Alternative Approaches to Legal Control of Environmental Quality in Canada

David Trezise*

I. Introduction

Law, whether legislative or "judge-made", can be said to have three principal social functions: to restore equilibrium to the social order when an imbalance has arisen, to enable individuals to calculate the legal consequences of their actions and to help mold and advance the moral and social attitudes of people in order to cope with emerging social problems.[1]

To fulfil the first of these general social functions, the law must be practically feasible and must provide an appropriate remedy for the cause of the social disequilibrium, not merely a cosmetic solution to the problem. Moreover, legal remedies must be equitable in their treatment of those affected to avoid exacerbating an existing problem or replacing it by another.

To secure uniformity in the expectations of individuals as regards the consequences of their actions — the second of its broad social functions — the law must be precise enough to allow a considerable degree of certainty, yet must contain a measure of flexibility so as not to discourage experimentation which may prove socially advantageous.

Finally, to perform its educative function — which is increasingly important in a rapidly changing society — law must not only satisfy the criteria already mentioned, but must also prove effective in remedying the wrong to which it is directed. No matter how theoretically attractive they may be, legal remedies which fail to accomplish their social goals do more harm than good in that they foster contempt for law in general, and tend to encourage the violations which they are intended to prevent.

When confronted with a serious imbalance in the social order requiring legislative action to rectify it, the legislator has three principal alternatives to work with: direct regulation of the offend-

---

* LL.B., Executive Editor, Volume 21. The author would like to thank Professor Ivan A. Vlasic of the Faculty of Law, McGill University, for his invaluable advice, and the Federal Department of the Environment for its financial assistance. The opinions expressed herein are those of the author.

[1] Berman and Greiner, *The Nature and Functions of Law* 2d ed. (1966), 31-34.

ing activity; incentives to secure the desired change in the offending parties' conduct; and disincentives to discourage the continuation of the offending activity.

Direct regulation is of course the most familiar governmental tool for influencing social behavior. It is best exemplified by the criminal law, which seeks to deter anti-social conduct through the enforcement of specified penalties and the accompanying stigma of criminality.

Incentives and disincentives are theoretically two sides of the same coin, although in practice their effects are quite dissimilar. Illustrations of the application of incentives to promote desired conduct may be found in the use of tax benefits to encourage certain types of investments or business planning. Similarly, the use of taxation as a disincentive is common, *e.g.*, the tax on liquor, which discourages its over-consumption as well as providing a source of revenue. The practical difference is in their effect: whereas incentives promote a specific course of action, disincentives serve only to discourage a particular activity, leaving the choice of alternatives wholly up to the individual.

A primary cause of our contemporary environmental problems is the tacit pre-eminence accorded the right to despoil the environment over the right to a clean environment. In theory, since antiquity the law has promoted common enjoyment of the environment:

> [B]y natural law itself these things are the common property of all: air, running water, the sea, and with it the shores of the sea.[1a]

In practice, however, this common property has been treated as a common waste disposal system, checked only by private rights in property and occasional legislation. While this practice may have been acceptable so long as the volume of pollutants remained at a level which could be safely absorbed by the environment, it is clearly no longer defensible.

The purpose of this paper is to examine and analyze, in the light of the general social functions of law outlined above, various legislative means of establishing the pre-eminence of the right to a healthy environment over the right to despoil it. Because ecological damage can arise from a great many diverse sources, this paper will concentrate on determining the most appropriate and efficacious legislative policy for controlling air and water pollution arising through industrial activity, principally production and transportation. This represents a major source of pollution which may be more susceptible to legal control than, for instance, the consumption habits of individuals.

[1a] Inst. Just., bk.2, tit.1, para.1.

II. Direct Regulation

Most Canadian environmental protection legislation was enacted in the late 1960's and early 1970's, partly in response to a growing public concern with pollution problems. This public concern, fueled by doomsday prophecies and several very real environmental catastrophies, fostered a crisis atmosphere which inevitably affected the legislator's choice of remedies. The typical governmental response to crisis situations is to apply a form of direct regulation to the activity giving rise to the crisis, and this has been the prevailing Canadian reaction to environmental problems.

