larger Green Plan. Several variables help to explain this preference: constitutional constraints, pressure from other levels of government, opposition from industry, and environmental interest group pressure.

Both the events leading up to the Green Plan and the implementation of the Fraser River Action Plan, suggest that the strongest motivating factor for the choice of policy
instruments is the concern to avoid blame from the interests affected by a particular initiative. In practice, this means that the federal government is reluctant to make use of its regulatory authority to impose clean-up costs on the polluting industry. It also avoids to interfere with provincial jurisdiction over natural resources. In order to avoid blame from environmental groups and the public, who demand tighter pollution controls, the government relies on symbolic actions. Symbolic actions enable the government to show its concern but postpone pollution abatement to a later date.

Federal reluctance to make use of its full constitutional authority in the area of environmental policy making combined with the large budget cuts the Green Plan has seen during its relatively short period of existence, belies the federal commitment to protecting the environment.
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INTRODUCTION

The first six years of the Mulroney government, from 1984 to 1990, were meagre years for Environment Canada (DOE). Suzanne Blais-Grenier, the first Minister of the Environment, cut $34 million and 300 jobs from the department. The Canadian Wildlife Service suffered the most from this with a reduction of 25 per cent of its annual budget.1 In 1985/86, as a result of widespread dissatisfaction among Canadians with how the government handled environmental issues, DOE was subjected to a program review under the Nielsen Task Force.2 The study recommended that there be a stronger commitment by the federal government to environmental issues and a larger role for DOE in addressing these issues.3 A follow-up study was more explicit. It recommended that "the department must be in a position to steer the federal government away from its current expensive, reactive and corrective approach toward a more effective anticipatory and preventive one."4 To accomplish this, the department should be given a greater role in horizontal and national coordination of federal environmental quality responsibilities. In response to these recommendations, Mulroney appointed a new Environment Minister, Tom McMillan. However, this action was not accompanied by an increase in funds or more power in cabinet for DOE.5 But McMillan accomplished a lot with very little. He engineered the Canadian Environmental

2 Task Force on Program Review, Improved Program Review: Environment (Ottawa: Minister of Supply and Services, 1986).
3 Ibid., p.11.
5 Bruce Doern, supra note 1, p.159.
Protection Act (CEPA), which gives the DOE greater regulatory authority and supported the establishment of a new national park on South Moresby Island. In 1987, international events gave environment issues renewed prominence. The Brundtland Commission on Environment and Development published its report, *Our Common Future*. It popularized the concept of sustainable development which advocates a reconciliation between economy and environment. Canada responded by creating the National Round Table on the Environment and the Economy. Brian Mulroney appointed its 25 members and opened the first meeting with a speech on sustainable development in Canada.\(^6\)

In part triggered by the Brundtland report, in part by opinion polls which showed public concern for the environment was on the rise again, Mulroney promised a major environmental program in the 1988 election campaign. In anticipation of this promise, DOE prepared a package of proposals. With the appointment of Lucien Bouchard as Environment Minister, the proposals were worked into a comprehensive environmental action plan, the predecessor to the Green Plan.

Albeit a weakened version of the initial DOE document, the Green Plan was to set the Tories’ environmental record straight. It received $3 billion in funds to implement environmental initiatives over the following five years.\(^7\) The opening statement by the Prime Minister to the Green Plan declares the great promise the Plan holds for all Canadians:

> As Canadians we are the trustees of a unique, beautiful, and productive northern land... The challenge we now face is to build upon our economic strengths in harmony with our environment, the basis of our health and prosperity. Every Canadian has a

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\(^7\) Two months later, funding for the Green Plan was stretched out over six years instead of five. See William Walker, "$3 billion green plan must be stretched," *Toronto Star*, February 27, 1991, A20.
role to play in achieving this goal of sustainable development... The Green Plan expresses the government's commitment to work with Canadians to manage their natural resources prudently and to encourage sensitive environmental decision making.\textsuperscript{8}

The Green Plan lists over "100 important and well-funded initiatives over the next five years."\textsuperscript{9} Their implementation is to bring Canada closer towards its goal of achieving sustainable development.

Since most of the initiatives promised in the Green Plan have not been implemented yet, it is too early for an assessment of the overall success of the Plan in achieving this ambitious goal. Furthermore, it is difficult to evaluate to what extent sustainable development is realized because of the broadness of the term. The concept of sustainable development has been espoused by different groups to justify widely diverging courses of action. To avoid confusion, this paper evaluates the Green Plan simply in terms of its ability to protect the environment or improve environmental quality,\textsuperscript{10} the most essential steps in achieving sustainable development. This will be done by examining the policy instruments the Green Plan proposes to use in the implementation of the various initiatives.

Policy instruments can be categorized according to the level of coercion they involve. Typically, the most coercive instruments, such as regulations, are also the most effective in protecting the environment, preventing or abating pollution, because they force a change in

\begin{itemize}
  \item \textsuperscript{8} Government of Canada, \textit{Canada's Green Plan} (Ottawa: Minister of Supply and Services, 1990), p.xi.
  \item \textsuperscript{9} Ibid, p.xii.
  \item \textsuperscript{10} An improvement in environmental quality is achieved through pollution prevention or abatement. The desirable level of environmental quality depends on the designated use of a given resource.
\end{itemize}
behaviour on the part of the polluter. Non-coercive instruments, such as public education or studies, on the other hand, are the least likely to produce rapid changes. They are important in that they raise public awareness and increase our understanding of pollution problems but they alone do not clean-up the environment.

This paper identifies the types of policy instruments preferred by the federal government in the implementation of the Green Plan and examines which variables have had a bearing on this preference. Hence, the two central questions addressed in this paper are: What policy instruments are preferred by the federal government? What determined the choice of policy instruments?

In pursuit of an answer to the second question, chapter II provides an overview of the main theories on instrument choice and discusses their relevancy with respect to the environmental policy field. The theories’ explanation for the government’s instrument choice range from considerations of the effectiveness of the instrument to the government’s preoccupation with blame avoidance. The discussion of the theories generates four propositions on what determines the choice of instruments in the making of environmental policy.

In chapter III, the Green Plan instruments are assigned to seven different categories, ranked according to the level of coercion they involve. The categories are regulation, expenditure, guidelines, capacity increasing, agreements, public education and public

\[\text{(11)}\] Market-based incentives to pollution control will not be dealt with in this paper. But they can be considered coercive policy instruments because government intervention is needed in order to set and collect taxes on the use of common property resources or distribute quotas or permits in the case of emission or effluent trading. Using the market to protect common property resources also does not eliminate the need for monitoring, inspections, and enforcement. The considerable opposition by Canadian industry to the inclusion of so-called green taxes in the Green Plan reveals that market-based incentives are also considered to be highly interventionist by the private sector. The advantage of market-based incentives is that pollution control is achieved at a lower aggregate cost than is possible with the traditional command and control approach to regulation.
participation. The results of this categorization make it possible to identify the types of instruments favoured by the federal government. The remainder of the chapter discusses the development of the Green Plan up to its release in December 1990 and examines what variables determined the federal government’s choice of policy instruments. This is done with the help of the four propositions arrived at in chapter II.

The four propositions are also applied in chapter IV, in a case study on the Fraser River Action Plan, one of the first initiatives announced under the Green Plan. That chapter provides a closer analysis of what motivates the federal government to choose certain instruments and avoid others. The following five variables are examined: constitutional constraints, environmental interest group activity, opposition from industry, the influence of other levels of government, and considerations of cost.

The final chapter analyzes the results obtained from the studies of instrument choice for the Green Plan and the Fraser River Action Plan. This leads to an evaluation of the federal government’s commitment to environmental protection and the likely success of the Green Plan in helping Canada move closer towards the ideal of sustainable development.
CHAPTER II

THEORETICAL APPROACHES TO THE CHOICE OF POLICY INSTRUMENTS

There is no controversy over the fact that in most situations policymakers will have a variety of policy instruments from which to choose in order to reach a specific objective. However, instrument choice is never a neutral exercise allowing policymakers to select instruments at will without consideration of the political consequences. Moreover, in most cases, no clear division can be made between means and ends, instruments and policy objectives. The instruments shape the policy process and affect the final outcome. They are often object of much controversy because by determining which instrument will be used to implement a particular policy, the policymaker decides who will bear the costs of the policy. The groups affected by a particular policy may attempt to influence the government’s instrument choice. What ultimately motivates policymakers to prefer one policy instrument over another in a given situation is the question policy instrument theorists try to answer. Explanations range from considerations of effectiveness and cost-efficiency to credit claiming and blame avoidance.

In what follows, I will summarize the arguments of the main policy instrument theories and discuss their relevance to instrument choice in the area of environmental policy making in Canada.

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1. COST-EFFICIENCY

According to the economist Gary Becker, the government will attempt to reach its objectives at the lowest possible cost. He compares instrument choice in a political democracy to choices made by firms in a free market economy. In both cases efficiency is the most important criterion:

In an ideally competitive free enterprise system, only the most efficient firms survive; for example, if the level of a firm's costs were independent of output and varied from firm to firm, only the firm with the lowest costs would survive. Similarly, in an ideal democracy only the most efficient parties would survive;... ²

The "most efficient party", according to Becker, is the party which can provide the policies demanded at least cost. He defines costs as administrative transaction costs, that is, monitoring and enforcement costs for the government and compliance costs for the private sector.

Becker does concede that neither the free market system nor the political system is free from imperfections. The greatest sources of distortion in the political system are inadequately informed voters and the large scale of political organizations.

Nevertheless, in a later article, Becker maintains that, in spite of these imperfections, the political system favours the selection of the most cost-efficient instrument available by the decision makers.³ The reason he gives for this is that the effects of policies can in the long run not be hidden from the voters:

I prefer instead to assume that voters have unbiased expectations, at least of policies that have persisted. They may overestimate the dead weight loss from some policies and underestimate it from others, but on the average they have a correct perception...⁴

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⁴ Ibid, p.246. Also quoted in Trebilcock et al, supra note 1, p. 22.
It follows that, in fact, the policy instruments chosen will tend to be the most efficient available.

This theory is clearly inadequate to describe instrument choice in environmental policy making because, first of all, the majority of voters are not familiar with the efficiency of their government's policy choices and do not make this their major concern when they go to the polls to vote a party in or out.\(^5\)

Secondly, the theory ignores that in choosing a policy instrument, the politician has to take into account the distribution of costs and benefits which does not make all alternatives equally acceptable in a given situation. The selection of the policy instrument is often as hotly debated as the actual policy goal. This is particularly true in the field of environmental policy making. Generally, everyone can agree that we need to take action to protect the environment; the conflict is over who will bear the costs of pollution control or abatement. Regulatory action shifts the costs to the private sector while the costs of government clean-up programs are born by the taxpayer. The government is unlikely to choose one over the other based on a simple evaluation of the cost-efficiency of the instrument. Rather, it will have to consider a number of variables and political pressures which may render the most cost-efficient instrument politically unpalatable.

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\(^5\) In his theory on collective action Olson states that the information costs are too high for the rational voter to try and get informed on a wide range of issues. See Mancur Olson, *The Logic of Collective Action* (Cambridge, Mass.: Harvard University press, 1965).
2. VOTE MAXIMIZATION

In their book, The Choice of Governing Instrument, M.J. Trebilcock et al strongly criticize Becker's theory for failing to distinguish between means and ends. What Becker considers to be policy objectives or ends such as reducing unemployment, reducing poverty or increasing economic growth, Trebilcock et al would call "means to more final objectives". A more final objective, or rather the final objective, is the politician's concern to stay in power or to gain an election. In Trebilcock et al's words, a policy is

not an end in itself, but a means to achieving some more ultimate end. In our analysis, more ultimate ends of these stated 'ends' would relate to the interest of politicians in securing their election or re-election. Thus both the determination of policy 'objectives', in the conventional sense, and the determination of the means by which those objectives are to be pursued [can] be weighed against the calculus of how they serve the end of enhancing the prospects of the election or re-election by the political decision makers.6

One of the most important considerations when trying to enhance their prospect of election or re-election is the impact a certain policy instrument will have on the voters. In any election two types of voters can be identified, those already committed to one political party (the inframarginal voters) and those who are still uncommitted or have only a weak commitment to a party (the marginal voters). As long as parties do not adopt any extreme platforms, they can ignore the ridings in which the majority of voters is already committed to them. Thus, party competition will be largely concentrated on those ridings in which there is a majority of relatively uncommitted voters. Trebilcock et al call these ridings 'marginal ridings' and goes on to say that voters in marginal ridings will behave rationally and "select from among the

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competing parties that party whose policies will maximize their utility." 7

The consequence of this for politicians is that they will favour instruments which "concentrate benefits of policies on marginal voters and do not disperse those benefits over inframarginal voters who are either so committed to the party or so alienated from it that the benefits would have no effect on voting behaviour." 8 Rational behaviour also dictates that politicians will favour instruments which impose the costs of policies on committed voters, so that the choice of instrument does not affect voting behaviour. 9

While this theory is very plausible, it ignores a number of other factors, such as party ideology and the distribution of power in society, which shape instrument choice but not necessarily in a way as to maximize votes. In addition, Trebilcock et al's theory does not have any predictive value. It is difficult to determine whether policies which benefit the marginal voter will actually induce him or her to vote for the politician claiming credit for these policies. Furthermore, a large number of environmental problems affect the country as a whole and their resolution does not allow the government to confer benefits to specific ridings. Examples of this are car emission controls, limits on SO\textsubscript{2} emissions, or new packaging regulations. In the environmental policy field, costs are usually concentrated (if the polluter has to pay for the pollution abatement) and benefits dispersed (everyone enjoys cleaner air or water), that is to say, it is in general difficult to confer benefits to a small group

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7 Ibid. p.28
8 Ibid, p.29.
9 Ibid.
of marginal voters. Nevertheless, politicians are open to electoral incentives even if these are not exclusively provided by voters in marginal ridings.

3. LEVEL OF COERCION

Quite a different approach to the choice of policy instruments has been taken by Bruce Doern and V. Seymour Wilson. In their book Issues in Canadian Public Policy, they identify several classes of instruments available to governments and place them on a continuum of low to high coercion. The most coercive policy instrument is public enterprise followed by regulation, expenditure and exhortation or persuasion. Their hypothesis is that politicians (especially the collective cabinet) have a strong tendency to respond to policy issues (any issue) by moving successively from the least coercive governing instruments to the most coercive. Thus they tend to respond first in the least coercive fashion by creating a study or by creating a new or reorganized unit of government, or merely by uttering a broad statement of intent...[At] the coercive end of the governing continuum would be direct regulation in which the sanctions or threat of sanctions would have to be directly applied. 

Doern and Wilson go on to explain that the above tendency is reinforced by the political structure of a federal state because "the least coercive instrument can also be utilized with greater constitutional ease and certainty...The more one moves into outright regulatory areas, the more one requires greater constitutional precision and clarity."

This argument has important implications for environmental policy making. Since the

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10 This distribution of costs and benefits is typical of common property resources such as air and water. Everyone benefits from an improvement in their quality. Improvement in the environmental quality of land, on the other hand, can be used to confer benefits to a relatively small group of voters or to specific ridings. Examples are the creation of national historic sites or regional parks.


Canadian constitution does not specifically deal with environmental protection, the two levels of government have had to derive their authority in that area from other fields of jurisdiction. As a result, federal and provincial powers with respect to the environment are not clearly defined and overlap in a number of cases. In order to avoid intergovernmental conflict, one would expect that governments will prefer policy instruments which involve a low level of coercion. However, non-coercive instruments are unlikely to further strong advances in the area of environmental protection. This conclusion is supported by Doern and Phidd who point out that the likelihood that specific policy objectives will be achieved decreases with the level of coercion. Thus, "acts of persuasion are not a reliable way to ensure that public policy goals are achieved in the long run, since several main ideas compete for attention and since human beings respond to other instruments and incentives as well."

The following example serves to illustrate this point. The government can try to persuade its citizens through a public information campaign to recycle but the short-term results are likely to be unimpressive. It is much more probable that people will take the government's advise to heart if recycled material is regularly collected from their homes and if, at the same time, they are allowed only one garbage can per household and are charged for each additional can.

In their publication Canadian Public Policy, Doern and Phidd point out some flaws of the above hypothesis. The most important one, in the context of this paper, is the connection between the coerciveness of a particular policy instrument and its effectiveness. It does not need to be true that the most coercive policy instrument, regulation, is also the most effective:

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13 G. Bruce Doern and Richard W. Phidd, supra note 1, p.317-318.
"Regulation can be promulgated and announced to satisfy [...] reformers in a symbolic way without unduly harming the more cohesive producer groups who will be given elaborate procedural protections and who can afford to participate in them." 14 In the area of environmental policy making where regulations often involve the setting of standards or emission reduction targets, the effectiveness of regulations depends on the regulatory agency's ability or commitment to enforce regulations.

4. DISTRIBUTION OF POWER IN SOCIETY

In his review of the policy instrument literature, Kenneth Woodside advances a similar criticism of the Doern and Wilson hypothesis. He points out that policy instruments cannot be neatly arranged along a continuum of differing levels of coercion, but that "each policy instrument can be used in a wide range of ways that involve differing degrees of coercion." 15 This is undoubtedly the case, but, given that it is nearly impossible to measure the precise level of coercion of each policy instrument when examining a large number of different instruments, generalizations have to be made. Hence, the following discussion will be based on the assumption that regulation and persuasion can always be found at opposing ends of the coercion continuum. When examining specific policy issues, a more thorough analysis of each policy instrument may be necessary.

A second important point Woodside raises in his criticism of the theories discussed

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above is that governments do not always attempt to avoid employing coercive instruments but that at times, they will choose to take a hard line from the start.\textsuperscript{16}

According to Woodside, one of the most important factors which determine a government’s response is the political power or influence of the group at which a policy is aimed: "...governments generally are much more careful and respectful in their dealing with big business than they are when pressed to respond to the needs or demands of less powerful groups."\textsuperscript{17} Consequently, one would expect governments to turn more quickly to more coercive policy instruments when aiming to influence the behaviour of a relatively powerless group than when the target is politically powerful.

The implications of this argument for environmental policy making are that the government will be reluctant to use coercive instruments in its dealings with polluting industry because industry wields significant political power, especially compared to the general public, but also to environmental interest groups.\textsuperscript{18}

Finally, Woodside argues that in many situations the choice of policy instruments available to the government is, in fact, very limited. Constitutional constraints, legal limits in instrument choice specified for departments and agencies, past choices, ideological trends and budgetary constraints are all factors which restrict the range of policy instruments available to the decision maker. But by considering those constraints alone, we can still not answer what motivates politicians to choose a particular policy instrument over another from among the

\begin{itemize}
  \item \textsuperscript{16} Ibid., p. 186.
  \item \textsuperscript{17} Ibid., p. 186. Also see Leo Panitch ed. \textit{The Canadian State} (Toronto: University of Toronto Press, 1977).
  \item \textsuperscript{18} The forestry and pulp and paper industries alone had more than 80 registered lobbyists in 1990. See Anne McIlroy, "A toothless tiger?" \textit{Ottawa Citizen}, Oct. 15, 1990, A12.
\end{itemize}
5. BLAME AVOIDANCE

Although Kent Weaver's theory on blame avoidance and credit claiming refers to the choice of the policies themselves, it equally applies to the choice of the policy instruments. According to Weaver's theory, "politicians are motivated primarily by the desire to avoid blame for unpopular actions rather than by seeking credit for popular ones." The underlying assumption of this argument is that policymakers seek to maximize their prospects for re-election, reappointment or advancement. In this respect, Weaver's theory coincides with Trebilcock et al's theory of vote maximization. However, the two theories differ in their explanation of how policymakers will go about improving their prospects for reelection. Trebilcock et al theorized that politicians would attempt to maximize the benefits which go to marginal voters in marginal ridings, in other words, they would attempt to claim credit for actions which benefit marginal voters. Weaver disagrees with that argument:

Pursuit of a constituency benefit maximizing, credit claiming strategy is rational only if constituents respond symmetrically to gains and losses...But there is substantial evidence that this is not so. Persons who are suffering losses are more likely to notice the loss, to feel aggrieved and to act on that grievance, than gainers are to act on the basis of their improved state.  

The implication of this to a policymaker who seeks to maximize votes is that concentrated losses to a particular group of voters should be avoided even in cases where they do not outweigh the benefits to another group of voters; it is enough that the losses are substantial.

20 Ibid., p.373.
Politicians must, therefore, be at least as concerned to avoid blame for losses they impose on a constituency as they are to claim credit for benefits they have granted.\(^{21}\)

Weaver identifies three different situations in which blame avoidance behaviour is most likely to occur. First, as mentioned above, the policymaker will try to avoid blame in situations where bringing benefits to one part of his or her constituency requires imposing costs on another segment. If the policymaker does take action, he or she risks alienating the losers, who are more likely to remember that loss and possibly punish him or her for it in the next elections. "So long as losses (and thus potential blame) are not drastically outweighed by other group’s gains, we would expect policymakers to focus on gaining credit only after attempting to minimize losses - and therefore blame."\(^{22}\)

Another situation leading to blame avoidance would be when all policy alternatives impose significant costs on at least some of the policymakers constituents. In such a situation no credit can be obtained and the policymaker can only hope to minimize blame by choosing the least costly alternative.

Finally, blame avoidance will occur in situations where constituency opinion is overwhelmingly in support of a single side of an issue. If the policymaker wants to avoid blame, he or she has no option but to act in accordance with constituency opinion whether or not he or she actually agrees with it.

In the environmental policy field all of the above situations in which blame avoidance is likely can occur. The first situation is the most common. Improving environmental quality

\(^{21}\) Ibid., p.372.

\(^{22}\) Ibid., p. 379.
will typically involve concentrated costs and diffused benefits (as in the case of effluent and emission regulations).

When it comes to the selection of policy instruments in such "blame-generating situations", policymakers will prefer instruments which do not commit them to any action which could alienate a particular group of voters - in the environmental policy field this group would be the polluters. Since the costs of regulatory action incurred by the parties affected can be significant, regulation is the most unpopular tool for blame avoiders. Less coercive policy instruments such as public education programs, studies or research do not impose costs on any particular group but only give out benefits in the form of new jobs or programs and research grants. One can therefore expect policymakers to prefer non-coercive over coercive instruments in blame generating situations.

6. SYMBOLIC ACTION

Kent Weaver identifies eight strategies employed by politicians to avoid blame. All of the strategies can be applied to the environmental policy field. However, one technique not identified by Weaver, but used very often, is symbolic action. A symbolic action or policy does not directly contribute to the resolution of a problem but is announced by politicians in order to express concern and to be seen doing something. Symbolic actions include making speeches, holding conferences and meetings, studying the problem, creating a new organization or reorganizing an existing one. These are of course not necessarily only symbolic actions, in fact, the above actions are fundamental to the democratic process and

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23 Ibid., p.385.
may represent a sincere first step to dealing with a problem. On the other hand, the above actions may be designed to delay dealing with a problem right away. In that case, their purpose is above all to "placate those with concerns that, for any number of valid or invalid reasons, are simply ranked at the lower end of the government’s priority list."\textsuperscript{24} The need for placating concerned voters arises out of the concern to avoid blame for inaction. If voters can be fooled into believing that something is actually being done to address their concerns, the politician will not be blamed for ignoring a problem.

Opinions on voters' ability to recognize symbolic policies diverge. The arguments used here are based on Mancur Olson's theory of collective action which states that information costs for voters are too high making it in fact rational for voters to remain relatively uninformed.\textsuperscript{25}

Voter ignorance gives a very important role to interest groups. Since the reason for existence of some environmental interest groups is to research and criticise government performance, they are in a better position to distinguish symbol from substance. The information gained by environmental interest groups is passed on to the public in condensed form, reducing the public’s information costs. Voters who are concerned about environmental issues will often take their cues from environmental interest groups. Hence symbolic policies might be exposed by interest group activity. One would therefore expect politicians to be less likely to engage in symbolic actions in areas where interest group activity is intense. Murray Edelman supports this view. According to his conclusions on the use of symbolic legislation,

\begin{itemize}
\item \textsuperscript{24} Doem and Phidd, supra note 1, p.318.
\item \textsuperscript{25} Mancur Olson, supra note 5. See Daniel A. Farber, "Politics and Procedure in Environmental Law" Journal of Law, Economics, and Organization, March 1992, on voters ability to recognize symbolic legislation.
\end{itemize}
administration has been effective and regulations have been enforced in cases where organized interest groups have applied pressure on the government.  

7. THE CHOICE OF POLICY INSTRUMENTS IN ENVIRONMENTAL POLICY MAKING

Even though all of the above theories contribute to a better understanding of the motivations behind policy instrument choice, they are not equally useful in describing and predicting instrument choice in environmental policy making. The discussion of instrument choice by the federal government in the Canada Green Plan will be based largely on Weaver’s theory of blame avoidance and the theories on symbolic action. Doem and Wilson’s concept of coerciveness will be used in the classification of the instruments. The level of coercion will serve to describe the effectiveness of a particular policy instrument. It will be assumed that the most coercive instrument in environmental policy making, regulation, is also the most effective.  

That is, regulation is most likely to result in a change of behaviour in the immediate future because non-compliance is penalized. Instruments which rely on persuasion are often used in parallel with regulations. By themselves, however, non-coercive instruments are not very likely to produce the desired change in behaviour, especially not in cases where fundamental changes are required. If changes are achieved through

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27 This assumption is supported by Bruce Doem and Richard Phidd, supra note 13. It is also based on a perception of human nature which sees individuals as resisting to rapid changes in behaviour or lifestyle unless they believe this change to be in their immediate self-interest. Environmental quality is in everyone’s long-term interest, but economic development which benefits people in the short-term, even if at the expense of environmental quality, is generally given priority. Often only major environmental crises bring concerns about environmental quality to the top of the priority list.
non-coercive instruments, then most likely only over an extended period of time, the length of which is impossible to predict. If an improvement in environmental quality requires changing ingrained habits such as driving a car to work, it may take more than a decade before people change their behaviour if the government solely relies on public education.

The assumption that regulatory action is the most effective instrument in protecting the environment has its exceptions, for, just like any other policy instrument, regulation can be of a symbolic nature. However, those cases do not weaken but rather strengthen the argument that the federal government is taking very few actions which contribute directly to the improvement of environmental quality, because, if we include the possibility that some of the regulations are only symbolic, we are left with even fewer action forcing policy instruments.

This theoretical overview generates four propositions about instrument choice. First, the federal government will be reluctant to use highly coercive policy instruments in implementing environmental policies because of the pattern of interests affected: the costs of highly coercive instruments, such as emission standards or outright bans on certain products are concentrated and borne by the polluter, whereas the benefits are diffused in that they accrue to the general public. Costs are therefore highly visible to the parties affected who are, as a result, likely to organize and oppose very coercive instruments.  

Second, the government will prefer non-coercive policy instruments over no action at all because it wants to avoid being blamed for ignoring a problem.

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28 Pollution control costs may eventually be passed on to the consumer through an increase in the prices of the products produced by the regulated industry. But regulation nevertheless hurts industry since higher prices can decrease its international competitiveness. A third party, who in certain cases is also affected by strong pollution control regulations is labour. Industries may try to recover lost revenue as a result of pollution abatement costs by cutting back jobs. As a consequence, labour tends to oppose stricter pollution control for existing industries.
Third, non-coercive policy instruments will especially dominate in areas where there is no significant pressure from environmental interest groups on the government. Environmental interest groups have an important role in monitoring government action and informing the voter. If their influence on voters is perceived to be strong by the government, the latter might be convinced that too weak a response to the problem at hand will negatively affect its popularity in the next elections. Hence, environmental groups must succeed in convincing the government that the credit to be claimed from enacting stricter pollution control regulations by far outweigh the political costs of imposing such regulations on industry (and that insufficient or symbolic action will generate an unacceptable level of blame).

Fourth, the government may be constrained in its choice of instruments by factors which have little to do with the groups affected. Weaver calls these political system constraints and they include constitutional provisions and federal-provincial conflict.29

In the following two chapters, I will describe the federal government’s use of policy instruments in the environmental policy field and examine the degree to which each of the above factors may have influenced the final choice of instruments. Chapter III looks at the entire federal Green Plan and examines with what frequency each particular instrument is to be used in the implementation of the Plan. This will be followed by a discussion of the factors which have influenced the pattern observed. Chapter IV provides a closer analysis of federal use of policy instruments through a case study of the Fraser River Action Plan, one of the initiatives announced under the Green Plan.

CHAPTER III

THE CANADA GREEN PLAN AND THE CHOICE OF POLICY INSTRUMENTS

After over a year of deliberations within the federal Cabinet, a $8 million public information and consultation process,1 one glossy discussion paper and a summary report printed on heavy recycled paper, the Canada Green Plan was finally released on December 11, 1990.2 It is Canada’s first comprehensive environmental action plan and is to guide Canadian environmental policy over the next six years. It has received considerable international recognition and praise, but domestic responses have been mixed. Environmental groups have complained about a lack of specific commitments, standards and regulations, too little detail on funding, and the absence of an environmental bill of rights.3 Business groups fear that they might have to bear huge clean-up costs in the future even though the greatly feared "green taxes" and tough pollution control laws were not part of the final Green Plan.4 Overall, the Green Plan is a document which avoids creating enemies among polluters but at the same time attempts to satisfy public demands for a cleaner environment largely through symbolic action. A look at the policy instruments to be employed in the implementation of the 248 Green Plan initiatives reveals a great deal about the federal government’s commitment to environmental protection.5

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5 The Green Plan is usually said to contain about 120 initiatives. However, those would be described more accurately as problem areas in which action is promised. The actual number of different programs or projects is 248.
In what follows, I will discuss the types of policy instruments in the Green Plan and
describe the considerations and political pressures which motivated the federal government to
avoid the use of instruments such as green taxes and legislative action.

1. POLICY INSTRUMENTS IN ENVIRONMENTAL POLICY MAKING

In order to be able to make generalizations about the policy instruments in the Green
Plan, I categorized all Green Plan initiatives according to the policy instruments they employ
(see appendix 2). Seven categories were identified, each involving a different level of
coercion: regulation, expenditure, guidelines, capacity increasing, agreements, public informa-
tion and public participation (see table I below).

Regulation is the most coercive instrument\(^6\) since it outlaws certain actions and
requires the polluter to comply with specific performance or emission standards; in the case
of non-compliance, the polluter is punished as provided under the law. The main instruments
can be broken down further into subcategories. Enforcement is included in the first category
because it is an essential component of any regulation. Regulations which are not enforced
are not coercive and have only symbolic value.

While far less coercive than regulation, expenditure contains a minor element of
coercion, since it prescribes a specific action to be taken, even though it does not put the
burden of the cost on any one party. Instead, the costs are diffused; they are covered through
government spending (or more precisely by the public through general taxes). All the other

\(^6\) In the policy instrument literature, the most coercive and interventionist instrument identified is public
enterprise. It is not included here, because there has never been a case in which the government has decided to
nationalize an industry or purchase shares of a private company in order to protect the environment.
TABLE I. POLICY INSTRUMENTS IN THE GREEN PLAN
(in decreasing order of coercion)

1. Regulation
   a. new regulatory authority
   b. regulatory actions
   c. proposed regulations
   d. enforcement

2. Expenditure
   a. spending on clean-up, restoring habitat
   b. acquisition/creation of natural sites, parks, protected areas
   c. foreign aid

3. Guidelines, codes of practice

4. Increasing capacity
   a. new research facilities
   b. new institutions or organizations
   c. technology development/demonstration projects
   d. spending on science, research, studies
   e. detection, classification, monitoring
   f. plan development, negotiations
   g. enhance management, administrative capabilities
   h. conferences

5. Agreements
   a. intergovernmental, no action specified
   b. international, no action specified
   c. international, general commitment

6. Public information/education

7. Increasing public participation (consultations, increase funding of ENGOs)

categories also involve some level of government spending. What distinguishes this category is that the funds are specifically allocated to clean-up or environmental enhancement projects such as the creation of national parks or the clean-up of abandoned contaminated sites.

Guidelines or codes of practice do not involve a high level of coercion on the part of
the government because, unlike regulations, they are not enforceable. They lay out norms or standards which the government would like individuals or companies to follow and hence rely on persuasion rather than coercion to achieve the desired results. Their significance lies in the fact that they provide the government and individuals or companies with a standard by which their behaviour or performance can be measured.

Initiatives under the capacity increasing category do not lead directly to an increase in environmental quality because they do not prevent, reduce, or clean-up pollution. Instead, they contribute to a better understanding of the problems created by pollution and thus increase the capability of the actors concerned to deal with the problem (this is particularly true of subcategories a, d and e). Sometimes, they represent a first step in the long process of addressing an environmental problem (subcategories b, c, f, g and h). In the long run, they all may lead to further initiatives which will actually improve environmental quality, but that is by no means guaranteed. They may also be followed by further capability increasing initiatives if the government is trying to delay action.

Comparable to "increasing capacity" in the level of coercion they involve, are categories five, six, and seven, agreements, public information and public participation. The types of agreements included in category five enable the government to show concern and express a general commitment to dealing with a problem. Agreements which outline a particular course of action are not included in this category because they can be assigned to any of the other categories depending on the type of action specified. Initiatives which rely largely on public information are aimed at increasing public awareness and possibly changing public behaviour to decrease its impact on the environment. Increasing public participation
includes initiatives such as the public consultation process leading up to the Green Plan. They enable the public to express its opinion on certain environmental issues. To what degree this will influence government action depends on the strength of the other interests or stakeholders involved.

The above three categories do not contribute directly to an improvement in environmental quality. This is not to say that they are not important because initiatives which fall under these categories are fundamental to the functioning of a democratic system and will hopefully, in the future, lead to greater demand from the electorate for action on the environment. However, these types of instruments, just like increasing capability, are all non-coercive policy instruments in that they do not stipulate any specific action to be taken and do not impose costs on a concentrated group. That also means that the government can not exercise any control over what the outcome of its initiatives are. Public education may make the public less wasteful and further research may provide an impetus for more regulatory action, but those outcomes are uncertain.

Hence, only the first two categories, regulation and expenditure, promise to result in an improvement in environmental quality within a specified period of time: new regulations or better enforcement require polluters to stop or abate pollution, and initiatives under expenditure entail clean-up or environmental enhancement programs funded by the federal government.

As the tables on pages 137 and 138 of appendix 2 show, regulation and expenditure make up about one fifth of all Green Plan initiatives. However, saying that one fifth of the Green Plan initiatives will directly contribute to increasing environmental quality may be
overly optimistic. Whether or not regulations will be effective depends on whether or not they are enforced. The creation of new regulatory authority does not guarantee that it will be used to tighten pollution control. Finally, spending on clean-up may, in certain cases be too low to make a significant difference or, even more frequently, as in the case of the Green Plan, spending initiatives renew commitments to already existing programs, so that action towards improving environmental quality is actually not increased (unless funding for the programs is increased).\(^7\)

By far the most commonly used policy instruments for both the Green Plan and the progress report initiatives (initiatives announced after the first one and a half years of the Green Plan's existence) are capacity increasing instruments. This dominance of non-coercive instruments puts into question the likely effectiveness of the Green Plan in producing significant changes. In order to understand why the Green Plan relies largely on non-coercive instruments to deal with environmental problems, the political pressures faced by Environment Canada in the drafting of the plan have to be examined. These are opposition from other federal ministers, the industry lobby, environmental interest group activity and provincial opposition. The above factors will be discussed with reference to the four propositions about instrument choice listed in Chapter II.

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\(^7\) Examples of previously existing programs which were included in the Green Plan are the Environmental Partners Fund, the Environmental Choice Program, assistance for resource evaluations of designated rivers, contributions to the World Wildlife Fund and sponsorship of the Globe Environmental Conferences in Vancouver.
2. CABINET OPPOSITION TO THE GREEN PLAN

The federal cabinet gave Environment Minister Lucien Bouchard the approval to develop a five year environmental agenda in August 1989. The agenda was to be presented to the public in February 1989, together with the federal budget. However, by that time, the proposed plan had still not received full cabinet approval. The reason for this is twofold. First, other ministers were concerned that the plan would interfere with the policies and programs of their own departments since it proposed making environmental considerations mandatory in all cabinet policy decisions. Second, the cabinet was unwilling to agree to an extra few billion dollars to Environment Canada at a time when all other departments were required to cut back spending. The biggest opponents of the plan were the Ministers of Industry, International Trade, Treasury Board and Finance. Opposition to the plan was also strong among bureaucrats in other federal departments, who feared a "power grab" by Environment Canada.

In an effort to overcome internal resistance to his environmental agenda, Lucien Bouchard changed tactics and went from closed departmental deliberations to an open public consultation process. His hope was to generate enough public support to pressure cabinet to approve his scheme. However, the discussion paper designed to guide the cross-country consultation process had already been weakened compared to the initial 200-page version put

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10 Craig McInnes, "Plan may be delayed until fall, Bouchard says," Globe and Mail, Feb. 9, 1990, A2.
together by Environment Canada.¹¹

In late May, just a few days before the public consultations began, Bouchard resigned as federal Minister of the Environment in protest over issues related to the proposed constitutional amendments. Treasury Board president Robert de Cotret, who was appointed as Bouchard’s successor, took over the supervision of the public consultation process.

The public consultation process allowed industry, environmental, and consumer groups to voice their opinions about what should be included in the Green plan and what should be excluded. Considering the widely diverging interests of these groups, it could not have come as a surprise that no consensus was reached.¹²

Consequently, it is questionable whether the public consultations had the desired effect on cabinet. The consultations certainly did not stop cabinet from cutting the budget of the Green Plan from the originally promised $5 billion over five years to $3 billion over six years and from rejecting granting Environment Canada greater authority within the government.¹³

Furthermore, when the Green Plan was finally released, no money had been approved by cabinet for specific Green Plan initiatives. Instead, Environment Canada is required to seek cabinet approval for the funding of each individual program before it can be announced, and all areas of spending face annual review by the government. This leaves cabinet with the power to oversee spending for environmental clean-up programs and research projects.

Finally, more than half of the $3 billion in Green Plan money was assigned to departments other than Environment Canada. This was heavily criticized as “Mr. de Cotret’s

gift to other cabinet ministers in exchange for their agreeing to finally release the long-
delayed plan."\textsuperscript{14}

What effect have all these concessions to cabinet had on the selection of policy
instruments? Generally, cabinet ministers opposed those instruments which would interfere
most with their departments’ mandates. The Ministers of International Trade, Industry, and
Energy, Mines and Resources, for example, were opposed to "green taxes" and stricter
environmental standards which could hurt the international competitiveness of business and
industry.\textsuperscript{15} Most cabinet ministers were opposed to regulation which would have required
them to consider the environmental impact of their programs and projects.\textsuperscript{16} Hence,
Environment Canada was forced to either exclude or weaken the regulatory actions initially
proposed in the Green Plan.

3. **OPPOSITION FROM INDUSTRY**

Opposition from cabinet ministers responsible for different aspects of trade and
commerce was no doubt influenced by the interests of the groups they represented. Industry
and business groups lobbied very strongly against certain Green Plan proposals, in particular
taxes on fossil fuels and tough pollution control laws.\textsuperscript{17} According to Francois Bregha,
policy director at the Rawson Academy, an environmental consulting group, the fact that the
economy went into a recession just a few months prior to the release of the Green Plan

\textsuperscript{16} Ross Howard, supra note 13.
\textsuperscript{17} John Geddes, supra note 4.
helped the fight of industry against tougher environmental laws. He pointed out that the Green Plan does not include many initiatives which will cost the private sector money.\(^{18}\)

One of the most active industry lobbyists was the Canadian Petroleum Association (CPA). It released a response to the Green Plan in July 1990 which deals with a large variety of environmental issues, including waste management, water, environmental emergencies and wildlife protection.\(^{19}\) One of its main concerns was that the federal government consult with the private sector before making any binding commitments to international agreements and accords, such as the Nitrogen Oxides Protocol, which might require industry to comply with unrealistic reductions schedules and hurt its international competitiveness.

A second concern related to the cost of environmental initiatives. According to Doug Bruchet, an environmental consultant for CPA, the costs should be borne by the public. In an article in the Calgary Sun, he was quoted as having said: "We do not support a tax at the well-head which will only affect the oil and gas industry. We think it should be broad-based because protecting the environment is everybody's concern."\(^{20}\) Such a "broad-based" tax would be applied at the consumer level and aimed at encouraging environmentally friendly behaviour and consumption. The CPA document also warned that "costly unilateral Canadian action could lead to the needless dislocation of industries, with no significant improvement in environmental quality."\(^{21}\) The federal government was sensitive to the pressure from industry, and some key proposals opposed by the private sector were not included in the final

\(^{18}\) Ibid.

\(^{19}\) Frank Dabbs, "CPA environment paper is benchmark for industry," Financial Post, July 31, 1990, p.21.

\(^{20}\) Dann Rogers, "Costs of cleaning up," Calgary Sun, July 31, 1990.

\(^{21}\) Quoted in Frank Dabbs, supra note 19.
Green Plan. These were the so-called "green taxes," including the proposed tax on fossil fuels, and stricter enforcement measures.

...there is a scarcity of stern measures against potential and actual polluters that makes the Green Plan seem unnecessarily weak - a reflection, perhaps, of the cabinet's pro-business orientation.22

Even though green taxes were not included because of too much opposition from the private sector, the federal government is currently studying the use of economic instruments to encourage environmental protection, this time in consultation with industry. For this purpose, a discussion paper on economic instruments was released in June 1992.

3. PRESSURE FROM ENVIRONMENTAL GROUPS

Even though environmental groups were given an opportunity to present their views during the public consultation process, the final Green Plan fell far short of their expectations. Environmental groups urged the government to "reorient its tax regime to discourage polluting industries, divert federal funds into non-polluting energy development, and institute a get-tough program of enforcement."23 They also lobbied for an environmental bill of rights and specific sums for specific programs. None of these demands were realized in the Green Plan; instead, environmental groups got a document of "fuzzy declarations of good intentions."24 The objectives set are for the most part very general and allocations have only been made for very broad categories of initiatives.

24 Jeffrey Simpson, supra note 22.
Why did environmental groups not achieve what they wanted? One possible explanation is that they did not have enough credibility because the public they were claiming to represent was in fact not very concerned about the environment. Evidence on the public's concern about the environment is inconclusive. A poll conducted by Environics Research Group Ltd. in the fall of 1990 showed that nearly three-quarters of Canadians approved of some form of green taxes. Another poll conducted by the same company shows that while Canadians believed action on the environment was important, eight out of ten thought that the government was unable to deal with environmental problems.

These two polls would suggest that government action on the environment was both desired and needed. However, a Globe and Mail - CBC News poll taken at approximately the same time showed that only 7 per cent of the respondents considered the environment Canada's most important problem, significantly less than the percentage whose major concern was the economy and the proposed goods and services tax. Only a year earlier, environmental problems had been ranked at the top of the list by 17 per cent of the respondents. This significant downward trend was also reflected in polls taken in February and July and may have indicated to the government that economic interests deserve a higher priority than environmental interests.

A second explanation as to why environmental groups did not succeed in making the Green Plan stronger is simply the constellation of power in cabinet discussed above. The first
draft of the Green Plan presented by Environment Canada to cabinet included a significant number of actions demanded by environmental groups. They proposed a review of every activity of the federal government: the national harmonization of environmental standards, new regulations, stricter enforcement actions, the use of market based instruments to reflect the environmental costs of products, higher prices for fossil fuels and the development of alternative sources of energy. That the draft was substantially changed and weakened by cabinet members was less influenced by a lack of pressure from environmental groups than by the refusal of a number of cabinet ministers to allow the new Green Plan to give Environment Canada new powers to interfere with the programs of their departments. This view is supported by Kai Millyard, of environmental group Friends of the Earth, in his assessment of the influence of environmental groups and the public on the Green Plan:

...the public consultations won't have much influence on what cabinet decides in the end. What really counts is the debates and machinations within cabinet.²⁸

Environment Canada does not have enough influence in cabinet to push anything past the central departments whose main concern is the economy and who therefore represent the interests of the private sector which was essentially opposed to the type of initiatives favoured by the environmental interest groups.

What the public got in the end was largely symbolic action - studies, research and programs to show concern for the environment but no bold step towards sustainable development.

²⁸ Reported in Dennis Bueckert, supra note 11.
4. PROVINCIAL RESISTANCE TO FEDERAL INTERFERENCE

The provinces sided with industry in their opposition to the Green Plan. Especially among the resource dependent provinces opposition was high. They were concerned that Ottawa might override provincial jurisdiction over environmental matters and seize control over environmental management. This would equal control over resource development and by extension, significant control over the provincial economies. The Green Plan was compared to the National Energy Program (NEP) in that its effects would be similar: "a massive siphoning of wealth to Ottawa, investment and economic growth grinding to a halt in resource-producing regions and a sharp rise in unemployment."\(^{29}\)

Provincial and territorial energy ministers complained in a joint statement from their annual meeting in Winnipeg that the federal government was developing its environmental action plan without consulting them. They demanded a joint decisionmaking process and expressed concern about the proposed tax on fossil fuels and the proposed federal environmental assessment regulations. The ministers demanded that provincial environmental assessment replace federal assessment for projects where federal and provincial jurisdictions overlap.\(^{30}\) The strongest opposition to a tax on fossil fuels came from Alberta, because as the province with the highest per capita consumption of fossil fuels, it would suffer the most from such a tax. The Alberta Conservative caucus chairman threatened that if a carbon tax was included in the Green Plan, the entire Alberta caucus would vote against it.\(^{31}\)

While the provinces were worried about federal encroachment on their regulatory

\(^{29}\) "Riding the green tiger," \textit{Alberta Report}, February 19, 1990, p. 16.


\(^{31}\) "Riding the green tiger," supra note 29, p.16.
powers with respect to natural resources, no opposition was voiced to any of the proposed spending initiatives. In fact, it seems that federal spending can never be high enough. In August 1990, the B.C. government demanded twice as much money as Ottawa offered on a new reforestation agreement arguing that it was not getting its share of federal funds for reforestation purposes. Federal spending, generally, does not interfere with provincial jurisdiction and is therefore seen as a welcome source of funds.

The final text of the Green Plan must have been a pleasant surprise to the provinces. It does not include any green taxes, and it also responds to provincial fears of federal interference in provincial jurisdiction by its emphasis, repeated throughout the document, on federal commitment to work in partnership with the provinces. In addition, the final text does not commit the provinces to any federal programs, that is, no federal-provincial agreements have been signed to implement the Green Plan. This is an invitation to provincial demands that every initiative be subject to consultations and negotiations with the provinces affected by it. In short, provincial pressures on the federal government have significantly contributed to an overall non-coercive and conciliatory Green Plan.

5. CONCLUSION

The above discussion shows that for the most part, the political pressures on Environment Canada (and the federal government in general) worked against a highly

32 Ken MacQueen, "De Cotret warned to respect environmental jurisdiction," Ottawa Citizen, November 30, 1990, A5.
34 Ross Howard, supra note 13.
coercive environmental agenda. Influential cabinet ministers, the private sector and the provinces were opposed to strong regulatory action and an expansion of the authority of Environment Canada. The only groups in favour of more coercive policy instruments were environmental groups, who did not have the same political weight as the other three groups of actors, especially since the level of public support for new environmental regulations was inconclusive.

The propositions discussed in chapter II have been confirmed by the Green Plan experience. The federal government did not use highly coercive instruments because the parties who would have had to bear the costs were well organized and effectively opposed regulatory action. The government did not yield to environmental interest group pressure because public support was inconclusive and the credit to be claimed for getting tough with polluters did not seem to outweigh the blame the government feared to generate from the private sector. In that situation, non-coercive instruments which do not force any specific action and therefore do not create political enemies were, from a political perspective, the wiser choice.

While the incentives to satisfy environmental groups and the public were not strong enough to risk offending industry, public concern for the environment could not be ignored entirely - especially since Prime Minister Mulroney had promised to take steps towards achieving sustainable development. The way to pacify the public was through symbolic action. The government needed to be seen doing something. The promise of numerous studies and research was one way to do this, spending on clean-up programs another, repackaging old programs yet another. None of these types of initiatives impose new costs on
concentrated groups. The repackaging of old initiatives is particularly interesting. Many
Green Plan initiatives have in fact been identified as already existing programs whose funding
is to be renewed under the Green Plan. Announcing old initiatives as new ones is a
politically safe thing to do, since once programs have been in place for a while, controversy
over them has usually died down. In addition, there are no new costs for anyone associated
with an already existing program and polluters are usually more concerned about new and
unpredictable costs.

Finally, since funding for each initiative has to be approved by cabinet, the public will
be reminded of the federal government’s commitment to the environment through regular
spending announcements under the Green Plan. In short, in implementing the Green Plan, the
government is avoiding blame where it can and claiming credit where it is politically the least
risky.

A similar pattern of behaviour can also be observed at the level of the individual
Green Plan initiative. The next chapter will deal with federal blame avoidance in the case of
the Fraser River Action Plan.
CHAPTER IV

CASE STUDY: THE FRASER RIVER ACTION PLAN

One of the environmental problem areas identified in the Green Plan is the Fraser River Basin. The federal government promised to develop a sustainable management plan for the Fraser River and Burrard Inlet together with the B.C. provincial government, communities and industry. On June 1, 1991, the federal government committed $100 million to the Fraser River Action Plan. The Action Plan is composed of eleven distinct initiatives which, as I have done with the entire Green Plan, can be categorized according to the policy instruments to be used to implement the initiatives.

Regulation is the policy instrument most likely to achieve the stated objectives. From the perspective of the federal government it is also a relatively cheap policy instrument because direct clean-up costs have to be paid by the polluters. These qualities would seem to make regulation a preferred policy instrument by the federal government. However, the Fraser River Action Plan does not bear this out. For the most part, the initiatives under the Action Plan make use of "capacity increasing" policy instruments, that is to say, they involve the identification of environmental problems, monitoring, research, and demonstration projects. A second important characteristic of the initiatives is that they are non-confrontational. That is, the federal government clearly avoids taking any action which could interfere with provincial or municipal jurisdiction. Federal activity is largely restricted to strengthening already existing federal programs or providing research and planning support to provincial and municipal programs. The Action Plan does not propose any new regulations or standards to protect the environmental quality of the Fraser River basin and if such
regulations are to be developed - as might be the case under the Burrard Inlet Environmental Action Plan - they will be developed in close cooperation with the province and the municipalities.

In its preference of non-coercive policy instruments, the Fraser River Action Plan is similar to the entire Green Plan which, as demonstrated in chapter III, favours capacity increasing policy instruments over regulatory action. Because of this similarity to the overall Green Plan, the Fraser River Action Plan provides a good case study which can shed some light on what determines the federal government’s choice of policy instruments.

In what is to follow, I will discuss the events leading up to the announcement of the Fraser River Action Plan, discuss each of the initiatives separately, and finally examine the factors which may have influenced the choice of initiatives and policy instruments. In order to be able to offer an explanation as to why certain policy instruments were chosen over others, I will look at constitutional constraints, budgetary constraints, and the federal government’s incentives to avoid blame in response to political pressures from environmental groups, industry and other levels of government.

1. **GENESIS OF THE FRASER RIVER ACTION PLAN**

The federal government’s commitment to target the Fraser River for action was prompted by pressure from a number of concerned MPs from Quesnel, Prince George and the Lower Mainland.¹ Their concern was raised by an article on the Fraser River which

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¹ Telephone interviews with officials from the Department of Fisheries and Ocean and Tom Siddon’s minister’s office, August, 1992.
appeared in the Nov/Dec 1988 issue of Equinox. Tom Siddon, then Minister of Fisheries and Oceans and MP for Vancouver South, brought the pollution problems in the Fraser to the attention of the B.C. conservative caucus. The B.C. caucus approved of the idea of a basin-wide environmental action plan and in September 1989, a proposal was submitted to the federal cabinet to fund a basin-wide management plan under the Green Plan. The Department of Fisheries and Oceans and Environment Canada strongly supported the proposal and gained the support of a number of Fraser River communities. On March 2, 1990, representatives from 16 different municipalities or communities along the Fraser River held a meeting in Richmond chaired by Vancouver Mayor Gordon Campbell. The objective of the meeting was to develop recommendations to senior levels of government to address their concerns and to improve the quality of the Fraser. The Mayors present at the meeting agreed that there was a need for an integrated approach to the management of the entire river basin. They called for a Three Point Action Plan:

1. A detailed water quality study from the source of the Fraser to the sea
2. The commitment of all sixty agencies involved in the Fraser - government, industries, and communities - to reverse the trend of deterioration, and rehabilitate the river through the creation of the Fraser River Management Plan
3. The promotion of public awareness of the river as an enormous asset.

Nine months later, on November 30, 1990, ten representatives of the Fraser Cities Coalition met with federal and provincial Ministers of Environment to suggest an action program for the Fraser. The federal Minister of the Environment, Robert de Cotret,

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committed to including initiatives on the Fraser River in the Green Plan and the provincial
Minister of Environment, John Reynolds, announced that the Province would participate in
the implementation of the plan and would match federal funding.4

This was the first time since a management plan for the Fraser River had been
proposed that the province showed any interest in participating. The reason for the late
provincial involvement was the low priority the Vander Zalm government gave to the
environment.5

Shortly after the release of the Green Plan, on January 11, 1991, the Fraser Cities
Coalition met for a second time and the mayors specified the goals and objectives of the
"Fraser Basin Action Program". A discussion paper was drawn up which identified several
areas requiring attention: water quality, habitat management, pollution sources, control of
water uses and adjacent land use, enforcement, public participation, and research. The
discussion paper stated the need for cooperation among the Environment Ministries, the
Department of Fisheries and Oceans, regional districts, and municipalities since none of these
agencies can delegate their legislated responsibilities to the organization developing and
implementing the Fraser River Management Plan. However, the paper also emphasized that
local governments should not lose jurisdiction over matters currently under their control and
that the key to the future management structure would be an effective mechanism for local
and regional participation.6

The federal government accepted most of the principles laid out in the discussion

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4 Ibid., p.2.
5 Ibid., p.14.
6 Ibid., p.8.
paper of the Fraser Cities Coalition; "building partnerships" with the province, the municipalities, and all other stakeholders was one of the major components of the Fraser River Action Plan announced on June 1, 1991.

On October 19, 1991, the federal government released the "Fraser River Sustainable Development Program - A Preview", which gives a more detailed description of the objectives of the Fraser River Action Plan. Its budget is $100 million, covering the period from 1991 to 1997 and is divided equally between Environment Canada and the Department of Fisheries and Oceans. The Action Plan is to be governed by three basic principles:

1) sustainable development
2) cooperation with the provincial and municipal governments, the private sector and environmental groups
3) making the polluter pay for the costs of clean-up and control.

1.1 FRASER BASIN MANAGEMENT PROGRAM START-UP COMMITTEE

The first step in the development of a sustainable management program for the Fraser River basin was the establishment of the Fraser Basin Management Start-up Committee on August 2, 1991. The membership of the committee included representatives from the three levels of government, the aboriginal community, environmental groups, industry and the public. The committee was formed under the Fraser River Action Plan and its mandate was to provide advice on the development of a comprehensive management program. In order to

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gain input from the public, the committee held a number of public meetings in Prince George, Kamloops, Chilliwack, Richmond, North Vancouver, and Vancouver. The outcome of these meetings contributed to the drafting of the federal/provincial/municipal agreement establishing the Fraser Basin Management Program in April 1992.

1.2 FRASER BASIN MANAGEMENT PROGRAM

The Fraser Basin Management Program is governed by a 19 member management board which was selected in August 1992.\(^9\) The board consists of three representatives each from the federal, provincial and local governments, and nine other members representing aboriginal peoples, industry, labour and the general public. During the consultations of the Start-Up Committee, it was formally decided that the management board would also include a representative from an environmental organization.\(^10\) To the great disappointment of many environmental groups, this decision has been ignored. This means that environmental groups are excluded from the decision making process and will have no input on how the Fraser Basin Management Board will allocate its funds.

The purpose of the Fraser Basin Management Program is to provide for sustainable development in the Fraser basin through the coordination and integration of activities, management practices, and decision making processes of all three levels of government.\(^11\)

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\(^10\) Interview with a Start-Up Committee member, July, 1992.

\(^11\) Government of Canada, Government of the Province of B.C., Fraser Municipalities and Regional Districts, Agreement Respecting the Fraser Basin Management Program, March 30, 1992. The definition of sustainable development given in the agreement is that used by the Brundtland Commission.
The Fraser River Action Plan is only one component of the Fraser Basin Management Program; the Fraser River Estuary Management program (FREMP), a 1985 federal-provincial agreement to protect the quality of the Fraser estuary’s natural environment, and several provincial and municipal initiatives such as sewage treatment upgrading, integrated resource management, solid waste management, air emissions control, groundwater quality monitoring and control, and elimination of toxic substances from pulp and paper mills will all be coordinated through the Fraser Basin Management Program.

2. THE FRASER RIVER ACTION PLAN INITIATIVES

Besides the Fraser Basin Management Board, ten other initiatives receive funding under the Fraser River Action Plan. Some of them will be coordinated through the Fraser Basin Management Board, others will remain within the control of either Environment Canada or the Department of Fisheries and Oceans. Few of the initiatives announced under FRAP are entirely new; the majority are based on existing federal programs that will be renewed or expanded.

2.1 FRASER RIVER ESTUARY MANAGEMENT PROGRAM

The Fraser River Estuary Management Program (FREMP) can in many ways be seen as a predecessor to the Fraser River Action Plan and has been used as a model for the Fraser Basin Management Board. It was established by a federal-provincial agreement in October

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12 The Province of B.C. has paid for half of the pre-construction costs to convert the Lulu and Annacis Island sewage treatment plants from primary to secondary treatment. But the province has not offered any construction money to date.
1985 and involves Environment Canada, Fisheries and Oceans Canada, the B.C. Ministry of Environment, the North Fraser Harbour Commission, and the Fraser River Harbour Commission.

FREMP established seven work groups to review activities in port and industrial management, navigation and dredging, log management, waste management, water quality, recreation, habitat and environmental emergencies. Each of the work groups wrote a report and, based on their findings, recommended specific actions. The sections of the reports dealing specifically with how to improve environmental protection of the estuary made a number of important recommendations. These included the establishment of basic environmental standards to be applied to the construction of new industry, the revision of current Fisheries and Oceans Dredging Guidelines to include more detailed environmental guidelines for dredging approval procedures and operational methods, the implementation of industrial and commercial sewer use control, the upgrading of the Annacis and Lulu Island sewage treatment plants, the revision of all pollution control objectives, and the identification of areas where enforcement and abatement may be needed.\textsuperscript{13} The habitat work group concluded that "existing environmental legislation is not adequate to protect and conserve all important habitat for fish and wildlife in the Fraser River estuary. [...] The establishment of a formal policy would improve the agencies’ abilities to protect wildlife habitat."\textsuperscript{14} Most of the recommendations made by FREMP have yet to be implemented.


\textsuperscript{14} Ibid., p.16.
FREMP is also known for the establishment of the Coordinated Project Review Process. Under this process all development projects proposed in the estuary are referred to one central office which coordinates the environmental review among the relevant regulatory agencies. This process avoids the duplication of reviews by several agencies and ensures that the companies seeking development approval fulfil all regulatory requirements as established by the different government agencies.

FREMP was renewed for another three years at the same time that the Fraser River Action Plan was announced and will receive additional federal funding through the Green Plan, as well as from the other partners to the agreement. Under the renewed agreement, the Greater Vancouver Regional District is joining the five original signatories. In the next three years the emphasis will be on "developing closer involvement with municipalities, industries, estuary users and the public to refine and implement various plans and technical recommendations of the activity programs of FREMP." 15

FREMP has been criticized for covering too limited an area. It excludes the Strait of Georgia into which the Fraser River empties and does not look at the upland areas but stops at the dykes. In the North-West it goes no further than Mission, ignoring how upstream activity affects the estuary. The program has also been attacked for its failure to include non-governmental representatives on its board. The Fraser Basin Management Program is designed to remedy these two problems; it will consider the entire drainage area of the Fraser River and its management board includes representatives from industry and the public (but similarly to FREMP it excludes environmental groups).

15 Ibid., p.27.
Since it has largely a coordinating and advisory function, FREMP employs exclusively capacity-increasing policy instruments, such as classification, monitoring, research, and plan development. FREMP can recommend that government agencies take regulatory action but it has no regulatory or enforcement powers itself. The decision to employ more coercive policy instruments and to enforce environmental requirements of specific projects therefore rests with the individual government agencies. Overall, FREMP has been successful as a bureaucracy but not in furthering pollution abatement. An assessment of FREMP to date, made by the Technical Advisory Committee to the GVRD, states

While the FREMP program had been successful in fostering communication and cooperation amongst agencies, its efforts to achieve advances in waste management and improvements in environmental conditions have largely been frustrated through a lack of available resources and funds.\(^\text{16}\)

### 2.2 DEMONSTRATION WATERSHEDS

When the Fraser River Action Plan was first announced $11 million was allocated to the development of demonstration projects which would apply the principles of sustainable development, and to information and education programs such as state of the environment reports for the basin and GIS (geographic information system) mapping and aerial and land-use surveys. The purpose of the demonstration watersheds is to provide working examples of sustainable resource management within the Fraser basin. The lessons learned are expected to provide ideas and guidelines for the management of the entire Fraser basin. The first year progress report announced that the first demonstration watershed will be established in 1992-

93. Even though initiated by Environment Canada and Fisheries and Oceans, this program is being developed in cooperation with other federal departments and provincial environment and resource management ministries.

The demonstration watersheds have two functions; to help develop new technology and expertise in the area of sustainable resource management and at the same time educate users of the Fraser on the knowledge/expertise gained. Hence, the policy instruments used in this initiative, fall under increasing capacity and public education, both instruments which involve very little coercion on the part of the federal government.

2.3 THE BURRARD INLET ENVIRONMENTAL ACTION PLAN

The federal government committed $1.8 million to the Burrard Inlet Environmental Action Plan, a project with the objective of cleaning up and controlling pollution in the Burrard Inlet. Four other agencies are involved in the project: the Department of Fisheries and Oceans, the British Columbia Ministry of Environment, the Vancouver Port Corporation, and the Greater Vancouver Sewerage and Drainage District. All five agencies, including the federal government, will contribute $400,000 to the program over the next five years. This sum does not include the investments made by each agency for specific commitments.

The Burrard Inlet Environmental Action Plan is based on the recommendations made in a draft action plan released by the Greater Vancouver Regional District (GVRD) in January 1990. The draft action plan was triggered by findings by the federal government that the quality of bottom sediment in the Burrard Inlet is degraded and that there is a moderate to high prevalence of precancerous lesions and tumours in bottom fish. In the draft action plan,
the GVRD pointed out the need for cooperation among all three levels of government since the mandate to protect the environment rests with the federal and provincial governments. One of the key recommendations made in the report is the need to upgrade Vancouver’s sewage treatment plants from primary to secondary treatment. But it would cost over $40 million just to upgrade the Lions Gate treatment plant which discharges effluents into the Burrard Inlet. In addition, the annual operating costs of the upgraded plant would increase by over $2 million.\(^{17}\) To date both the federal and provincial governments have assigned the highest priority for sewage treatment upgrading to the Annacis and Lulu Island plants which release discharges into the Fraser River.\(^{18}\)

The draft action plan also emphasized the importance of identifying and controlling the environmental impact of non-point sources, now largely unregulated.\(^{19}\) The GVRD and industry have developed 'best management practices'(BMPs) for industrial and port activities, but BMPs are not enforceable. For certain practices, bylaws have been passed by the GVRD based on the BMPs. The Vancouver sewer bylaw and the bylaw on photofinishing practices, for example, are both based on the text of previously existing BMPs.

The BMP Action Team, established under the BIEAP, is currently reviewing existing BMPs to identify if there are any holes in the guidelines. But there is no plan to develop new regulations, since this is left up to the individual governmental agencies. The BPM Action Team hopes that compliance with existing BPMs can be increased by better informing

\(^{17}\) Ibid., p.58.

\(^{18}\) In 1990, B.C. Environment Minister John Reynolds ordered the regional district to have secondary treatment by 1993, but the deadline was subsequently extended to 1995 for Lulu and 1997 for Annacis. Neither the federal nor the provincial government have offered to contribute to the construction costs.

\(^{19}\) Burrard Inlet Environmental Improvements, supra note 16, p.14.
the affected parties of what these codes of practices are, because in many cases, individuals or companies are not even aware that they exist.\textsuperscript{20} The Burrard Inlet Draft Action Plan is less hopeful that compliance can be reached by simply increasing efforts at informing the public: "...for BPMs to be fully effective, legislation and/or bylaws must be implemented to make the recommended practices enforceable." \textsuperscript{21}

In addition, the draft action plan recommended that some legislation (such as the Canada Shipping Act to regulate sewage discharges from vessels) would need to be amended.\textsuperscript{22} But, for the most part,

existing legislation provides the power to control almost every contaminant source to the Burrard Inlet. However, for a variety of reasons, including limited staff and funds, the agencies have focused on regulating and enforcing standards for a limited number of sources considered a priority; sources considered to have a lower priority are largely unregulated at this time.\textsuperscript{23}

The writers of the draft action plan were confident that most of its recommendations could be successfully implemented; the only major stumbling block identified was a lack of available resources and funds. The budget of the Burrard Inlet Environmental Action Plan demonstrates the force of this constraint. $2 million over five years will only allow the most rudimentary clean-up actions to be carried out; the upgrading of the Lions Gate treatment plant seems out of reach because of the costs involved. Success of the Burrard Inlet Environmental Action Plan then, depends largely on voluntary compliance of polluting industries with "best management practices."

\begin{itemize}
\item \textsuperscript{20} Interview with the director of the BMP Action Team, September 8, 1992.
\item \textsuperscript{21} Burrard Inlet Environmental Improvements, supra note 16, p.63.
\item \textsuperscript{22} Ibid., p.23.
\item \textsuperscript{23} Ibid, p.12.
\end{itemize}
Progress to date includes the establishment of the Burrard Inlet Environmental Action Plan (BIEAP) office in downtown Vancouver and the identification of four main areas of concern:

1) objectives and standards
2) operations and enforcement
3) remediation
4) land/water use planning

Under each of the above categories several projects have been initiated. Under objectives and standards, DOE and DFO are responsible for the dioxin monitoring program and DOE also participates in research on biomedical indicators of polycyclic aromatic hydrocarbons (PAH) in fish. Under operations and enforcement, DOE is conducting an enforcement capability study and is participating in reviews of existing enforcement programs and emergency response procedures. Under remediation, the federal government has assumed almost no responsibilities apart from DOE participation in a review of the referral of on-shore contaminated sites. DFO, together with the Vancouver Port Corporation initiated a habitat mapping project under the fourth area of concern, land/water use planning.

The projects in which DOE and DFO are involved are without exception aimed at increasing capacity. The only project which may lead to the tightening of existing codes of practice is being undertaken by the Best Management Practices Action Team, which includes participants from all parties to the BIEAP. The Action Team reviewed all codes and guidelines in 1991 and in the next year will identify the gaps, and recommend the

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The office was found to make communication between the different agencies very cumbersome and as a result was closed down again, only a few months after it had opened.
development of new codes where necessary. However, whether or not new codes of practice will decrease water pollution significantly depends on the voluntary compliance of the parties affected.

2.4 POLLLUTION ABATEMENT

A third component of the Fraser River Action Plan is a pollution abatement program to be implemented by Environment Canada. The two key targets announced in October of 1991 were:

- to reduce by 30 per cent, in the first five years, the discharge of harmful industrial pollutants into the waters of the Basin and to virtually eliminate, by the year 2000, the release of toxic substances in the basin. The substances in question are itemized in the Priority Substances List, published and regularly updated by Environment Canada under the Canadian Environmental Protection Act.

Even though this seems to be a serious commitment to pollution abatement, there is to date no clear strategy on how the reductions are to be achieved.

Environment Canada and the B.C. Ministry of Environment have assigned priority to five classes of contaminants entering the Fraser River: industrial discharges, urban and agricultural runoff, air pollution, ground water, and waste site identification and clean-up.

In the case of industrial discharges, clean-up will be concentrated in the heavily industrialized parts of the lower Fraser and on pulp and paper plants, sawmills and other forest industry facilities in the basin. To reduce pollution from urban and agricultural runoff, the federal government proposes the assembly of a more complete data base on the type and

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26 The Fraser River Sustainable Development Program - A Preview, supra note 7, p.8.

27 Interview with an Environment Canada official, August 12, 1992.
volume of contaminants in the Fraser, setting priorities for reducing specific contaminants, regulatory or other measures to reduce pollution loads, evaluation of the effectiveness of the control measures, monitoring and surveillance of compliance and evaluation of the effectiveness of regulation. The problem of air pollution is to be attacked by compiling an inventory of emission sources for major industrial sectors in the Fraser Basin, assessing the effectiveness of current air pollution control technology, and establishing a monitoring network to trace the source and destination of airborne pollution. Under the ground water program, an inventory of ground waters close to pollution sources and in risk of contamination will be made. The fifth category of sources of contaminants, waste sites, will have to be identified and cleaned up. Where possible, the clean-up of contaminated waste sites will be the responsibility of the offending party. Where the responsible party cannot be identified, the Orphan Site Fund, established previously under a nationwide program, will be used as a source of funds for the clean-up.

Of the above five classes of contaminants, so far action has only been taken to address urban runoff. In September of 1992, Environment Canada expects to award a contract to an environmental consultant company to develop a methodology to measure the contaminant loadings of effluents from sewage treatment plants and combined sewer overflows.\textsuperscript{28} Hence, the only step that has been taken to date will initiate another monitoring program. Whether the monitoring program is really needed before any pollution abatement action is initiated is doubtful. It might just be a way to delay immediate response to well-known problems since

\textsuperscript{28} The GVRD estimates that combined sewers (which carry sewage and stormwater) in Vancouver, New Westminster, and Burnaby overflow about 62 billion litres of mixed sewage and rainfall runoff each year, enough to fill B.C. Place Stadium over 30 times.
it will not contribute significantly to already existing data. In the development of its Liquid Waste Management Plan, the GVRD has estimated the volume of untreated sewage entering lower Mainland waters every year. It also established the Combined Sewer Overflow and Urban Runoff Committee which researched existing data on the pollution arising from combined sewer overflows and urban runoff, and has evaluated alternatives for reducing contaminant discharges to local receiving waters. Environment Canada’s monitoring program can contribute to determining the exact impact of sewage treatment plant effluents, combined sewer overflows and urban runoff, but such a program should not be used to delay action. Current data which rates 14 out of 21 water bodies in the region either "fair" or "poor" should be strong enough to prompt action. Already back in 1988, Ken Hall, with the Westwater Research Centre, stated that the existing knowledge of water quality in the Fraser was sufficient to warrant clean-up actions to address specific problems. At that time, the number of scientific reports on the quality of the Fraser, written since 1950, already amounted to about 650. Since then the GVRD, and the provincial and federal ministries of Environment have commissioned numerous more studies on water quality, sewage effluents, and other sources of contaminants.

It is difficult to judge whether or not this time further studies will result in action. According to an Environment Canada official, once the monitoring program has established

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30 Quoted in Greater Vancouver Regional District, Liquid Waste Management Plan, 1988. These ratings mean that at times, water quality is not high enough to support uses such as bathing, crop irrigation, and habitat for fish.

31 Quoted in Mark Hume, supra note 2, p.71.
the severity of the problem, contaminants loadings (as opposed to total flow) will be reduced either by revising existing codes of practice or guidelines, or by encouraging the development of new technologies. Neither one of these actions involves a high degree of coercion.

The first mechanism for reducing contaminants is currently in the review stage of the process. New regulations are not anticipated but the existing codes of practice of the province and the federal government might be revised. The second mechanism, development of new technologies, is funded in part by the Environmental Technology Program, another Green Plan initiative announced October 7, 1991. Under this program industries can apply for federal funds to develop and demonstrate commercially viable environmental technologies.\footnote{Environment Canada Press Release, "$100 million Green Plan Initiative Technology for Environmental Solutions Unveiled," October 7, 1991.}

The initiatives announced under the pollution abatement program so far fall under one major instrument category: increasing capacity. Even if codes of practices are reviewed at a later date, polluters may not have to pay for clean-up costs as announced in the statement of principles of the Fraser River Action Plan (see page 43) because, as mentioned above, codes of practice can not be legally enforced.

2.5 WATER/ENVIRONMENTAL QUALITY MANAGEMENT

To manage the environmental quality of the Fraser River, the federal government has announced several actions. Firstly, existing water quality objectives for the lower part of the basin are to be reviewed and followed by the development of scientific information for environmental quality objectives throughout the basin. If necessary, new objectives will be
developed and negotiated with stakeholders. Secondly, present water quality of the river are to be assessed and the effectiveness of the current regulatory program will be evaluated. Thirdly, the program will fund scientific research into the effects of certain pollutants on water quality, fish productivity, etc. The research will also be directed towards finding better measurements of environmental quality. Finally, enforcement is to be strengthened in order to increase the compliance with requirements under the Fisheries Act and the Canadian Environmental Protection Act.

The above actions are taken in cooperation with the province. The development of water quality objectives from Moose Lake to Kanaka Creek is being undertaken by the province and setting up monitoring programs of the objectives are also the responsibility of the province. Water quality objectives vary from one body of water to the next. They are formulated based on the major water uses identified for the water body. For example, water quality objectives for water bodies which support valuable resources or provide drinking water are set so as to avoid degradation. "For other bodies, objectives are set to protect the most sensitive designated use, which may allow some degradation...or it may require some enhancement action." These objectives are not enforceable as environmental standards; their purpose is to provide a monitoring standard by which water quality is measured. They also act as guidelines for the issuing of waste management permits, water licences or pesticide use permits by the provincial Ministry of Environment.

The federal government can review the water quality objectives of the province but

does not develop its own. Instead, the federal government monitors the environmental quality of various media, such as biota and sediment quality. At the present time, Environment Canada is supporting the development of ecosystem objectives. Some of the municipalities in the Fraser River Basin have already started work in that area; however, the ecosystem objectives still have to be defined. Environment Canada is also assessing how the environmental quality of the basin has changed over time.

The actual role of Environment Canada in the water/environmental quality initiative is a support role. According to one Environment Canada official, the federal government is not undertaking any abatement measures, nor funding changes in industry or helping in any clean-up actions. Rather, funding is going into identifying where problems are, providing support to the province and the municipalities in developing guidelines, and monitoring environmental quality. Judging by how the funds are allocated, the policy instruments used by the federal government in the environmental/water quality area concentrate on research and monitoring. Actions which aim directly at increasing environmental quality are being undertaken by the province and, to a degree, the municipalities.

2.6 ENFORCEMENT

In its first announcement of the Fraser River Action Plan, the federal government earmarked $10.6 million to contribute towards stricter enforcement of environmental regulations. Under this initiative, a team of technical experts and habitat officers will be

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34 Telephone interview with an official from the water quality branch of Environment Canada, August 1992.

35 It should be noted that initial allocations of funds may have changed since part of FRAP is now coordinated through FBMP.
selected with the mandate to enforce the habitat provisions of the Fisheries Act. By early 1992, three new environmental inspectors were hired and the capability of the laboratory of Environment Canada was increased to support sampling requirements. The goal announced in the first year progress report is to carry out 300 inspections annually and achieve at least 90 per cent compliance with the Fisheries Act effluent regulations and CEPA by 1997.36

Besides the increase in staff (which is not only to enforce initiatives under the Fraser River Action Plan but also other Green Plan initiatives), a separate enforcement branch has been set up. This means that enforcement activities, such as inspections and the issuance of warnings and fines, are now carried out by different officials than activities which promote compliance, such as communication and consultation with the regulated industry.

A further effect the Green Plan initiatives have had on the enforcement and compliance branch of Environment Canada is that there is a renewed commitment to develop closer ties with the provincial counterparts and portion out enforcement activities to ensure that there is no duplication and that all affected parties are undergoing regular inspections. The latter is more of a concern since there are generally not enough enforcement officers.37 Federal enforcement teams enforce the regulations under the Fisheries Act and under CEPA. Currently, Environment Canada carries out about 80 inspections per quarter which have been scheduled and planned.38 In addition to the scheduled inspections, the department carries out a number of non-scheduled inspections which follow up on complaints.

Stricter enforcement has also been promised under the Burrard Inlet Environmental

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37 Telephone interview with an official from the Enforcement Branch at Environment Canada, August 1992.
38 Ibid.
Action Plan. However, the time schedule of when this is to be achieved does not show any sense of urgency. The BIEAP Annual Report lists the objectives to be reached in the next five years. Improvements to enforcement programs will not be completed until 1996.39

The enforcement program is potentially the most important initiative under the Fraser River Action Plan because in most cases the existing regulations under CEPA and the Fisheries Act are strong enough to halt environmental degradation of the Fraser River. However, the level of coercion of enforcement actions varies considerably depending on whether or not compliance with existing regulations is actually achieved. Only very strict enforcement actions will result in compliance and thus ensure that a certain level of environmental quality is maintained.

It is impossible to predict with what rigidity enforcement measures will be carried out in the next few years and if they will indeed contribute to slowing pollution of the Fraser. However, the past record of DOE and DFO enforcement activities may lead one to be sceptical of major improvements. In the past, the "official enforcement policy [has been] to seek compliance from polluters and to proceed with charges only as a last desperate act."40 And according to one Fisheries and Oceans official, charges laid under the Fisheries Act in the last ten years can be "counted up on one finger." Enforcement typically involves negotiation with industries and efforts at pollution abatement are largely voluntary.

With respect to effluents from the Vancouver sewage treatment plants, enforcement actions have been equally lenient. The federal Fisheries Act allows the federal government to

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40 Mark Hume, supra note 2, p.72.
prosecute sewage plants legally if they are found to be in violation of the Act. Effluent limits from Annacis and Lulu Island sewage treatment plants are set by provincial pollution permits. The province carries out monthly toxicity tests of the effluents from the two plants (this test sets lower standards than the federal Fisheries Act). According to GVRD documents, the Annacis plant failed the test nine months out of twelve in 1991, and the Lulu plant failed eleven months out of twelve. This is not only a recent occurrence, "the Annacis Island and Lulu Island wastewater treatment plants have not complied with the provincial waste management permits, and the federal Fisheries Act, for many years. The key violation is effluent toxicity."42

2.7 FISH HABITAT MANAGEMENT PLANNING AND RESTORATION

In order to restore the productivity of the Fraser to historic levels, the federal government has announced a number of initiatives: the development of habitat management plans for the river's 16 watershed areas, the restoration of degraded habitats, additional enumeration of fish production, research to establish baselines and better understanding of habitat impacts and habitat capacity, and stricter enforcement of habitat provisions of the Fisheries Act.43

Efforts to restore fish habitat are not new but will build on existing programs such as the Policy for the Management of Fish Habitat (1985) and the Salmonid Enhancement Program (1977). By early 1992, thirteen of the sixteen fish habitat management areas

42 GVRD document quoted in Glenn Bohn, supra note 41.
(HMAs) have been identified and the next step will be to develop habitat management plans for those areas. Planning is under way in five habitat management areas: Stuart/Takla, Quesnel, Thompson/Nicola, North Thompson, and South Thompson/Shuswap.

Closely related to the fish habitat restoration program is the salmon rehabilitation program which has as its objective to double sockeye salmon stocks within 20 years. Stock rebuilding efforts will also be undertaken with regard to other species of salmon inhabiting the Fraser River system. Specific targets for chinook, coho, pink, and chum salmon, as well as steelhead will still have to be identified. In 1991-92, a number of research projects identifying the rearing capacity of lakes or studying the behaviour of migrating adult salmon have been carried out. The research is to help in the formulation of future stock rebuilding strategies.

According to one fisheries official no new projects are being undertaken as a result of FRAP.44 The above initiatives are all existing programs. The ones which fall under the fish habitat management planning and restoration programs utilize mostly capacity increasing instruments such as plan development and research but the restoration of degraded habitat involves expenditure, and habitat enforcement falls under regulatory actions.

Of the above, only stricter habitat enforcement measures, if carried out, involve a high level of coercion. However, recent events do not indicate that monitoring and enforcement measures have improved since the announcement of the initiative fifteen months ago. On Monday, August 25, 1992, angry fishers complained about the failure of expected numbers of sockeye to reach their spawning grounds as a result of overfishing. They accused Fisheries

44 Interview with a government official from Fisheries and Oceans, September 1992.
Minister John Crosbie and his staff for failing to monitor the activity of native Indian fishers. While it is unclear whether or not the loss in sockeye runs is due to overfishing by aboriginal fishers, the incident puts into question the capability of the fisheries department to effectively monitor fishers’ activity and enforce catch quotas.45

Nevertheless, the enforcement program may still improve. According to one fisheries official, four new habitat enforcement officers are to be hired with FRAP funding. Progress in that area, however, is slow. Fifteen months after the announcement of FRAP, the job descriptions still remain to be written.

2.8 WILDLIFE HABITAT RESTORATION

The wildlife habitat component of the Fraser Basin Action Plan is to complement existing initiatives such as the North American Waterfowl Management Plan, the Wildlife Policy for Canada, and the Federal Policy on Wetlands Conservation and on Endangered Species. The agency responsible for wildlife habitat restoration is the Canadian Wildlife Service, a branch of Environment Canada. It is focusing on three major projects: estuary and land conservation, interior wetland conservation, and forest ecosystem diversity.

According to the First Year Progress Report, the goal of the estuary and land conservation program is to "protect and enhance biodiversity in upland ecosystems and in staging and wintering migratory bird habitats in the Lower Fraser."46 The principal activity in the past year has been the Greenfields Project under which agreements were reached with

local farmers to plant winter cover and lure crops on close to 1200 hectares of farmland in Delta and Surrey in order to improve food and habitat conditions for wintering waterfowl in the Fraser River's estuary. This project has been in place since August 1990 and is being continued under the Fraser River Action Plan. Funding for the seeds comes from the Canadian Wildlife Service while the farmers are absorbing the costs of planting and raising the crops. The project was initiated by UBC soil scientists and Ducks Unlimited.

An interior wetlands conservation program was started in 1991. In the first year, a cost-shared agreement between Environment Canada and Ducks Unlimited was developed with the goal to provide a coordinator for the program. In addition, a demonstration project to restore a drained wetland on Monte Creek was completed with the help of Ducks Unlimited, the Nature Trust of B.C., and the provincial Ministry of Environment, Lands and Parks.

The third component of the wildlife habitat restoration initiative, the forest ecosystem diversity program, is still in the consultation stage. Its objective is to improve forest management programs that benefit biodiversity, wildlife and threatened ecosystems. To date forest ecosystems and diversity data have been catalogued and the development of combined model forests/demonstration watersheds has been discussed.

The policy instrument used to implement the Greenfields project is categorized as expenditure and will contribute directly to protecting the environment. The other two components of the wildlife habitat restoration initiative are still in the planning stage, but will eventually involve expenditure and public education.

For a representative of the environmental organization Friends of Boundary Bay,
progress is too slow.\textsuperscript{47} He complained that funds should be going into buying land for conservation purposes rather than demonstration projects or the expansion of the facilities of the Canadian Wildlife Service.\textsuperscript{48} He also would have liked to see a federal wetland law passed which would provide groups with legal means to protect habitat. None of his concerns have been addressed by the wetland habitat restoration initiative.

2.9 IMPROVED SCIENTIFIC BASE

Research projects which will measure the effects of human activity in the Fraser River Basin on the natural environment received are also part of FRAP. Water quality studies are under way, as well as several research programs to provide managers within the DFO with the data required to restore and enhance the fisheries resource. Also, monitoring sites for temperature, salinity and productivity of plankton and chlorophyll have been established. In the Stuart/Takla region, research on the effects of logging on sockeye salmon production is being undertaken. This research and monitoring initiative solely relies on capability increasing instruments.

2.10 PARTICIPATION BY FIRST NATIONS

One initiative not mentioned when the Fraser River Action Plan was first announced, but included in the First Year Progress Report, is the participation of First Nations in habitat restoration and resource management. In the first year of the Fraser River Action Plan native

\textsuperscript{47} Interview with a member of Friends of Boundary Bay, September 10, 1992.

\textsuperscript{48} Under the Canadian Wildlife Act, CWS has the authority to acquire land as wildlife areas for the purpose of protecting migratory birds. See Harriet I. Rueggeberg and Anthony H. J. Dorcey, supra note 33, p.222.
groups participated in a number of DFO projects such as building fish ladders, conducting
habitat inventories, constructing trails, building side channels and cleaning up streams.49
$16 million of the $50 million allotted to the DFO is going towards aboriginal programs.50
A large amount of the money is going into setting up a new fisheries administration for the
native fisheries which has nothing to do with improving the environmental quality of the
Fraser River. Funds allocated to DFO by FRAP have been significantly reduced as a result of
the diversion of funds to native programs. DFO was to receive $6 million in FRAP funding
for 1992, this sum was reduced by the Treasury Board to $5 million. Of the $5 million, $2
million went into funding the native programs. Originally, natives in the Fraser basin were
asking for a separate Treasury Board submission. This was not granted, instead funds were
diverted from FRAP. These programs are now being acclaimed as part of the effort to
achieve sustainable development in the Fraser River Basin since they will increase native
participation in resource management.51

The policy instruments used in this initiative are capacity increasing (creation of new
organizations), public participation, and expenditure (in as far as natives are working on
clean-up and habitat restoration programs).

49 First Year Progress Report, supra note 8, p.24.
50 Confidential interview.
51 Interview with an official from Tom Siddon's Minister's office.
3. **THE QUESTION OF INSTRUMENT CHOICE**

A close examination of the Fraser River Action Plan shows that the policy instruments to be used to implement the initiatives almost exclusively involve a very low level of coercion. The majority of the initiatives centre around the identification of problems, research, classification, and monitoring (see table II below).

At the same time, none of the initiatives are being carried out by the federal government alone. Typically, they involve cooperation with the province and the municipalities. The large cooperative effort is carried out in the name of sustainable development which, as specified in the Fraser Basin Management Agreement, must reflect

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broad-based public involvement, the diversity of the natural resource system, the broad range of social, economic and environmental values in the Fraser Basin and the need for improved institutional relationships. So far the Fraser Basin Management Program has concentrated on improving institutional relationships. The federal government will spend a minimum of $200,000 a year to create a new bureaucracy, the Fraser Basin Management Board. Within the cooperative programs under the Fraser River Action Plan, the federal government plays a support role, leaving actions aimed directly at improving environmental quality (such as pollution abatement measures and sewage treatment plant upgrading) up to the provinces and the municipalities. The rather passive role of the federal government reflects a very timid interpretation of its constitutional powers with respect to water. The only initiatives which require the federal departments to take a more active role are the salmon rehabilitation, fish and wildlife habitat restoration, and enforcement initiatives. However, all four initiatives build to a large extent on programs which have been in existence for a number of years such as the Salmonid Enhancement Program established in 1977 and the Greenfields Project initiated in 1990.

Of the ten initiatives, only the water quality initiative and the Burrard Inlet Environmental Action Plan consider the possibility of new regulations. But even in those two initiatives, non-enforceable best management practices, guidelines or water quality objectives are preferred over regulations. Defining these is left up to the province; the federal government is only involved in the review process. In short, the federal government is increasing its research efforts and establishing new bureaucracies such as FBMB and BIEAP, all in the name of sustainable development. Money is going into creating more "process"
rather than action aimed directly at improving environmental quality.

There are several variables which explain why the federal government has chosen relatively non-coercive policy instruments over coercive ones and why it seems to be avoiding regulatory action altogether. These variables, to be discussed below, are political system constraints such as constitutional provisions and the interests of other levels of government, and incentives to avoid blame or claim credit provided by pressure from environmental interest groups and industry.

4. CONSTITUTIONAL CONSTRAINTS

Provincial and federal jurisdiction over water is outlined in the BNA Act of 1867 and the Constitution Act of 1982. The power over water resources lies with the provinces because the Natural Resources Transfer Agreement vests control or ownership of most bodies of water in the provinces. Provincial ownership of water provides the provinces with considerable legislative power, based on exclusive provincial jurisdiction over property and civil rights (section 92(13)), local works and undertakings (section 92(10)), and the management and sale of public lands (section 92(5)). Generally, the provinces are concerned with pollution through statutes dealing with the regulation of industries, the issue of permits specifying allowable discharges and the administration of prohibitions and penalties. However, specific heads of federal power in the constitution may interfere with or limit provincial jurisdiction over water.

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52 Barry J. Barton, Robert T. Franson, Andrew Thompson, A Contract for Pollution Control (Vancouver: Westwater Research Centre, 1984) p.15.
Most significant are sections 91(10) and 91(12) of the BNA Act. Section 91(10) gives the federal government exclusive legislative authority over navigation and by extension, over the regulation of navigable waters. Based on the interpretation of the courts of this section, the federal government has been able to require the provinces to seek its approval for any provincial project affecting the navigability of water ways such as large scale dams.53

Section 91(12) gives the federal government jurisdiction over sea coast and inland fisheries. Since fish are affected by most water pollution, this section provides the federal government with a legal basis to regulate water pollution. It also provides the federal government with the authority to review water projects which could negatively affect fish habitat, fish stocks or any other aspect of fish life. Without any question, section 91(12) gives the federal government the most extensive powers to control and regulate water quality.

In addition to section 91, the federal residual power to legislate for the "peace, order and good government of Canada" may justify federal intervention in cases of "national emergency," or at times, in cases of merely "national concern". Largely because of the absence of any clear legal authority, the federal government has used this section very sparingly to justify involvement with respect to water.54

4.1 FEDERAL JURISDICTION OVER WATER

The various activities taking place in the Fraser River Basin are regulated through legislation, agreements, or policies of nine different provincial ministries and seven different


54 Ibid.
federal departments and agencies. It is beyond the scope of this study to describe the entire governance system. Instead, I will only discuss the most important pieces of legislation and administrative structures which give the federal government a role to play in controlling and regulating the pollution of the Fraser River.

The federal government has asserted its constitutional powers over water through the 1970 Fisheries Act, the 1970 Canada Water Act, and most recently, the 1988 Canada Environmental Protection Act. All three pieces of legislation give the federal government considerable authority to regulate water pollution and/or the sources of contaminants. The two most important pieces of legislation, the Fisheries Act and the Canadian Environmental Protection Act (CEPA), enable the federal government to require the clean-up of the Fraser River, in the case of the Fisheries Act without having to negotiate an agreement with the province. However, a federal regulation under CEPA may be replaced by an equivalent provincial or territorial regulation if the two levels of government enter into an equivalency agreement.

THE FISHERIES ACT

By giving it the authority to control fishing and fish stocks, the Fisheries Act is the federal government’s main instrument for managing fish. Because it is also responsible for the protection of fish habitat, the federal government has a say in any activity that may

55 For a detailed discussion of the entire governance system see Rueggeberg and Dorcey, supra note 33.

56 The Canada Water Act authorizes the federal government to enter into agreement with the provinces in order to conduct research and water inventories, formulate comprehensive plans and execute research projects relating to water quality. The Act has never been used to justify unilateral federal action.
adversely affect areas frequented by fish, such as spawning beds. In the last two decades the Fisheries Act has become the basis for federal involvement in water pollution control and the management of fisheries habitat in the Fraser. The Fisheries Act prohibits the discharge of any substances hazardous to fish. It also authorizes the federal government to set effluent regulations and exempt sources from the prohibition if covered by regulations.  

Under separate arrangements with seven of the provinces, administration and enforcement of the Fisheries Act in inland waters has been delegated to the provinces. In the case of British Columbia, the federal government retains full control over salmon in inland waters, while the provincial government manages other inland fisheries through regulations approved under the Fisheries Act.

With respect to the Fraser River, the federal government’s authority means that it can restrict the discharge of pollutants in areas of the Fraser where strong scientific evidence exists that water quality is at a level where it endangers fish stocks. The worst area in terms of water quality in the Fraser is the North Arm, into which a large number of effluents are discharged but where the water flow is relatively low. Some of the toxic contaminants identified are chlorophenols, polycyclic aromatic hydrocarbons, and dioxins. The Burrard Inlet, which is technically not part of the Fraser River Basin but has also been targeted by the Fraser River Action Plan, is in even worse condition. In 1988, Darcy Goyette, senior biologist of the marine programs arm of Environment Canada, found precancerous liver


58 Harriet I. Rueggeberg and Anthony H. J. Dorsey, supra note 33, p.204.

lesions and tumours in nearly three-quarters of the sole he examined from the Port Moody Arm of the Inlet.\textsuperscript{60} He linked the bottom dwellers' lesions to their contact with polycyclic aromatic hydrocarbons (PAHs). Other chemicals such as tributyltin, oil, sewage, and human wastes contribute to the pollution of the Inlet. Sewer outflows are one of the main sources of pollutants. Under the Fisheries Act, the federal government has the authority to require sewage treatment plants to be upgraded to secondary treatment to reduce pollution from the plants' effluents.

**THE CANADIAN ENVIRONMENTAL PROTECTION ACT**

The most recent addition to the federal government's tool kit, the 1988 Canadian Environmental Protection Act, is the strongest assertion of federal authority in the area of environmental protection. Part II of the act contains the most important provisions with respect to ensuring water quality. It provides the federal government with the authority to regulate existing chemical substances, as well as the entry of new chemicals into Canadian commerce. The onus is on manufacturers and importers of chemical substances to prove their safety to human health and the environment. All existing chemicals known to be dangerous to human health or the environment are included either on the Domestic Substances List or the Non-Domestic Substances List. Existing chemicals which still need to be assessed for their potential toxicity are listed on the Priority Substances List. Effluents from pulp mills using bleaching, for example, were on the Priority Substances List for 1991-92. Two major pulp mill bleaching agents, dioxins and furans were regulated under CEPA in May, 1992 and

\textsuperscript{60} Burrard Inlet Environmental Improvements, supra note 16, p.6.
will have to be virtually eliminated from pulp mill effluents by 1994. This regulation affects all pulp mills along the Fraser River.\textsuperscript{51}

4.2 B.C. ENVIRONMENTAL LEGISLATION

As mentioned above, provincial jurisdiction over water is based on provincial control and ownership of most natural resources, including water. The most important piece of B.C. legislation with respect to water pollution is the Waste Management Act. Section 3(1.1) makes it an offense to discharge into the environment any waste produced by the operation of an industry, trade or business (this includes municipalities) or any other prescribed activity unless authorized by a permit, approval, order or regulation. Waste or discharges not covered by a permit are allowed if they are not introduced "into the environment in such a manner or quantity as to cause pollution."\textsuperscript{62} Permits are issued by Regional Waste Managers and can be repealed to the Director of Waste Management. Municipalities may not have to apply for permits if they prepare a waste management plan and submit it to the Minister for approval. If the plan is approved, the municipality may discharge wastes as specified in the plan.

Hence, the main tool of the Ministry of the Environment to control pollution is through the issuing and upgrading of permits for waste discharges. Companies with permits have to regularly submit monitoring data to the province for review. The federal government can ask to review these permits, but that is seldom done, leaving the province with significant

\textsuperscript{51} Dioxins have shown up in fish in concentrations requiring closure of fisheries and the issuing of health advisors.

\textsuperscript{62} B.C. Waste Management Act, Section 3 (2). See also Barton et al., supra note 52.
discretion in that area." For non-permitted discharges which are causing pollution, the B.C. Ministry of Environment can issue pollution abatement orders which require the offender to stop polluting. In the case of the Burrard Inlet and the Fraser River Estuary, however, most industrial discharges are currently permitted, and therefore pollution abatement orders are rarely ever issued.

As demonstrated in the preceding discussion, the authority to control water pollution is divided between the provincial and federal government. Nevertheless, the Fisheries Act provides the federal government with considerable authority over water since it can regulate any substance found harmful to fish.

As a result federal officers can deal with a case of pollution with few formal constraints in their decision making. They may accept the situation, negotiate for an improvement, make orders, or simply prosecute. The steps that they may take are not limited by the issuance of a provincial permit. In practice federal officers have a substantial input into the decision making which leads to a provincial permit being issued, and therefore rarely threaten to prosecute a discharge which is keeping within the terms of a provincial permit.

The question therefore is why, within the cooperative effort of the Fraser River Action Plan, the federal government has concentrated on research projects which involve monitoring, classification and the collection of data, rather than on the review of existing legislation and codes of practice which may lead to regulatory action. The latter type of research is being largely undertaken by the province. The only potentially "threatening" action undertaken by the federal government is a review of existing enforcement practices. However, nothing so far indicates that the polluter will indeed be made to pay for clean up costs.

63 Telephone interview with an official from the enforcement branch of Environment Canada, August 1992.
64 Barry J. Barton, supra note 52, p.19-20.
Since federal powers with respect to water pollution are broad, the focus of the Fraser River Action Plan on non-coercive policy instruments and on cooperation with the provinces and municipalities cannot be attributed to constitutional constraints. Instead, the federal government’s reluctance to get involved in any regulatory or clean-up actions is based on its preoccupation with blame avoidance and credit claiming. Pressure from environmental interest groups, industry, and other levels of government all have shaped the federal government’s perception of the blame or credit generating potential of the various initiatives. In the end, it chose to concentrate its efforts on initiatives which will generate the least blame but at the same time also allow it to claim some credit.

5. ENVIRONMENTAL INTEREST GROUP PRESSURE

The strength of environmental interest groups lies in their ability to convince governments that they will be blamed by the voter for inaction on particular environmental issues. Voter dissatisfaction with the government’s commitment to environmental protection, however, has to be perceived by the government to be strong enough to actually make voters change their party allegiance. If the government fears that may be the case, it will have an incentive to either strengthen its commitment to environmental protection or take symbolic action with the objective to convince the public of its concern for the environment. The latter response may be preferred in cases where other interests oppose a strong federal commitment to the environment. The Fraser River Action Plan represents such a case.

Gardner identified more than 30 environmental groups in the Fraser River Basin

\[65\] see Kathryn Harrison, supra note 57.
whose activities relate directly to the environmental protection of the basin.\textsuperscript{66} A number of these organizations have a long history of involvement in issues affecting the Fraser River. The following are just a few examples of the attempts by some of these groups to draw attention to the pollution of the Fraser.

In 1981, Will Paulik, founder of the Fraser River Coalition, laid charges against both Richmond Landfill Ltd. and the Fraser River Harbour Commission for discharging effluents harmful to fish into the Fraser. In both cases he won a conviction under the Fisheries Act.\textsuperscript{67} In June 1985, Concerned Citizen Against Raw Sewage Dumping appealed to federal fisheries Minister John Fraser to prohibit the dumping of raw sewage into the Fraser while the Greater Vancouver regional district engineers cut a sewer line to make way for a ramp on Annacis Island Bridge.\textsuperscript{68} In 1989, the Musqueam Indian Band charged the Iona Sewage Treatment Plant for damaging fish stocks. In January 1991, the Fraser River Coalition sought a court order to force an environmental assessment of the plan by the National Metal Corporation to build a deep sea dock on valuable marshland in Richmond. DFO had given the company approval to build the dock.\textsuperscript{69}

Besides these law suits, organizations such as Friends of Boundary Bay, Fraser for Life and the Wreck Beach Conservation Society have lobbied the provincial and federal governments for years to increase the protection of wildlife and fish habitat and to clean up


\textsuperscript{67} Mark Hume, supra note 2, p.72.

\textsuperscript{68} Patti Flather, "Fraser gets Fraser plea," \textit{Vancouver Sun}, June 10, 1985.

\textsuperscript{69} Glenn Bohn, "Fisheries allowed destruction of marsh habitat, coalition claims," \textit{Vancouver Sun}, Jan. 4, 1991, B3.
It is difficult to evaluate the extent to which environmental group activity influenced local Members of Parliament to press for federal funds to clean up the Fraser. No one particular event can be identified as having caused the change of heart. But environmental group activity did ensure that decisions affecting the environmental quality of the Fraser did not go unnoticed. Environmentalists from the Fraser River Coalition and the Wreck Beach Conservation Society have ensured that the Fraser remained on the agenda of Vancouver city council and provincial cabinet meetings.

Nevertheless, governmental response was slow in coming. The Fraser River Estuary Study identified significant degradation of the River back in 1978 and called for a coordinated river management plan involving all three levels of government. The provincial, federal and regional response came seven years later with the creation of a new agency in 1985, the Fraser River Estuary Management Program, designed to do more research on the problem and make recommendations. Few of these recommendations have been implemented so far.

What prompted the latest governmental initiative has not been attributed to pressure from environmental groups but to an article about the Fraser which appeared in Equinox in 1988. This article is usually being cited as having raised the concern of local MPs who then brought the issues up in the provincial conservative caucus meeting.

According to environmentalist and member of the Fraser Basin Management Start-Up Committee, Will Paulik, the pressure placed by interest groups on the federal government to

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71 Interviews with officials from Fisheries and Oceans and Tom Siddon’s minister’s office.
get involved in establishing a management plan for the entire Fraser River was not significant. Anthony H.J. Dorcey draws the same conclusion:

...while non-governmental organizations have participated in a wide variety of public consultation exercises related to the federal and provincial initiatives, none has yet focused on the Fraser River Basin [as a whole].

Rather, interest groups have concentrated on specific issues such as sewage treatment, protection of wildlife and fish habitat and effluents from pulp and paper industries.

Even though environmental groups did not pressure for an environmental action plan for the entire basin, FRAP can be seen as an attempt by the federal government to address as many different environmental concerns as possible. By espousing the conveniently "fuzzy" concept of sustainable development, and supporting the Fraser Basin Management Board in coordinating activities throughout the basin, the federal government can claim to be dealing with everyone's concerns.

But comments from various environmental groups in the Fraser basin reveal that they are not convinced that their concerns are in fact being addressed by the federal initiatives. A member of the Wreck Beach Conservation Society, who has been lobbying for the protection of the Fraser since 1974, says that FRAP is "preordained to failure" since the Fraser Basin Management Board, which will coordinate a large number of FRAP initiatives, does not have a representative from the environmental organizations on the board. Instead, the board represents private interest lobby groups such as dairy, grazing, silvicultural and forestry interests. As a consequence, it is unlikely that the Fraser Basin Management Program will succeed in "making the polluter pay."

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Other environmentalists are equally disenchanted with FRAP. They despair when they receive yet another proposal for research on the Fraser by the federal government.\textsuperscript{73} However, the general public who does not know how many years the federal government has already spent "studying" the Fraser River and who the people on the board are, may be more easily impressed by spending announcements made under FRAP and the positive First Year Progress Report.

6. **OPPOSITION FROM INDUSTRY\textsuperscript{74}**

One would assume that the industries along the Fraser River which discharge effluents into the stream are strongly opposed to new regulations which would require them to reduce the contaminant loading of the effluents. However, since no new regulations have been announced under the Fraser River Action Plan, industries in the Fraser River basin have not seen any need to mobilize. The perception of a representative of the Council of Forest Industries (COFI) was that the Fraser River Action Plan was mostly a research program since COFI had received a number of research proposals.\textsuperscript{75} Pulp mills in particular are much more concerned about the new regulations controlling dioxins and furans than any initiative announced under the Fraser River Action Plan.

Even research projects which may lead to a strengthening of enforcement actions, have not raised any particular concern among the affected parties. The reason for this is the way

\textsuperscript{73} Interview with a member of the T. Buck Suzuki Environmental Foundation, September 11, 1992.

\textsuperscript{74} This section is based largely on telephone interviews with an official from Fisheries and Oceans, a member of the Fraser River Coalition, and a representative of COFI.

\textsuperscript{75} Telephone interview with a representative of the Council of Forest Industries, September 10, 1992.
enforcement is currently handled. Enforcement rarely ever results in fines and almost never in prosecutions. Only the most flagrant violations are prosecuted. Generally, compliance with existing regulations are sought through negotiations with industries and the enforcement program relies on voluntary efforts on the part of the polluter to comply with the regulations. Since there is so much flexibility in the enforcement program, most industries have not felt any great economic impact from the existing regulations.\textsuperscript{76}

Furthermore, industry has been part of the consultations leading up to the establishment of the Fraser Basin Management Board and has a representative on the Board. This assures industry some influence over the nature of specific projects and over how funds will be allocated.

Federal reluctance to regulate industry more or tighten up enforcement can be attributed not to actual but to anticipated opposition by industry. To refer back to the theories discussed in chapter one, the government is reluctant to regulate industry in order to avoid a blame generating situation. If the polluter is indeed made to pay, as the first press release of the Fraser River Action Plan indicated, industry would certainly blame the federal government for increased operating costs, losses in profit and possible layoffs. Rising concerns of voters about the health of the Canadian economy also make the federal government reluctant to use the regulatory tool. It does not want to be accused of crippling the economy through stringent regulatory action. To avoid this situation, the federal government prefers to leave regulatory action up to the provinces.

\textsuperscript{76} Telephone interview with an official from Fisheries and Oceans, September 15, 1992.
7. CONSIDERATIONS OF COSTS INVOLVED IN CLEAN-UP PROJECTS

In addition to regulations that force private polluters to clean up, the government itself can commit funding to specific activities that improve environmental quality. In chapter two, these types of clean up or enhancement programs were classified under expenditure. The Fraser River Action Plan includes three major expenditure programs, the salmon rehabilitation program and the fish and wildlife habitat restoration programs. However, the first two programs are not new initiatives, but rather a continuation (and renewed funding) of programs which have been in existence since the 1970s. Their continuation can be ascribed to both their success and bureaucratic resistance to change. The Salmonid Enhancement Program (SEP) for example has been renewed every five years since its creation in 1977; the last time it was renewed was in 1987. At that time it received a total of $208 million for the following five years. That means, its renewal was expected again in 1992 with or without the Green Plan. Some of the wildlife habitat enhancement programs are relatively new, such as the Greenfields project but even that program was initiated before Green Plan funding was secured. In the case of the Greenfields project, however, funds have been increased as a result of FRAP. SEP, on the other hand, has not received any additional funding and will not be expanded to include any new projects.\(^\text{77}\) It is unclear whether or not the other clean-up or restoration programs continued under FRAP have received additional funding.

To date, the federal government has not committed any monies to new large scale clean-up or environmental restoration programs. The main reason for this is that they may simply be too expensive.

\(^{77}\) Interview with a Fisheries and Oceans official, September, 1992.
One illustration of that involves the upgrading of the Vancouver sewage system. Vancouver’s sewage system is one of the major sources of environmentally damaging effluents to the Fraser River and Burrard Inlet. Vancouver’s main sewage treatment plants, Lions Gate, Annacis Island, Lulu Island and Iona Island, are all primary treatment plants. Upgrading these plants to secondary or even tertiary treatment would significantly reduce water pollution in the Fraser River and the Burrard Inlet. However, the costs involved in such a project are phenomenal. In 1988, the GVRD estimated that it would cost $425 million in 1987 dollars to upgrade the four plants and the annual operating costs would be $25 million higher. The Green Plan has done nothing to resolve this funding problem.

A second major source of pollution is combined sewer overflows during periods of heavy rain. This occurs because most areas in Vancouver have a combined sewage system, that is, sewage and storm water are collected in the same pipes. During periods of heavy rain, the combined sewers become overloaded and spill a mixture of untreated sewage and rainfall runoff into English Bay, Vancouver Harbour, False Creek and parts of the Fraser River. Combined sewers in Vancouver, New Westminster, and Burnaby overflow about 62 billion litres of mixed sewage and rainfall runoff each year. Approximately 80 per cent of the overflows occur during the winter months. This problem could be solved by constructing separate pipe systems for sewage and rainfall runoff. In that case, all sewage

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78 Primary treatment removes suspended particles from the waste stream before the remaining fluid is discharged to the water. Only about 60% of suspended particles can be removed by this process. Most other Fraser River communities have at least secondary treatment which reduces the nutrient and chemical loadings from the flow from the primary plant.


80 Ibid., p.11.
would be treated, while all rainfall runoff discharges to the nearest body of water would go untreated.\textsuperscript{81} This project is under way in Vancouver. At the present rate of construction, however, the project will not be completed until about seventy years from now. A second solution would be to build storage tanks in which the overflow could be collected during periods of heavy rain and slowly released to the combined sewers and from there to the sewage treatment plant once the rain has passed. Building enough storage tanks in Vancouver, New Westminster and Burnaby to reduce the combined sewer overflow by 50 per cent would cost about $430 million according to an 1988 estimate.\textsuperscript{82} Again, the Fraser River Action Plan has simply not addressed this problem.

By contributing financially to the upgrading of the sewage system, the federal government could achieve significant improvements in the water quality of the Fraser River. That it does not get involved in upgrading the Greater Vancouver sewerage system can be ascribed not only to the phenomenal costs involved in that particular project but also the expectations it might raise in other municipalities. As one Environment Canada official put it: "If the federal government put funds towards upgrading the Vancouver sewerage system, a number of other major Canadian cities would demand the same money go towards upgrading their sewerage systems. That would simply be too costly!"\textsuperscript{83}

As a result of these constraints, the federal government spending on the Fraser river under the Green Plan is allocated largely to "capacity enhancing" projects, such as the

\textsuperscript{81} Discharging runoff untreated into the Fraser is not an environmentally sound solution to the sewage overflow problem since runoff carries considerable amounts of contaminants from the street surface to receiving waters.

\textsuperscript{82} \textit{Greater Vancouver Liquid Waste Management Plan}, supra note 30, p.16.

\textsuperscript{83} Telephone interview with an official from the water quality management branch of Environment Canada, August 20, 1992.
demonstration watersheds and the various research projects, rather than on activities which
directly improve environmental quality.

8. PRESSURE FROM OTHER LEVELS OF GOVERNMENT

While certain expenditure programs may not have been undertaken simply because of
the costs involved, the federal government might have shied away from regulatory action
because of opposition from the province and local governments.

Local governments would certainly welcome federal funds for the upgrading of their
sewage system but they are concerned that instead of funds they will receive orders from the
senior levels of government. In their own words, they are "concerned about the devolution or
'downloading' of federal and provincial programs to municipalities without consultation,
funding, enabling legislation or protection from liability." 84 Fraser basin municipalities put
pressure on the two senior levels of government not to make the Fraser Basin Management
Board an exercise in "downloading" but to create a "consensual federation between the
federal, provincial and local governments."85 Local control over the program is to be
secured through the creation of regional or subregional management boards. Moreover, the
Union of British Columbia Municipalities (UBCM) briefing paper on the FBMB expresses the
view that "participation in the program will provide tangible environmental benefits in its own
right and may lead the way to new powers for local governments that wish them."86 More

85 Ibid.
86 Ibid., p.15.
specifically, these new powers should include statutory powers to support municipal
initiatives. UBCM's policy paper, Local Governments and the Constitution, goes so far as to
call for the recognition of local rights in the federal constitution and the inclusion of a 'Local
Government Bill of Rights' in the B.C. Constitution Act. The briefing paper also quotes a
publication by the City of Vancouver, Towards a New Generation of Government, which calls
for a new Bill of Rights for community governments:

Local decisions should be made locally by local people...It is now time for the
Government of British Columbia to make a serious commitment to empower local
governments to manage our communities in accord with local priorities and
concerns, to provide municipalities with the resources we need to control
development and protect the quality of life in our communities... We want
sustainable economic growth with sound environmental controls to protect our
children's futures.87

While B.C. municipalities do not expect to receive enabling legislation through the
Fraser River Basin Management Program, they do view it as an opportunity to improve
communication with senior governments and as a forum to lobby for new powers which they
see as a prerequisite for sustainability.

This focus on local control leaves a support role for the senior levels of government.
The consensual approach of FBMB precludes highly coercive action on the part of the federal
government without consultation with local and provincial partners. In fact, coercive action
would almost certainly be viewed as "downloading" of federal responsibility.

This lobbying of local governments against "downloading" can explain why the federal
government has been reluctant to use its authority to enforce existing regulations to require
the GVRD to shoulder the costs of upgrading the Vancouver sewage system. Such unilateral

87 City of Vancouver, Towards a New Generation of Government, September, 1991, quoted in Local
Government and the Fraser Basin Management Program, supra note 84, p.16.
regulatory action on the part of the federal government would most certainly encounter strong resistance from the GVRD and the GVS&DD (Greater Vancouver Sewerage and Drainage District) which is currently working on phase II of its Waste Management Plan. Moreover, several federal agencies participated on advisory committees during the development of the GVRD’s Liquid Waste Management Plan (LWMP). These advisory committees also included representatives from the provincial government, the municipalities, public interest groups, consultants, and industry. As a result of its participation in this cooperative planning effort, the federal government has indirectly agreed not to enforce federal regulations which could be applied to effluents from sewage treatment plants to suit the GVRD’s LWMP. Since the LWMP is limited by tight municipal budgets, it is doubtful that rapid progress can be made to decrease plant effluents. Deadlines to upgrade the Annacis and Lulu Island plants to secondary treatment have been moved back twice. The current deadlines are set for 1997 and 1995 respectively.

In short, pressure from the Fraser basin municipalities not only contributed to getting the federal government involved but also shaped the involvement. The federal government seems to content itself with a support role in the implementation of the Fraser River Action Plan and the Fraser Basin Management Program. It is expected that the chairperson of the Fraser Basin Management Board, Anthony Dorcey, will promote this role. He emphasized the need for local empowerment in his conclusion to the study on sustainable development in the Fraser River Basin, undertaken for the province of British Columbia. In his opinion, one

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88 Greater Vancouver Liquid Waste Management Plan, supra note 30, p.3.
89 Glenn Bohn, supra note 41.
of the lessons to be learned from FREMP is that in setting up the Fraser River Basin Management Program, locally elected representatives should be more involved in the decisionmaking, planning and implementation process.\(^9\)

While local governments are concerned with gaining more influence and power, the provincial government is concerned with losing power. The province would interpret strong regulatory action by the federal government as an attempt by the latter to expand its jurisdiction in the environmental policy field, and, as a consequence, interfere with provincial control over natural resources. The province's concern is not that federal regulation is too weak to protect the environment but rather that it is too strong, hurting the competitiveness of B.C. industry.

According to an official from Tom Siddon's Minister's office, the negotiations over FRAP between the federal and provincial government proceeded in great harmony. It was accepted from the start that each government would not interfere with the other's jurisdiction. Initial talks were conducted when the Social Credit party was still in office in B.C. But the new provincial government under the NDP apparently also did not fear a federal "power grab" disguised under FRAP but agreed to the structure and appointment of the Fraser Basin Management Board.

This harmony between federal and provincial governments seems surprising since most other policy fields are dominated by federal-provincial conflict. The explanation lies in the nature of the policy field. As pointed out in chapter II, environmental policy is characterized by diffuse benefits and concentrated costs. The benefits of improvements in environmental

\(^9\) Anthony H.J. Dorcey, "Sustaining the Greater Fraser River Basin," supra note 72, p.278.
quality accrue to the public at large, while the costs have to be borne by a concentrated group of polluters. The latter, because of their size will be well informed and organized and use this advantage to lobby against environmental protection. Therefore, the distribution of costs and benefits in the environmental policy field in general, and clean-up of the Fraser River in particular, provide a strong incentive for blame avoidance, achieved through the use of non-coercive policy instruments. Hence, the weak federal role in the Fraser River Action Plan can be attributed more to a federal preoccupation with blame avoidance than to pressure from the province.

9. **PRINCIPLES, PRINCIPLES, PRINCIPLES**

It is too early to comment on the success of the Fraser River Action Plan. Direct action to clean-up the Fraser may still be taken by the federal government as a result of recommendations by the Fraser Basin Management Board. It is possible, however, to evaluate whether or not the federal government is living up to the principles which were to guide the Fraser River Action Plan (see page 43). The first principle, achieving sustainable development, has been used to justify a number of actions which do not contribute directly to protecting the environment or improving environmental quality which is what sustainable development should be all about. The second principle, cooperation with the province, municipalities and environmental groups, has only been achieved partly, since environmental groups have been excluded from the planning and decision making functions carried out by

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92 See Kathryn Harrison, supra note 57.
the Fraser Basin Management Board. The third principle, making the polluter pay, has so far not been addressed in any serious way and may be difficult to implement with private sector interests well represented on the Fraser Basin Management Board. The lack of commitment to these three principles, in particular the last one, is evidenced by the government’s choice of policy instruments in the implementation of the Fraser River Action Plan. This choice can be explained by examining the four propositions discussed in chapter II.

First, it was argued that the government will be reluctant to use highly coercive policy instruments because of the patterns of interests involved in environmental policy making. The Fraser River Action Plan is an example of federal preoccupation with the potential political costs of its choice of policy instruments. The federal government has chosen not to use highly coercive policy instruments in the implementation of the various initiatives under the Action Plan in order to avoid the electoral retributions from those hardest hit by such a choice, the polluters.

Second, it was expected that the government would prefer non-coercive instruments over no action at all because it wants to avoid being blamed for ignoring a problem. The Fraser River Action Plan is rich in symbolic initiatives which involve a low level of coercion and do not contribute directly to improving environmental quality in the Fraser basin. Very telling is the attempt by the federal government to claim credit for already existing programs by repackaging them and presenting them to the public as FRAP initiatives.

Third, non-coercive policy instruments were expected to dominate especially in areas where there is no significant pressure from environmental interest groups on the government. Environmental groups have been demanding the clean-up of the Fraser River for years and
have been active in lobbying all three levels of government. That the response they finally got lacks teeth may be due to the government's perception that they could be satisfied with a basin-wide environmental action plan. Environmental groups were in fact hopeful about the new action plan because they expected that their involvement in the Fraser Basin Management Start-Up Committee would result in representation on the Board, a development which would have given them formal access and input to the planning and implementation of projects initiated by the board. After they found out that all their nominees had been rejected leaving them without representation, criticisms of FRAP have become stronger. But environmental groups have so far not communicated their disappointment with FRAP to the public. Neither the Vancouver Sun, nor the Province have published any articles dealing with this issue. Even the British Columbia Environmental Network (BCEN) September newsletter only includes a brief article listing the names of the new Board members. The lack of environmental representation is downplayed. The article simply states that criticism had been expressed regarding this but that environmentalists were hopeful that they would be able to participate at the regional level. This rather fatalistic attitude will not help environmental interest groups to discredit FRAP. So far the $100 million program has gained the federal government only credit from the public.

Fourth, the choice of policy instruments of the federal government can be shaped by political system constraints. The main political system constraints examined in the context of FRAP were constitutional constraints and the interests of provincial and municipal governments. Federal choice of weak policy instruments is not a result of constitutional constraints, since the Fisheries Act gives the federal government sufficient authority to require
the clean-up of the Fraser. On the other hand, the active role municipalities played in convincing the federal government to commit Green Plan monies to a sustainable development program for the Fraser certainly shaped the form this commitment took. The language used in the Fraser River Action Plan Progress Report with its emphasis on partnership and consensus strongly resembles that of the discussion paper produced by UBCM.

The reason that local and provincial governments were able to protect their interests may also be due to the fact that their interests coincide with those of the private sector which the federal government so far has not crossed.

The case of the Fraser River Action Plan reflects what the entire Green Plan suggests: the strength of any initiative by the federal government to protect the environment is likely to be subject to considerations of the political costs involved. The choice of policy instruments is restricted by the government’s concern not to create enemies amongst the polluters. Hence, capacity increasing instruments, will, in all likelihood, remain the government’s favourites amongst the range of instruments available. Research, classification, monitoring and plan development do not offend any party; they do not threaten the jurisdiction of the province, do not place a financial burden on local governments, impose no new costs on industry and pacify the public who thinks something is happening.
CONCLUSION

The purpose of this paper was to explain what determines the choice of policy instruments of the Canadian federal government in the environmental policy field. The most prominent policy instrument theories were discussed in order to find an answer to that question. Some of the arguments advanced by the different theorists were found to be irrelevant to environmental policy making, others led to the formulation of four general propositions about instrument choice:

1) the government will be reluctant to use highly coercive instruments in implementing environmental policies because of the pattern of interests affected.
2) the government will prefer non-coercive instruments over no action at all in order to avoid blame for ignoring a problem
3) non-coercive policy instruments will especially dominate in issue areas where there is no significant pressure from environmental interest groups on the government.
4) the government may be constrained in its choice of policy instruments by the political system itself.¹

The chapter on instrument theories was followed by an analysis of instrument choice in the Canada Green Plan and the Fraser River Action Plan. To enable me to make generalizations about the government's instrument preference, all initiatives in the Green Plan were categorized according to the policy instruments they employ. The resulting seven broad categories were formed on the basis of the level of coercion the policy instruments involve. The seven categories are, from high to low coercion: regulation, expenditure, guidelines, capacity increasing, agreements, public information and increasing public participation. It was found that both the Green Plan document and the Green Plan initiatives announced in the first 18 months strongly favoured capacity increasing instruments. The Fraser River Action Plan

¹ These propositions relate specifically to instrument choice in environmental policy making and do not claim to be equally applicable to other areas of public policy.
followed the same pattern.

After the initial classification of policy instruments in both the chapters on the Green Plan and the Fraser River Action Plan, the variables which influenced instrument choice were discussed. They differed slightly in the two cases but included: constitutional constraints, internal cabinet opposition, pressures from the provinces, environmental interest group activity, opposition from industry and considerations of costs.

In both cases, the interests of the opponents to highly coercive instruments won over the interests of the advocates. This was attributed to the federal government’s preoccupation with blame avoidance. As suggested by propositions 1, 2, and 3, the federal government is primarily guided by its concern to avoid blame (or electoral retribution) in its choice of instruments. It is likely that, in most cases, industry is able to put more pressure on the government than environmental groups because it is better organized and has larger financial resources. Putting the burden of clean-up costs on industry, by passing new action forcing regulations, is therefore politically more risky than disappointing environmental groups, especially when the latter cannot claim to be backed by strong public opinion on the issues they are fighting for. As proposition 3 suggests, the government will only listen to environmental groups if it perceives that the blame generated from not addressing environmental problems will be greater than the blame generated from the industries to be regulated.

In most cases, environmental policy making affords little opportunity to claim credit. Nevertheless, the Green Plan and the Fraser River Action Plan were both also meant to generate credit for the federal government. This was to be achieved by announcing a large number of initiatives which show the government’s concern but do not actually contribute to
an improvement in environmental quality and sustainable development. These types of symbolic actions generally make use of capacity increasing instruments, such as the creation of new offices and institutions, or the appointment of committees. But even regulations can be symbolic if they include escape clauses for the regulated industry or if they are in fact hardly ever enforced.

Another "safe" way to claim credit without at the same time creating enemies, is the repackaging of already existing programs and projects. A large proportion of the initiatives announced under the Green Plan and the Fraser River Action Plan are in fact existing programs which are being renewed or continued. Even highly interventionist programs which have existed for some time will generate less blame from the regulated industries than new regulations, because, in most cases, industries have already adapted to the requirements of the existing regulations.

SUCCESS OF THE GREEN PLAN AND THE FRASER RIVER ACTION PLAN2

In light of the foregoing discussion, there is little hope that the Green Plan will result in a significant improvement in environmental quality or achieve its objective of sustainable development, as defined at the outset of the document.

Sustainable development is described...as activity in which the environment is fully incorporated into the economic decision-making process as a forethought, not an afterthought. It holds that resources must be treated on the basis of their future, as well as their present, value. That approach offers genuine hope of economic development without environmental decline.3

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2 Success in this case does not equal "political success" or the extent to which the Green Plan has contributed to improving the popularity of the government in power.

The type of Green Plan initiatives give little indication that the federal government is putting environmental concerns first, much less incorporating them into its economic decision-making. Cabinet refused to allow the DOE a role in the horizontal and national coordination of responsibilities which relate to environmental quality. The first draft of the Green Plan had proposed to make environmental considerations mandatory in all cabinet decisions. But the majority of cabinet ministers were opposed to an environmental action plan which would interfere with the policies and programs of their departments. However, achievement of sustainable development requires, as Brian Mulroney himself stated, a complete change in lifestyle.\(^4\) It will be difficult and certainly take a long time to produce such changes with initiatives which rely largely on non-coercive policy instruments. Certainly, studies, research, and public information all have an important role to play in increasing environmental awareness and providing the necessary information to make environmentally sound decisions. But they will produce changes only very slowly and should not replace more coercive instruments in areas where the environmental problems are well known and the major sources of pollution have been identified, as in the case of the Fraser River.

That achieving sustainable development is not a priority of the federal government is also reflected in the budgetary cuts of the Green Plan. It was initially to receive $5 billion in funding.\(^5\) By the time it was released, this sum had been reduced to $3 billion. On February 27, 1991, an announcement was made to stretch the budget over six years instead of five, and in February, 1992, Finance Minister Mazankowski announced that the Green Plan budget was

\(^4\) Craig McInnes, "'We are all responsible' for environment, PM says," *Globe and Mail*, April 10, 1990, A11.

\(^5\) Anne McIlroy, "Federal ecology plan about to be unveiled," *Vancouver Sun*, Dec. 8, 1990.
to be cut by a further $75 million in each of the next two fiscal years.\(^6\)

The Fraser River Action Plan has also been subject to budgetary cuts. $16 million of
the $100 million budget were diverted to programs not initially announced under the Fraser
River Action Plan and whose supporters had, in fact, sought their own funding from the
Treasury Board.

As Stephen Hazell, executive director of the Canadian Arctic Resources Committee,
expressed it so carefully, "[these actions] raise some concerns. There have been some good
announcements under the Green Plan, but after all these changes, one wonders about the over-
all government commitment to the 'thing.'"\(^7\)

\(^7\) Ibid.
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APPENDICES
APPENDIX 1: METHODOLOGY

OBJECTIVE

The following table categorizes the Green Plan initiatives and the initiatives announced in the first 1 1/2 years according to the policy instruments to be employed in their implementation. The purpose of this categorization exercise is to find out which types of policy instruments are most commonly used and which ones the government uses only sparingly.

METHODOLOGY

The total number of initiatives announced under the Green Plan is usually quoted as being about 120. This total refers to the separate areas in which action is promised, however, often several different actions have been announced within each area. Since each of these actions may require the use of a different policy instrument, I have counted each action announced under one heading as a separate initiative, so that the total number of Green Plan initiatives comes to 248. The Green Plan highlights each of these initiatives by a symbol. There are seven different symbols, identified on page 26, which categorize the initiatives. My own categorization of the initiatives does not coincide with that of the Green Plan since I have used different criteria to distinguish the initiatives.

I have categorized the 248 initiatives according to the policy instruments to be used on their implementation. I have identified seven major categories of policy instruments: regulation, expenditure, guidelines, increasing capacity, agreements, public education and increasing public participation. All of the Green Plan initiatives fall into one of these
categories. Within four of the categories, several subheadings are identified. I have not attempted to also categorize the initiatives, as announced in the Green Plan, under any of the subheadings since the wording is often too vague to allow me to make such small distinctions. Only the initiatives on which action has been announced after the first one and a half years of the Green Plan’s release have been categorized under the subheadings. The reason for this is that the announcement specifies the policy instruments to be used more explicitly, allowing for a more precise categorization. The sources used to categorize the initiatives announced in the first one and a half years are press releases from Environment Canada and the First Year Progress Report.

Frequently, as the implementation of a Green Plan initiative is announced, it actually entails several different initiatives. One example illustrates this. On page 1, the original Green Plan initiative "Native People and Environmental Contaminants" actually involves two separate actions, each of which will employ a different policy instrument. It is important to keep this in mind because it means that the total number of initiatives announced after the first one and a half years cannot be subtracted from the total number of Green Plan initiatives (248) in order to calculate how many initiatives are left to be implemented. Hence, when all Green Plan initiatives have been implemented (or at least announced) after six years, the total number of initiatives announced will exceed the total number of original Green Plan initiatives. This does not mean that more has been done than has been promised under the Green Plan, it just means that initiatives have been further defined and broken down into separate actions when they were finally announced.

The table of initiatives and policy instruments is self-explanatory. Original Green Plan
initiatives are typed in capital letters while announcements after the first 1 1/2 years are indented and immediately follow the related Green Plan initiative. For easy reference, the table has the same structure and headings as the original Green Plan.

**EVALUATION**

Added together, categories three, four, five, six and seven make up about 76 per cent or four-fifths of all the Green Plan initiatives. The remaining two categories, regulation and expenditure, make up 22 per cent, or one fifth. It is only these which promise to result in an improvement of environmental quality: new regulations or better enforcement require polluters to stop or abate pollution, and initiatives under expenditure entail clean-up or environmental enhancement programs funded by the federal government. However, saying that one fifth of the Green Plan initiatives will directly contribute to increasing environmental quality is probably overly optimistic. Whether or not regulations will be effective depends on whether or not they are enforced. The creation of new regulatory authority does not guarantee that it will be used to tighten pollution control. Finally, spending on clean-up may be too low to make a significant difference or, even more frequently, spending initiatives renew commitments to already existing programs, so that action towards improving environmental quality is actually not increased.
APPENDIX 2: CLASSIFICATION OF POLICY INSTRUMENTS IN CANADA'S GREEN PLAN

I. LIFE'S THREE ESSENTIALS - CLEAN AIR, WATER AND LAND

Total budgetary commitment: $850 million

<table>
<thead>
<tr>
<th>INITIATIVE</th>
<th>POLICY INSTRUMENT</th>
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<tr>
<td>GREEN PLAN 1st 1 1/2 years</td>
<td>Green Plan</td>
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</table>

A. OUR HEALTH AND THE ENVIRONMENT

| DRINKING WATER SAFETY ACT                      | 1                 |
| EFFECTS OF AIR ON HEALTH                      | 4                 |
| WASTE MANAGEMENT AND HEALTH                   | 4                 |

NATIVE PEOPLE AND ENVIRONMENTAL CONTAMINANTS

March 11, 1991 - $275 million over the next six years for the Drinking Safety Program for Natives: water testing, water monitoring, training for band staff
- $250 million to accelerate the establishment and improvement of water and sewage services on reserves
- $25 million for water quality monitoring and training in water treatment on reserves

| NORTHERN AND ARCTIC HEALTH AND ENVIRONMENT     | 4                 |
| REGISTRY OF HEALTH EFFECTS IN HOT SPOTS        | 4                 |
| RADIATION                                      | 4                 |

HEALTH AND ENVIRONMENT INFORMATION AND AWARENESS PROGRAM

- 109 -
FITNESS AND ENVIRONMENT PROGRAM

B. ACTION TO PROTECT AND RESTORE OUR WATER

DRINKING WATER SAFETY ACT - see section I A. above

ACTION ON GROUNDWATER

INDIAN HEALTH AND WATER - see section I A. above

SUSTAINABLE DEVELOPMENT MANAGEMENT PLAN FOR THE FRASER RIVER BASIN

June 1, 1991 - Fraser River Action Plan - $100 million
- formation of committee to develop sustainable management plan for the Fraser
- $11 million to encourage the application of sustainable development through demonstration projects
- $4 million towards the Burrard Inlet Environmental Action Plan

DOUBLE FISH POPULATIONS IN THE RIVER

- $30.1 million towards restoring habitat and salmon populations
- $14 million for research on the effects of water quality and river flows on fish production

MONITORING, COMPLIANCE AND ENFORCEMENT MEASURES

- $2.5 million for sustainable development strategies
- $10.6 million to improve compliance with environmental regulations through enhanced enforcement
- $9.5 million to identify and reduce contaminants entering the Fraser River from industrial and domestic sources
- $18.3 million to identify toxins in the basin and sources of contamination

June 24, 1991 - An agreement is signed between federal, B.C. governments and local agencies to work together to protect the environmental quality of Burrard Inlet
COORDINATE VARIOUS COMPONENTS OF THE PROGRAM

May 26, 1992 - The Fraser Basin Management Program Agreement between the federal, provincial and local governments is announced. The program includes the $100 million Fraser River Action Plan and provincial initiatives. A 19 member management board is to be established to develop and coordinate the Fraser Basin Management Program.

TARGETING THE ATLANTIC HARBOURS AND COASTS

POLLUTION PREVENTION IN THE GREAT LAKES AND ST. LAWRENCE RIVER BASIN

March 5, 1991 - $25 million to prevent pollution in Great Lakes and St. Lawrence River:
- strategy development to spell out targets, schedules and actions needed to achieve major reductions of toxic substance contamination
- demonstration - money to assist industry to introduce proven pollution prevention technologies
- education and awareness

Oct 1, 1991 - U.S./Canada binational Great Lakes/St.Lawrence River Pollution Prevention Symposium

Feb 14, 1992 - $16.6 million to the National Research Institute to upgrade laboratories and carry out research in ecological hazard assessments and Great Lakes pollution

May 29, 1992 - The federal and Ontario governments and big three automakers announced an agreement to voluntarily reduce the use, generation and release of toxic substances in the manufacturing of automobiles

GREAT LAKES POLLUTION PREVENTION CENTRE

May 11, 1992 - Great Lakes Pollution Prevention Centre at Sarnia is officially opened. The centre will promote public education on pollution prevention issues and facilitate information exchange
April 2, 1992 - Canada and U.S. establish air monitoring sites on the Great Lakes to monitor and sample toxic substances found in the air and precipitation, contributing to the pollution of the Great Lakes basin

THREE YEAR IMPACT STUDY OF DEVELOPMENT IN ATHABASCA RIVER BASIN
Sept 27, 1991 - the Canada-Alberta-NWT Northern Rivers Study Agreement is signed

JOINT STUDY IN RED RIVER AND ASSINBOINE RIVER BASINS

NATIONAL CONFERENCE TO PROMOTE WISER WATER USE
July 2, 1991 - Contract between Environment Canada and Rockcliffe Research and Technology Inc. to manage marketing and commercialization of new technologies developed at Environment Canada's Wastewater Technology Centre

IMPROVED REGULATIONS UNDER CEPA TO PROHIBIT OCEAN DUMPING
Nov 7, 1991 - $10 million Ocean Dumping Control Action Plan
- new controls on waste disposal at sea and scientific efforts to protect the marine environment
- improved regulation under CEPA to strengthen controls to safeguard the marine environment
- general commitment to phase out the ocean disposal of industrial wastes by December 1995

AUGMENT SURVEILLANCE ACTIVITIES TO ENSURE COMPLIANCE WITH NEW REGULATIONS
Nov 7, 1991 - improve Environment Canada's capacity to enforce permit conditions

NATIONAL RESEARCH AND INFORMATION PROGRAM
Nov 7, 1991 - public information and research to reduce persistent plastics in the coastal waters

PROTECTION OF MARINE ENVIRONMENT CONSISTENT WITH INTERNATIONAL LAW
May 1991 - Intergovernmental meeting of experts developed action plan on land-based sources of marine pollution
DESIGNATION OF MARINE PROTECTED AREAS

C. KEEPING TOXICS OUT OF OUR ENVIRONMENT

ASSESSMENT OF TOXIC CHEMICALS BY 1994

Feb 24, 1992 - $95 million to keep toxins out of the environment
- National Pollution Release Inventory to identify sources of pollutants from industry
- Scientific assessments to be accelerated

Dec 16, 91 - New federal regulations proposed to require notification of exports of toxic substances

FEDERAL REGULATIONS FOR THE CONTROL OF EMISSIONS OF DIOXINS AND FURANS

Dec 4, 1991 - Pulp and Paper Regulatory Package containing new regulations under CEPA and amendments to regulations under the Fisheries Act: regulations of dioxins, furans, and organochlorine
- $55.7 million allocated to improve enforcement of environmental protection regulations including the new pulp and paper package

CONTROL OPTIONS REPORTS FOR MAJOR SOURCES TO BE RELEASED 1994

CONTROL OPTIONS REPORTS FOR TOXIC PRIORITY SUBSTANCES WILL BE RELEASED 1994

EVERY FIVE YEARS REVIEW AND UPDATE REGULATIONS ON TOXIC SUBSTANCES

DEVELOP A NATIONAL DATA BASE FOR HAZARDOUS POLLUTANTS

Feb 24, 1992 - a National Pollutants Release Inventory will be established

NATIONAL DATA BASE BY 1996 TO IDENTIFY RISKS PRESENTED TO FISHERIES

ESTABLISHMENT OF A NATIONAL TOXICOLOGY NETWORK BY 1992

Feb 10, 1992 - $14 million to create the National Toxicology Network which will support scientists conducting toxicology
research at Canadian Universities

ESTABLISH A NATIONAL REGULATORY REGIME FOR BIOTECHNOLOGY INDUSTRY

PUBLISH NATIONAL STANDARDS AND CODES OF PRACTICE TO REGULATE RELEASE OF GENETICALLY ENGINEERED ORGANISMS

REGULATIONS TO BE DEVELOPED UNDER CEPA BY 1992 REQUIRING NOTIFICATION OF NEW PRODUCTS OF BIOTECHNOLOGY

D. SMOG IS A VISIBLE THREAT

INTERIM EMISSION TARGETS FOR NO₃ AND VOCs EMISSIONS

Dec 6, 1991 - $30 million program to combat smog in Canada:
  federal-provincial management plan, negotiations with provinces
  where smog is a major problem to commence January 1992
  - development of new regulations
  - research program
  - negotiation of bilateral agreements with provinces to set emission reduction targets
  - public awareness campaign

BY 1993, PROVIDE PUBLIC ADVISORS IN MAJOR URBAN AREAS

BY 1994, ADOPT PACKAGE OF TIGHTER EMISSION STANDARDS FOR NEW MOTOR VEHICLES

Feb 20, 1992 - Federal government agreement with the auto industry to establish more stringent passenger car exhaust emission controls

BY 1995, ADOPT ALL FEDERAL ACTIONS CALLED FOR IN FED./ PROV. AGREEMENTS

BY 1995, CONSENSUS ON EMISSION TARGETS TO ACHIEVE OZONE AIR QUALITY STANDARDS

INCORPORATE EMISSION TRADING PROGRAMS INTO FED-PROV AGREEMENTS

INCREASE MONITORING OF NO₃, VOCs, AND GROUND-LEVEL OZONE

Dec 6, 1991 - research and monitoring (see above)
BY 1995, NATIONAL MONITORING NETWORK TO MEASURE OZONE LEVELS

BY 1995, DETERMINE FINAL EMISSION TARGETS TO DEAL WITH SMOG

CONCLUDE INTERNATIONAL PROTOCOL ON VOC EMISSIONS WITHIN ECE
Nov 19, 1991 - Canada signed international protocol on VOC emissions - calls for a 30 per cent reduction in Fraser Valley and Windsor-Quebec corridor and a national freeze at 1988 levels by 1999.

E. CUTTING WASTES IN HALF

BY 1993, ESTABLISH STANDARDS AND REGULATIONS TO REDUCE WASTE FROM PACKAGING MATERIALS
Nov 6, 1991 - $25 million Federal Waste Reduction Plan released:
- implementation of the National Packaging Protocol in partnership with provincial governments, industry and environmental groups
- creation of the first coordinated national inventory and profile of hazardous and non-hazardous wastes
- issuance of regulations under CEPA to ensure sound management of hazardous waste exports and imports
- regulations and guidelines for the safe storage of PCBs, and other dangerous substances

BY 1994, FOR OTHER COMPONENTS FOR WASTE STREAM, DEVELOP NATIONAL STANDARDS

SUPPORT TECHNOLOGICAL INNOVATIONS AIMED AT WASTE REDUCTION
(see section VI - D)

MAKE NATIONAL WASTE EXCHANGE PROGRAM SELF-SUFFICIENT BY THE YEAR 2000
Nov 6, 1991 - expansion of the National Waste Exchange Program

PROVIDE INFORMATION TO INDIVIDUALS AND BUSINESS
Nov 6, 1991 - public information campaign

ESTABLISH AN OFFICE OF WASTE MANAGEMENT TO COORDINATE FEDERAL PROGRAMS
Nov 6, 1991 - establishment of the Office of Waste Management

REDUCE WASTER FROM FEDERAL OPERATIONS BY 50 PER CENT BY THE YEAR 2000
Nov 6, 1991 - cooperate with other federal departments to
achieve a 50 per cent reduction

SUPPORT COMMUNITY ACTION THROUGH THE EXPANSION OF THE ENVIRONMENTAL PARTNERS FUND
(June 6, 1991 - section VI)

BY 1992, DEVELOP A COMPUTERIZED TRACKING SYSTEM TO MONITOR THE
MOVEMENT OF HAZARDOUS WASTES IN AND OUT OF CANADA
June 15, 1992 - proposed domestic regulation to implement
the provisions of the Basel Convention on the control of
Transboundary Movements of Hazardous Wastes and their Disposal
- tracking system for hazardous wastes
- prevention of illegal traffic in hazardous wastes

BY 1996, DESTROY ALL PCBs UNDER FEDERAL JURISDICTION AND ESTABLISH
MOBILE INCINERATORS

BY 1996, COMPLETE REGULATIONS AND GUIDELINES FOR THE SAFE MANAGEMENT
OF HAZARDOUS WASTE STREAMS

SUPPORT TECHNOLOGY AIMED AT REDUCING, RECYCLING, RE-USING HAZARDOUS WASTES
(section VI - D)
Feb 14, 1992 - $5.6 million to the Wastewater Technology Centre
in Burlington to develop state of the art technologies for
wastewater treatment, waste management, and reduction and
pollution prevention technology

BY 1991, AGREEMENT WITH PROVINCES ON CLEANING UP CONTAMINATED SITES
1991 - Federal govt signs agreements with seven provinces to
commit $230 million for clean-up of contaminated "orphan"sites
and development and demonstration of new remedial technologies

CLEAN UP 30 HIGH-RISK CONTAMINATED HAZARDOUS WASTES SITES BY 1995
Aug 21, 1991 - $22 million over four years to complete Co-operative
Siting Process, begun in 1988 for siting facility to manage low-
level radioactive wastes

SUPPORT NEW TECHNOLOGY FOR SITE CLEAN-UP
## II. SUSTAINING OUR RENEWABLE RESOURCES

Total budgetary commitment: $350 million

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<tr>
<th>INITIATIVE</th>
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<td><strong>A. SUSTAINABLE FOREST DEVELOPMENT</strong></td>
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<tr>
<td>DEMONSTRATION PROJECTS AS MODELS OF SUSTAINABLE DEVELOPMENT</td>
<td>4</td>
</tr>
<tr>
<td>Sept 25, 1991 - $100 million six-year Partners in Sustainable Development Program was announced:</td>
<td></td>
</tr>
<tr>
<td>- $54 million for the selection of model forest sites in each of the major forest regions of the country, as working models of sustainable development</td>
<td>4 c.</td>
</tr>
<tr>
<td>FORESTS DAMAGED BY INSECTS AND DISEASE</td>
<td>4</td>
</tr>
<tr>
<td>- $13 million for improved monitoring and information systems</td>
<td>4 e.</td>
</tr>
<tr>
<td>R&amp;D OF IMPROVED PRODUCTS AND ENVIRONMENTALLY SENSITIVE PROCESSES IN THE FOREST SECTOR</td>
<td>4</td>
</tr>
<tr>
<td>- $33 million for specific research initiatives</td>
<td>4 d.</td>
</tr>
<tr>
<td>RELEASE OF A REPORT TO PARLIAMENT ON THE STATE OF CANADIAN FORESTS</td>
<td>6</td>
</tr>
<tr>
<td>April 9, 1991 - House of Commons first annual report The State of Forestry in Canada - first national account of forest activity</td>
<td>6</td>
</tr>
<tr>
<td>EXPAND DATA ON FOREST CONSERVATION</td>
<td>4</td>
</tr>
<tr>
<td>ESTABLISH A NATIONAL FOREST SEED AND GENE BANK</td>
<td>4</td>
</tr>
<tr>
<td>SUPPORT THE IDENTIFICATION AND COMPLETION OF A NATIONAL NETWORK OF ECOLOGY RESERVES</td>
<td>2</td>
</tr>
<tr>
<td>ACCELERATE THE CREATION OF COMPUTER-AIDED MANAGEMENT TOOLS</td>
<td>4</td>
</tr>
<tr>
<td>RESEARCH INTO CLIMATE CHANGE, BIODIVERSITY, ACID RAIN AND FIRE MANAGEMENT</td>
<td>4</td>
</tr>
<tr>
<td>SUPPORT THE INTERNATIONAL CONVENTION ON FORESTS</td>
<td>5</td>
</tr>
</tbody>
</table>
B. ACHIEVING SUSTAINABILITY IN AGRICULTURE

PROMOTING SOIL CONSERVATION - EASTERN CANADA SOIL CONSERVATION CENTRE

PROVIDING A CLEAN WATER SUPPLY

INTEGRATING AGRICULTURE AND WILDLIFE

MANAGING WASTE AND POLLUTION
- Jan 15, 1992 - $170 million to expand efforts at making Canada's agri-food industry more environmentally sustainable.
- $128 million to be spent through cost-shared Green Plan agreements to be negotiated with provinces and territories

PROTECTING GENETIC RESOURCES
- Jan 15, 1992 - $22 million towards protecting our genetic resources and developing alternative pest management strategies

CLIMATE CHANGE AND AGRICULTURE
- Jan 15, 1992 - $20 million for research to help agriculture respond to the increase in greenhouse gases
- research into alternative renewable energy resources such as ethanol
- Dec 1990 - Federal Pesticide Review Team issued its final report outlining a proposal for a revised regulatory system

C. SUSTAINABLE FISHERIES

SUSTAINABILITY
- 1991 - Consultations with public and private sector recreational fisheries stakeholders have been conducted and a national action plan for Sustainable Recreational Fisheries developed

ENFORCEMENT
- Jan 17, 1991 - New amendments to Fisheries Act became Law
- increase penalties for fish habitat offenses

COMPLIANCE POLICY
PARTNERSHIP WITH PROVINCIAL GOVERNMENTS

POLLUTION PREVENTION - ECOLOGICAL EFFECTS OF TOXIC CHEMICALS

UPDATE POLLUTION PREVENTION REGULATIONS CONTAINED IN FISHERIES ACT
Dec 4, 1991

NET GAIN OF THE PRODUCTIVE CAPACITY OF FISH HABITAT

INDIVIDUAL TRANSFERABLE QUOTAS FOR VARIOUS FISHERIES

SUSTAINABLE PRACTICES IN FISHERIES MANAGEMENT

BY 1991, DEVELOP AN ACTION PLAN TO IMPLEMENT THE RECREATIONAL FISHERIES POLICY

COMPLETE IMPLEMENTATION OF AQUACULTURE STRATEGY

INTERNATIONAL COOPERATION TO MONITOR DRIFTNET OPERATIONS
Sept 1991 - Canada signed Protocol II of the Wellington Convention which supports ban on driftnet fishing for all species in the south Pacific.

DEVELOPMENT OF ALTERNATIVE FISHING METHODS

INTERNATIONAL SUSTAINABLE FISHERIES STRATEGY
Canada, U.S.S.R, Japan and US agreed to terminate high-seas salmon fishing in north Pacific - agreement to be ratified spring 1992

CONTROLLING LANDBASED SOURCES OF OCEAN POLLUTION

STRENGTHENING THE LONDON DUMPING CONVENTION
(NOV. 1, 1991)

ESTABLISH A GLOBAL OCEAN OBSERVING SYSTEM
### III. OUR SPECIAL SPACES AND SPECIES

Total budgetary commitment: $175 million

<table>
<thead>
<tr>
<th>INITIATIVE</th>
<th>POLICY INSTRUMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. PROTECTING UNIQUE ECOLOGICAL AREAS</strong></td>
<td></td>
</tr>
<tr>
<td>ESTABLISH AT LEAST FIVE NEW NATIONAL PARKS BY 1996</td>
<td>2</td>
</tr>
<tr>
<td>NEGOTIATE AGREEMENTS FOR THE REMAINING 13 PARKS REQUIRED TO COMPLETE THE TERRESTRIAL SYSTEM BY 2000</td>
<td>4</td>
</tr>
<tr>
<td>Negotiations taking place over creation of new national parks:</td>
<td></td>
</tr>
<tr>
<td>Banks Island, N.W.T.; Churchill, Manitoba; Torngat Mountains and Mealy Mountains, Labrador; Bluenose Lake, N.W.T.; Wager Bay, N.W.T.; East Arm of Great Slave Lake, North Baffin island, and Old Crow Flats, Yukon.</td>
<td></td>
</tr>
<tr>
<td>April 23, 1992 - Land set aside for a new national park to be created on northern Baffin Island by 1996</td>
<td>2 b.</td>
</tr>
<tr>
<td>ESTABLISH THREE NEW NATIONAL MARINE PARKS BY 1996</td>
<td>2</td>
</tr>
<tr>
<td>ESTABLISH AN ADDITIONAL THREE MARINE PARKS BY 2000</td>
<td>2</td>
</tr>
<tr>
<td>PROVIDE ASSISTANCE IN RESOURCE EVALUATIONS AND MONITORING OF DESIGNATED RIVERS</td>
<td>4</td>
</tr>
<tr>
<td>Joint action in undertaking studies, plans, resource evaluation and monitoring of 21 rivers in nine provinces and territories to be added to the Canadian Heritage River System.</td>
<td>4 e.</td>
</tr>
<tr>
<td>EXPAND FOREST FIRE PROTECTION</td>
<td>2</td>
</tr>
<tr>
<td>DEVELOP AN ENHANCED RESOURCE MANAGEMENT PROGRAM</td>
<td>4</td>
</tr>
<tr>
<td>Management planning under way for Saguenay and South Morsby</td>
<td>4 f.</td>
</tr>
<tr>
<td>SUPPORT STAFF TRAINING IN NATURAL RESOURCE PROTECTION</td>
<td>4</td>
</tr>
<tr>
<td>Training initiatives and three ecosystem studies to enhance</td>
<td></td>
</tr>
</tbody>
</table>
management and protection of national park resources 4 g.

PARKS AS MODELS OF SUSTAINABLE DEVELOPMENT 4

June 4, 1992 - $20 million to improve access for disabled visitors at national parks and historic sites 2 b.

Program of prescribed burns in four national parks to enhance regeneration of natural species 2 b.

ADOPT THE FEDERAL POLICY ON WETLAND CONSERVATION IN 1991 1

March 9, 1992 - Federal Policy on Wetland Conservation commits the federal government to sustaining and improving wetlands through its programs and land management practices 1 b.

B. SUSTAINING CANADA'S WEALTH OF WILDLIFE 4

STRENGTHEN WILDLIFE RESEARCH PROGRAMS 4

WILDLIFE RESEARCH NETWORK AT CANADIAN UNIVERSITIES 4

WILDLIFE HEALTH NETWORK AT CANADIAN VETERINARY COLLEGES 4

NEW LABORATORY FACILITIES TO SUPPORT TOXICOLOGY RESEARCH 4

Feb 14, 1992 - $ 5.5 million to the National Wildlife Research Centre to fund research to trace the presence of organic and metal contamination and their effects on wildlife 4 d.

RECOVERY PROGRAMS FOR 11 AT-RISK MIGRATORY BIRD SPECIES 4

RENEW CONTRIBUTION TO WORLD WILDLIFE FUND 2

INCREASE PARTICIPATION OF UNIVERSITIES AND ENGOs 7

BY 1993, ENSURE RECOVERY PROGRAMS FOR ALL THREATENED AND ENDANGERED SPECIES 4

NETWORK OF ENFORCEMENT COORDINATORS FOR THE MIGRATORY BIRD CONVENTION ACT 4
BY 1992, DEVELOP A COOPERATIVE MANAGEMENT REGIME WITH NATIVE COMMUNITIES

BY 1994, ESTABLISH AN INTEGRATED SYSTEM OF NON-GAME BIRD STUDIES

REDUCE POACHING AND ILLEGAL TRADE

STRENGTHEN WILDLIFE LAW ENFORCEMENT
- Wild Animal and Plant Protection Act (see above)

BY 1992, INITIATE AN INTEGRATED FORESTRY AND WILDLIFE CONSERVATION PROGRAM
- Nov 29, 1991 - $34.9 million National Wildlife Strategy to protect wildlife diversity, conserve wildlife habitat, and safeguard healthy ecosystems
  Initiatives:
  - enhance wildlife research
  - implement Federal Policy on Wetland Conservation (see III - A)

ESTABLISH THE PACIFIC COAST JOINT VENTURE
- Pacific Coast Joint Venture
- develop a federal policy on endangered species

ESTABLISH A NATIONAL WILDLIFE HABITAT NETWORK

ENCOURAGE FARMERS TO PRESERVE WILDLIFE HABITAT SUCH AS WETLANDS ON THEIR LANDS (see III-A)
- March 9, 1992 - Federal Policy on Wetland Conservation commits the federal government to sustaining and improving wetlands through its programs and land management practices (see III-A)

C. BUILDING UPON OUR HISTORICAL HERITAGE

COMMENORATE SEVEN KEY HISTORIC THEMES BY 1996 AND AN ADDITIONAL EIGHT BY 2000
- Acquisition of the Bar U Ranch and Ryan Premises is being finalized
- Put Manoir Papineau National Historic Site under Environment Canada's Park Service

Management Planning under way for Grosse-Ile National Historic Site in Ontario and McLean Mill National Historic Site in B.C.
Dec 18, 1991 - $2.7 million - Federal/provincial agreement gives Environment Canada the authority to develop a national historic site at Red Bay, Labrador.

Dec 18, 1991 - $3.15 million to develop a national historic site at Bonavista, Newfoundland.

**PROVIDE FINANCIAL ASSISTANCE TO OTHER GOVERNMENTS AND ORGANIZATIONS FOR NATIONALLY IMPORTANT HISTORIC SITES**

Assist Gardenton Museum Board with the purchase of Korol Homestead in Manitoba.

**EXPAND THE PROTECTION OF ARTIFACTS AND HISTORIC OBJECTS**

Measures are being undertaken to improve the management of artifacts and historic objects.

**DEVELOP THE NATION'S ARCHAEOLOGICAL AND HISTORIC RESOURCE CONSERVATION CAPABILITIES**

**SUPPORTING STAFF TRAINING IN HISTORICAL RESOURCE PROTECTION**

Training Strategy is being developed to improve cultural resource management practices.

**IV. CANADA'S UNIQUE STEWARDSHIP: THE ARCTIC**

Total budgetary commitment: $100 million

**A. PRESERVING THE INTEGRITY OF OUR NORTHLAND**

**RESEARCH ON SOURCES, SINKS, PATHWAYS AND TRENDS OF CONTAMINANTS**

April 29, 1991 - $100 million Arctic Environment Strategy

- identify, reduce and eliminate chemical contaminants
- a plan to clean up unsafe, hazardous and unsightly waste
- a program to improve management and protection of northern waters 4 g.
- plan to work with territorial and community governments 4 f.

DEVELOP STRATEGIES FOR THE INTERNATIONAL CONTROL OF CONTAMINANT EMISSIONS THROUGH LRTAP OF THE UN ECE 5

ARCTIC ENVIRONMENTAL PROTECTION STRATEGY 5
June 1991 - Ministerial meeting in Finland of all circumpolar states
- Arctic Environment Protection Strategy 5 c.

CLEAN UP ALL KNOWN HAZARDOUS WASTES ON CROWN LANDS IN THE NORTH 2
CLEAN UP ALL HAZARDOUS WASTES AT ABANDONED MILITARY SITES 2
CLEAN UP ALL ABANDONED DEW LINE SITES ACROSS THE NORTH 2
CLEAN UP OF NON-HAZARDOUS WASTES NEAR COMMUNITIES 2
DEVELOP A NETWORK OF WATER QUALITY STATIONS THROUGHOUT THE NORTH 4
MODERNIZE NETWORK OF WATER QUANTITY MONITORING STATIONS 4
INCREASE ANALYTICAL AND INTERPRETATION PROGRAMS 4
DEVELOPMENT OF INFORMATION BASES 6
ENVIRONMENTAL EDUCATION 6
TRAINING FOR CONSERVATION AREA MANAGEMENT AND ECOTOURISM 4
DEVELOPMENT AND INTRODUCTION OF APPROPRIATE TECHNOLOGY 4
## V. GLOBAL ENVIRONMENTAL SECURITY

Total budgetary commitment: $575 million

<table>
<thead>
<tr>
<th>Initiative</th>
<th>Policy Instrument</th>
</tr>
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<tbody>
<tr>
<td><strong>A. GLOBAL WARMING</strong></td>
<td></td>
</tr>
<tr>
<td>Regulation of minimum energy efficiency levels in equipment</td>
<td>1 b.</td>
</tr>
<tr>
<td>Oct 29, 1991 - Energy Efficiency Act</td>
<td></td>
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<tr>
<td>Labelling of products to convey information on energy use</td>
<td>6</td>
</tr>
<tr>
<td>Oct 29, 1991 - Energy Efficiency Act</td>
<td></td>
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<tr>
<td>Collection of statistics on energy use</td>
<td>4 e.</td>
</tr>
<tr>
<td>Oct 29, 1991 - Energy Efficiency Act</td>
<td></td>
</tr>
<tr>
<td>Minimum energy efficiency standards in buildings and equipment</td>
<td>1</td>
</tr>
<tr>
<td>By 1992, Energuide labelling for home appliances</td>
<td>6</td>
</tr>
<tr>
<td>Oct 29, 1991 and Feb 7, 1992</td>
<td></td>
</tr>
<tr>
<td>Federal measures for energy conservation in new buildings</td>
<td>1</td>
</tr>
<tr>
<td>Nov 22, 1991 - see above</td>
<td>1 b.</td>
</tr>
<tr>
<td>Development of technologies for energy-efficient buildings</td>
<td>4</td>
</tr>
<tr>
<td>Fuel efficiency targets for new vehicles</td>
<td>1</td>
</tr>
<tr>
<td>Dec 4, 1991</td>
<td></td>
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<tr>
<td>Develop strategies for reducing CO₂</td>
<td>4</td>
</tr>
<tr>
<td>Dec 4, 1991</td>
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</tr>
</tbody>
</table>
DEVELOP EDUCATIONAL PACKAGES FOR FLEET MANAGERS AND DRIVERS  
Dec 4, 1991

ESTABLISH A NATIONAL ADVISORY COUNCIL TO ESTABLISH ENERGY EFFICIENCY TARGETS

TRAIN AND CERTIFY ENERGY EFFICIENCY MANAGERS IN INDUSTRIAL FIRMS

DEVELOPMENT AND MARKET PENETRATION OF ALTERNATIVE TRANSPORTATION FUELS  
Dec 4, 1991 - announcement by the Ministry of Energy, Mines and Resources

RESEARCH AND DEVELOPMENT OF ALTERNATIVE ENERGY SOURCES

COST-SHARED MARKET ASSESSMENTS OF NON-FOSSIL ENERGY SOURCES

DEMONSTRATION OF ADVANCED ENERGY SYSTEMS

AGREEMENTS WITH MAJOR ENERGY-USING ORGANIZATIONS ON PERFORMANCE

ANNUAL PROGRESS REPORTS TO PARLIAMENT ON MEETING ENERGY EFFICIENCY OBJECTIVES

INFORMATION ON CANADIAN ENERGY CONSUMPTION TO THE PUBLIC

PUBLIC INFORMATION CAMPAIGN

LIMITING GREENHOUSE GASES THROUGH TREE PLANTING  
1991 - National Community Tree Planting Foundation established

LIMITING GREENHOUSE GASES IN AGRICULTURE

DISCUSSION PAPER ON THE USE OF ECONOMIC INSTRUMENTS  
June 1992

INQUIRY INTO THE ENVIRONMENTAL IMPACT OF ELECTRICAL GENERATION OPTIONS

BY 1994, ADOPT GUIDELINES TO CONSIDER EFFECTS ON CLIMATE OF MAJOR PROJECTS
BY 1996, ASSESS SOCIO-ECONOMIC REPERCUSSIONS OF CLIMATE CHANGE ON SEVERAL RIVER BASINS  
Jan 27, 1992 - $85 million science program to reduce the uncertainties surrounding global warming in Canada.  

BY 1996, ASSESS POLICY CHANGES NEEDED TO DEAL WITH RISING SEA LEVELS  

BY 1991, ANNUAL REPORTS ON THE STATE OF THE CANADIAN CLIMATE  

BY 1996, A CLIMATE CHANGE DETECTION NETWORK  
Jan 7, 1992  

BY 1992, A NATIONAL PROGRAM FOR OCEAN RESEARCH RELATED TO CLIMATE CHANGE  
Jan 7, 1992  

PURSUE AN INTERNATIONAL FRAMEWORK CONVENTION ON CLIMATE CHANGE  
June 1992 - UNCED conference - international agreement on global warming  

ENHANCED COOPERATION ON INTERNATIONAL CLIMATE CHANGE SCIENCE  

ADDRESS THE CONCERNS OF DEVELOPING COUNTRIES  
committed $1 million at Second World Climate Conference  

BILATERAL DIPLOMACY TO ENCOURAGE OTHER COUNTRIES TO ABIDE BY INTERNATIONAL AGREEMENTS  

SEEK INTERNATIONAL COOPERATION IN DEVELOPMENT OF TECHNOLOGIES THAT REDUCE GREENHOUSE GAS EMISSIONS  

B. OZONE DEPLETION: ACCELERATING CONTROL MEASURES  

FEDERAL PROGRAM TO PROMOTE THE RECOVERY OF OZONE DEPLETING SUBSTANCES  
Aug 25, 1991 - $25 million for Canada's fight against ozone depletion  
- $9.2 million - regulations, recycling and recovery of ozone depleting substances
Nov 16, 1991 - Amendments to Ozone Depleting Regulations #3 proposed in Canada Gazette, Part I

ESTABLISH AN ARCTIC OBSERVATORY FOR RESEARCH AND MONITORING
Aug 25, 1991 - $15.8 million - verifying effectiveness - establishment of a High Arctic Ozone Observatory at Eureka, NWT - monitoring and analysis, research

BY 1992, AUGMENT THE CANADIAN OZONE MONITORING PROGRAM
Feb 14, 1992 - 25.8 million towards upgrading the Toronto Atmospheric Environment Service laboratory

March 11, 1992 - "Ozone Watch", a new program to report on the state of the ozone layer over Canada

BY 1993, PROVIDE WARNINGS OF ULTRAVIOLET RADIATION LEVELS
May 27, 1992 - the UV Advisory Program is unveiled. It is to provide the public with daily updates on the expected UV strength (UV Advisory and Ozone Watch programs fall under the $25 million ozone initiative)

BY 1993, PARTICIPATE IN INTERNATIONAL JOINT RESEARCH PROGRAMS

C. ACID RAIN: BUILDING ON SUCCESS

RE-NEGOTIATE AGREEMENTS WITH EASTERN PROVINCES TO CAP SO$_2$ EMISSIONS IN 1991

BY 1994, AGREEMENTS WITH ALL PROVINCES TO CAP SO$_2$ EMISSIONS
Sept 23, 1991 - $30 million towards Canada's acid rain control program - to cap SO$_2$ emissions and to verify Canadian and US actions called for in the Canada/US Air Quality Accord

BEGINNING IN 1991, PROVIDE PROGRESS REPORTS ON ACID RAIN CONTROL PROGRAM
March 1992 - First Progress report on Canadian Acid Rain Control Program released

EXAMINE FEASIBILITY OF USING EMISSION TRADING AS MEANS OF CONTROL
CONCLUDE A TRANSBOUNDARY AIR QUALITY AGREEMENT WITH THE US
March 13, 1991 - Canada/ US Accord on Air Quality signed to control transboundary air pollution 5 c.

BY 1992, PRESS FOR RENEGOTIATION OF THE HELSINKI PROTOCOL UNDER THE UN ECE

DETERMINE EXTENT OF LAKE AND RIVER RECOVERY FROM ACID RAIN DAMAGE 4

BY 1994, REPORT ON THE CAUSES OF FOREST DECLINE 6

BY 1994, REPORT ON HUMAN HEALTH EFFECTS OF ACID RAIN RELATED POLLUTANTS 6

D. ACCELERATING INTERNATIONAL PROGRESS ON THE ENVIRONMENT

INCREASE FUNDING OF KEY INTERNATIONAL ENVIRONMENTAL INSTITUTIONS 2
UNCED National Secretariat established - Canada contributed $4.75 million to support preparations for conference 2 c.

SUPPORT CANADIAN YOUTH ORGANIZATIONS IN PARTICIPATION TO UN CONFERENCE 7
June 26, 1991 - $1.7 million allocated for the support of the Canadian Youth Secretariat on Environment and Development 7

ESTABLISH A NATIONAL SECRETARIAT TO ASSIST PARTICIPATION OF CANADIANS IN THE CONFERENCE 4

PROVIDE FUNDING TO THE SECRETARY GENERAL FOR STUDIES NEEDED TO DEFINE ISSUES 4

DEMONSTRATION PROJECTS TO TRANSFER CANADIAN EXPERTISE TO OTHER COUNTRIES 4

CONTINUE TO SPONSOR THE GLOBE ENVIRONMENTAL CONFERENCES IN VANCOUVER 6
March 1992 - Globe 92 Conference 6

STRENGTHEN BILATERAL COOPERATION
Nov 19, 1991 - Canada signed international protocol calling for a 30% reduction of VOC emissions by 1991 in areas where ground-level ozone is high 5 c.
Feb 1, 1991 - Canada-France Memorandum of Understanding signed promoting cooperation on various environmental issues

VI. ENVIRONMENTALLY RESPONSIBLE DECISION-MAKING

Total budgetary commitment: $500 million

<table>
<thead>
<tr>
<th>Initiative</th>
<th>Policy Instrument</th>
</tr>
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<tbody>
<tr>
<td>A. PARTNERSHIPS EQUAL SOLUTIONS</td>
<td></td>
</tr>
<tr>
<td>ASSIST INDIAN COMMUNITIES TO DEVELOP ENVIRONMENTAL ACTION PLANS</td>
<td>7</td>
</tr>
<tr>
<td>SUPPORT THE CREATION OF AN ABORIGINAL ENVIRONMENTAL CONSULTATION MECHANISM</td>
<td>7</td>
</tr>
<tr>
<td>INCREASE IN THE CLASS GRANT FUND</td>
<td>7</td>
</tr>
<tr>
<td>Additional funding to Canada's ENGOs through increase in Class Grant Fund</td>
<td></td>
</tr>
<tr>
<td>INCREASE IN ANNUAL CONTRIBUTIONS TO CEN</td>
<td>7</td>
</tr>
<tr>
<td>additional funding to CEN - announcements to be made in 1992</td>
<td></td>
</tr>
<tr>
<td>BY 1991, ESTABLISH ANNUAL CONFERENCES TO CONSULT BUSINESS AND LABOUR ON ENVIRONMENTAL ISSUES</td>
<td>7</td>
</tr>
<tr>
<td>Oct 1991 - Business Connexion</td>
<td></td>
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<tr>
<td>BY 1991, FUNDING TO ENVIRONMENTAL FORA INVOLVING MULTI-STAKEHOLDER DISCUSSIONS</td>
<td>7</td>
</tr>
<tr>
<td>BY 1991, SUPPORT TO FACILITATE PERSONNEL EXCHANGES BETWEEN ENVIRONMENT CANADA AND NGOs</td>
<td>4</td>
</tr>
<tr>
<td>EXTEND THE PARTNERS FUND PROGRAM</td>
<td>7</td>
</tr>
<tr>
<td>June 6, 1991 - Expansion of the Environmental Partners Fund program's eligibility criteria to include projects that broaden public environmental awareness and knowledge. More than $4.9 million granted to 130 community based organizations across the country</td>
<td>7</td>
</tr>
</tbody>
</table>
Nov 14, 1991 - An additional $20 million in funding to the Environmental Partners Fund, mandate extended until 1997 (fund now a total commitment of $70 million)

STRENGTHEN THE ENVIRONMENTAL CHOICE PROGRAM
Aug 26, 1991 - $2 million public awareness campaign to promote the Environmental Choice Program
Feb 7, 1992 - New Environmental Choice certification criteria for five large appliances made public. The guidelines are to complement Energy, Mines and Resources' Energuide program by identifying the top ranking energy-saving devices.

EXPAND ENVIRONMENT WEEK
Nov 14, 1991 - $7.5 million over six years to non-profit community organizations to organize activities during Environment Week

BY 1991, ESTABLISH A CANADIAN YOUTH ADVISORY COUNCIL ON ENVIRONMENT AND DEVELOPMENT

ESTABLISH A CANADIAN YOUTH SECRETARIAT ON ENVIRONMENT AND DEVELOPMENT
June 26, 1991 - see section V - D.

ORGANIZE A NATIONAL YOUTH CONFERENCE ON ENVIRONMENT AND DEVELOPMENT TO PRECEDE THE BRAZIL CONFERENCE

IMPROVE THE CONSULTATION PROCESS TO INVOLVE AS MANY CANADIANS AS POSSIBLE
Environment Canada produces an Environment Consultations Calendar

B. ENVIRONMENTAL INFORMATION

RELEASE THE SECOND NATIONAL STATE OF THE ENVIRONMENT REPORT IN 1991
April 9, 1992 - The second national State of the Environment Report is released
- $40 million to fund the Environmental Information initiative
(the money will go towards a number of information initiatives see below)

BY 1992, PROVIDE AN ANNUAL STATE OF THE ENVIRONMENT POLICY STATEMENT

BY 1993, ESTABLISH A LONG-TERM STATE OF THE ENVIRONMENT MONITORING AND ASSESSMENT CAPABILITY
   April 9, 1991 - see above

MAY 1991, HOST AN INTERNATIONAL FORUM ON ENVIRONMENTAL INFORMATION
   May 1991 - Canada hosts an international forum on environmental information for the 21st century

IMPLEMENT PILOT ACCOUNTS FOR TWO NATURAL RESOURCES

BY 1993, DRAFT AN ENVIRONMENTAL ACCOUNTING FRAMEWORK
   April 9, 1992 - see above

DEVELOP A PRELIMINARY NATIONAL SET OF ENVIRONMENTAL INDICATORS
   April 16, 1991 - Release of a preliminary report on a national set of environmental indicators

BY 1993, DEVELOP AND RELEASE A COMPREHENSIVE SET OF INDICATORS TO MEASURE CANADA'S PROGRESS IN ACHIEVING OUR ENVIRONMENTAL GOALS

BY 1994, ESTABLISH COMPUTER SERVICES AND A NATIONAL NETWORK TO SUPPORT INDICATOR DEVELOPMENT

BY 1994, ESTABLISH A NATIONAL STATE OF THE ENVIRONMENT REPORTING ORGANIZATION
   April 9, 1992 - see above

C. ENVIRONMENTAL CITIZENSHIP

CAMPAIGNS TO ENHANCE ENVIRONMENTAL AWARENESS
   Jan 28, 1991 - Federal participation in the City of Montreal's Parc des Iles Project, to convert Biosphere into an environmental and water interpretation centre
DEVELOPMENT OF LEARNING MATERIALS AND PROGRAMS 6

DEVELOPMENT OF SPECIALIZED CAMPAIGNS 6

EXCHANGE OF ENVIRONMENTAL LEARNING RESOURCES 6

IMPLEMENTATION OF ENVIRONMENTAL ACTION AND TRAINING PLANS 4

SUPPORT FOR PARTNERSHIP ACTIVITIES TO ENHANCE GENERAL ENVIRONMENTAL AWARENESS 6

D. SUPPORTING NEW SCIENCE

CONTINUE FINANCIAL SUPPORT TO THE GLOBAL CHANGE PROGRAM
Dec 6, 1991 - $4.5 million for the Global Change Program - nation wide research into all aspects of global change 4 d.

FUND SCHOLARSHIPS, PROFESSIONAL CHAIRS AND UNIVERSITY GRANTS IN THE ENVIRONMENTAL SCIENCES
Sept 29, 1991 - $50 million program for research and training in environmental studies 4 d.

REVITALIZE FEDERAL RESEARCH FACILITIES AND EQUIPMENT
1992 - Commitment to revitalize research facilities and equipment and augment scientific staff over next five years:
- Feb 14, 1992 - $2.3 million to the National Hydrology Research Institute to construct a new laboratory and acquire equipment to measure contaminants in surface and groundwater systems. 4 d.
- Feb 14, 1992 - $10.2 million to the River Road Technology Centre to acquire instrumentation for the development of new air pollution technologies 4 d.
- Feb 14, 1992 - $1.9 million to the Archaeological Research Centre in Ottawa for a new imaging laboratory and recording system to develop accurate maps and images of marine archaeological sites 4 d.
- Feb 14, 1992 - $5.7 million to the Centre Saint-Laurent
to fund a new laboratory and field equipment to trace the
quantity of toxic chemicals from industry

DURING 1991, AUGMENT THE TECHNOLOGY DEVELOPMENT PROGRAM
Oct 7, 1991 - $100 million Technology for Environmental Solutions
initiative to foster creation of partnerships and attract funding
from the private sector,
includes:
- $18 million Technology Transfer Program to assist Canadian
firms to locate, assess, transfer and promote environmental
technologies

LAUNCH AN ENVIRONMENTAL TECHNOLOGY COMMERCIALIZATION PROGRAM
Oct 7, 1991 - $80 million Environmental Technology
Commercialization Program to develop and commercialize
technologies to prevent and clean up pollution

ESTABLISH A FEDERAL-PROVINCIAL ENVIRONMENTAL TECHNOLOGY NETWORK
Oct 7, 1991 - $2 million to establish and Environmental
Technology Network among existing federal, provincial and
university centres of environmental technology

IN 1991, INTRODUCE AN ENVIRONMENTAL INNOVATION PROGRAM
Nov 25, 1991 - $20 million to illicit innovative research
and development proposals from Canadian industry, universities,
native groups, NGOs, and individuals

E. LEGISLATIVE, REGULATORY AND MARKET TOOLS FOR CHANGE

ENHANCE ONGOING ENFORCEMENT PROGRAMS
Dec 4, 1991 - $55.7 million to enhance enforcement of
environmental regulations

WORK IN CLOSE COOPERATION WITH THE PROVINCES IN ENFORCEMENT ACTIVITIES

RECRUIT NATIVE PEOPLE FOR ENFORCEMENT PROGRAMS not an environmental initiative
ENFORCE THE MIGRATORY BIRDS CONVENTION ACT

IMPROVE LAW ENFORCEMENT CAPABILITIES IN CANADA'S NATIONAL PARKS
Dec 4, 1991 - $55.7 million to enhance enforcement of environmental regulations

PROGRAM TO SUPPORT RESEARCH INTO THE USE OF ECONOMIC INSTRUMENTS

EARLY 1991, RELEASE A DISCUSSION PAPER ON THE USE OF ECONOMIC INSTRUMENTS
May 21, 1992 - A discussion paper on the use of economic instruments to pursue environmental protection is released and a public consultation process is announced (see section IV)

VII. STARTING IN OUR OWN HOUSE: FEDERAL ENVIRONMENTAL STEWARDSHIP

Total budgetary commitment: $275 million

<table>
<thead>
<tr>
<th>Initiative</th>
<th>Policy Instrument</th>
</tr>
</thead>
<tbody>
<tr>
<td>FUNDING FOR THE ENVIRONMENTAL ASSESSMENT PROCESS</td>
<td>2</td>
</tr>
<tr>
<td>PARTICIPANT FUNDING PROGRAM</td>
<td>7</td>
</tr>
<tr>
<td>- Nov 15, 1991 - $8.5 million initiative to assist public participation in review of projects subject to environmental assessment by a panel</td>
<td>7</td>
</tr>
<tr>
<td>EXISTING POLICY AND PROGRAM REVIEW</td>
<td>4</td>
</tr>
<tr>
<td>CODE OF ENVIRONMENTAL STEWARDSHIP</td>
<td>2</td>
</tr>
<tr>
<td>- Nov 22, 1991 - Federal Building Initiative to address financial and non-financial barriers to energy efficient investments in federal departments (also see section V - A.)</td>
<td></td>
</tr>
<tr>
<td>- June 5, 1992 - The federal government will adopt a Code of Environmental Stewardship. The code promotes good environmental practices in all government operations and requires all agencies to incorporate environmental considerations into their operations and practices</td>
<td>3</td>
</tr>
</tbody>
</table>
## VIII. EMERGENCY PREPAREDNESS

Total budgetary commitment: $175 million

<table>
<thead>
<tr>
<th>Initiative</th>
<th>Policy Instrument</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEFINE ROLE OF ARMED FORCES IN ENVIRONMENTAL EMERGENCIES</td>
<td>4</td>
</tr>
<tr>
<td>SPILL PREVENTION AND RESPONSE</td>
<td>4</td>
</tr>
<tr>
<td>CONSULTATIONS WITH THE MARINE INDUSTRY</td>
<td>7</td>
</tr>
<tr>
<td>RE-ASSESSMENT OF COMPENSATION LEVELS FOR MARINE POLLUTION INCIDENTS</td>
<td>N/C</td>
</tr>
<tr>
<td>IMPROVE MARINE SPILL CONTINGENCY PLANNING</td>
<td>4</td>
</tr>
<tr>
<td>June 26, 1991 - $100 million Marine Environmental Emergencies</td>
<td></td>
</tr>
<tr>
<td>Response Strategy to protect Canada's oceans, coastlines and</td>
<td></td>
</tr>
<tr>
<td>inland waters from oil and chemical spills</td>
<td>4 f.</td>
</tr>
<tr>
<td>NEW TRAINING PROGRAMS FOR RESPONSE PERSONNEL</td>
<td>4</td>
</tr>
<tr>
<td>Nov 5, 1991 - $25 million Hazardous Spills Prevention and</td>
<td></td>
</tr>
<tr>
<td>Response Program</td>
<td>2 a.</td>
</tr>
<tr>
<td>PROMOTE MEASURES TO PREVENT AND RESPOND TO NON-MARINE SPILLS</td>
<td>6</td>
</tr>
<tr>
<td>IMPROVE SPILL RESPONSE TRAINING AND DECISION-MAKING</td>
<td>4</td>
</tr>
<tr>
<td>RESEARCH INTO REPERCUSSIONS OF OIL AND CHEMICAL SPILLS</td>
<td>4</td>
</tr>
<tr>
<td>BY 1996, INSTALMENT OF FOUR DOPPLER RADAR FACILITIES</td>
<td>4</td>
</tr>
<tr>
<td>May 17, 1991 - Installation of a Doppler weather radar in Edmonton</td>
<td>4 a.</td>
</tr>
<tr>
<td>SUPPORT SCIENTIFIC EFFORTS TO ACHIEVE BETTER UNDERSTANDING OF SEVERE WEATHER</td>
<td>4</td>
</tr>
<tr>
<td>Dec 5, 1991 - $40 million initiative to upgrade natural hazard</td>
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</table>
and warning systems as well as extreme weather facilities

UPGRADE EMERGENCY COMMUNICATION CAPABILITIES

<table>
<thead>
<tr>
<th>TYPES OF POLICY INSTRUMENTS USED:</th>
<th>number of initiatives</th>
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<tbody>
<tr>
<td></td>
<td>progress report (first 1 1/2 years)</td>
</tr>
<tr>
<td>1. Regulation</td>
<td>22</td>
</tr>
<tr>
<td>a. creation of new regulatory authority</td>
<td>1</td>
</tr>
<tr>
<td>b. regulatory actions</td>
<td>8</td>
</tr>
<tr>
<td>c. regulations proposed</td>
<td>9</td>
</tr>
<tr>
<td>d. enforcement</td>
<td>4</td>
</tr>
<tr>
<td>2. Expenditure</td>
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</tr>
<tr>
<td>a. spending on clean-up/restoring habitat</td>
<td>6</td>
</tr>
<tr>
<td>b. acquisition/creation of natl. sites/parks</td>
<td>8</td>
</tr>
<tr>
<td>c. foreign aid</td>
<td>2</td>
</tr>
<tr>
<td>3. Guidelines/codes of practice</td>
<td>3</td>
</tr>
<tr>
<td>4. Increasing Capacity</td>
<td>76</td>
</tr>
<tr>
<td>a. creation of new research facilities</td>
<td>2</td>
</tr>
<tr>
<td>b. new institutions or organizations</td>
<td>2</td>
</tr>
<tr>
<td>c. technology development (incl. demo projects)</td>
<td>11</td>
</tr>
<tr>
<td>d. spending on science and other research</td>
<td>26</td>
</tr>
<tr>
<td>e. setting guidelines, detection, monitoring, classification of environmental problems</td>
<td>15</td>
</tr>
<tr>
<td>f. plan development, negotiations</td>
<td>17</td>
</tr>
<tr>
<td>g. enhance mgmt, admin capabilities</td>
<td>2</td>
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<tr>
<td>h. conferences</td>
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- 137 -
5. Agreements

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<th>Description</th>
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<th>15</th>
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<tbody>
<tr>
<td>a. Intergovernmental agreements, no action specified</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>b. International agreement, no action specified</td>
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<tr>
<td>c. International agreement, general commitment</td>
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6. Public education

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<th>Section</th>
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<tr>
<td>Increase public participation (consultations, increase funding of ENGOs)</td>
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<td>13</td>
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Non-classifiable (N/C)

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TOTAL

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<th>Section</th>
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Distribution (1st 1 1/2 years):

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<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Coercive vs non-coercive instruments</th>
<th>14%</th>
<th>10%</th>
<th>2%</th>
<th>48%</th>
<th>7%</th>
<th>14%</th>
<th>5%</th>
<th>24% : 76%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>22</td>
<td>16</td>
<td>3</td>
<td>76</td>
<td>12</td>
<td>22</td>
<td>8</td>
<td></td>
<td>14%</td>
<td>10%</td>
<td>2%</td>
<td>48%</td>
<td>7%</td>
<td>14%</td>
<td>5%</td>
<td>14% : 86%</td>
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Distribution (Green Plan initiatives):

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<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Coercive vs non-coercive instruments</th>
<th>13%</th>
<th>9%</th>
<th>1%</th>
<th>48%</th>
<th>6%</th>
<th>16%</th>
<th>5%</th>
<th>21% : 76%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>33</td>
<td>23</td>
<td>2</td>
<td>119</td>
<td>15</td>
<td>39</td>
<td>13</td>
<td></td>
<td>13%</td>
<td>9%</td>
<td>1%</td>
<td>48%</td>
<td>6%</td>
<td>16%</td>
<td>5%</td>
<td>13% : 85%</td>
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</table>
APPENDIX 3:  FEDERAL MINISTERS OF THE ENVIRONMENT UNDER THE MULRONEY GOVERNMENT

starting date of term in office:

Suzanne Blais-Grenier: September 1984
Tom McMillan: August 1985
Lucien Bouchard: January 1989
Robert de Cotret: September 1990
Jean Charest: April 1991
APPENDIX 4: INTERVIEWS

MEMBERS OF THE FRASER BASIN MANAGEMENT BOARD:

Susan Anderson, B.C. Federation of Labour

Anthoney H. J. Dorcey, Chairperson

Chief Peter Quaw, Lheit-Lit’en Nation

GOVERNMENT OFFICIALS:

Allan Borham, Fraser Basin Management Program

Lee Coonfer, Tom Siddons’s Minister’s office

Teresa Duynstee, Coordinator, Greenfields Project

Fred Fraser, Fisheries and Oceans

Prad Kahry, B.C. Ministry of Environment, Lands and Parks

Bruce Kay, Environment Canada, Enforcement

Otto Langer, Fisheries and Oceans

Hew McConnell, Engineer, GVRD

James Jordan, BIEAP, director of the BMP Action Team

Martin Pomeroy, Environment Canada, Pollution Abatement

Gordon Rose, Engineer, GVRD

Tony Shebbeare, Council of Forest Industries, Member of Start-up Committee

Less Swain, B.C. Ministry of Environment, Lands and Parks

Taina Tuonimin, Environment Canada, Water Quality
ENVIRONMENTAL INTEREST GROUP REPRESENTATIVES:

Mae Burrows, T. Buck Suzuki Environmental Foundation

Evelyn Feller, Fraser River Coalition

Martin Keely, Friends of Boundary Bay

Anne Murray, Boundary Bay Conservation Committee

Will Paulik, Fraser River Coalition, Member of the Start-up Committee

Judy Williams, Wreck Beach Conservation Society

Rick Zammuto, Canoe/Robson Environmental Coalition

OTHER:

Ken Hall, Westwater Research Centre