Direct regulation of environmental quality may take various forms: prohibitions coupled with criminal sanctions, licensing arrangements, administrative controls or zoning regulations. Whatever form of regulation is applied in the field of environmental protection, the underlying aim is to limit the traditional *de facto* right to discharge waste into the air and water, and thus to limit overall levels of contamination. Although similar in principle, the various forms of direct regulation produce different results in practice, and should therefore be examined individually to determine their appropriateness as means of environmental quality control.

A. Prohibitions and Criminal Penalties

As long ago as 1307, a Royal Proclamation prohibited the burning of coal in London furnaces, with the aim of alleviating air pollution. To ensure compliance with the proclamation, the death sentence was prescribed for offenders.[2] Although more lenient, current Canadian environmental protection legislation generally follows the same form: it prohibits certains types or levels of waste discharge[3] and punishes the offenders with fines and, in some instances, imprisonment. There is no question that this approach can be crudely effective in controlling specific sources of pollution. Nor can it be doubted that provision for fines of up to $200,000, as in the federal *Clean Air Act*,[4] has a certain dramatic impact and serves to mollify the public demand for aggressive governmental intervention.

---

[2] Haar, *Land Use Planning* (1959), 131.

[3] These prohibitions are of varying specificity. For instance, the *Fisheries Act*, R.S.C. 1970, c.F-14, prohibits in s.33(2) the introduction of "deleterious substances" into water frequented by fish. On the other hand, Ontario Reg. 133/70 under the *Environmental Protection Act*, S.O. 1971, c.86, provides specific maximum emission levels for various contaminants, and provides for the preparation of a smoke density chart, with certain densities declared unlawful.

[4] S.C. 1970-71-72, c.47, s.33(1).

However, the long-term value of this type of regulation is debatable, in view of industry's traditional *de facto* right to deposit its wastes in the natural environment. This "right" plays an important role in our market economy by enabling producers to pass the costs of pollution, in the form of damages and clean-up costs, onto society as a whole rather than adding such expenses to the costs of production. In view of the importance of this "right" and its long-standing existence, it is unlikely that the public will demand, or the courts impose, sanctions severe enough to have a real deterrent effect.[5]

Experience with various environmental protection statutes justifies this conclusion. Pursuant to the Ontario *Pollution Control Act*[6] and its successor, the *Environmental Protection Act*,[7] nearly 130 convictions were obtained between 1968 and 1975 for offences ranging from the emission of unlawfully dense smoke to causing loss of enjoyment of property through the emission of noxious odours.[8] The fines imposed, however, have been minimal, averaging about $730.[9] No fine of more than $2,500 was imposed, although the *Environmental Protection Act* prescribes a maximum fine of $5,000 for a first offence and $10,000 for a second offence.[10] It would be naive to contend that such fines can have a real deterrent effect on a major enterprise and the offenders have included Ford Motors, Shell Oil, Gulf Oil and T. Eaton Realty.[11] Even more striking than these figures are statistics indicating the average fine imposed per day for violation of the *Fisheries Act*,[12] which prohibits the introduction of "deleterious substances" into waters frequented by fish. The maximum fine for contravention of this provision is $5,000, with each day of violation constituting a separate offence.[13] In 1969, the fines averaged $10 per violation day; in 1970 the fines reached $45 per violation day; incomplete figures for 1971 indicate average fines of about $14 per violation day.[14]

---

[5] Grad, Rathjens and Rosenthal, *Environmental Control: Priorities, Policies and the Law* (1971), 236.

[6] S.O. 1967, c.2.

[7] S.O. 1971, c.86.

[8] Letter to the author dated March 10, 1975, from the Legal Services Branch of the Ontario Ministry of the Environment.

[9] *Ibid.*

[10] *Supra*, f.n.7, s.102(1).

[11] *Supra*, f.n.8.

[12] R.S.C. 1970, c.F-14, s.33(2), as amended by R.S.C. 1970, c.17 (1st Supp.).

[13] *Ibid.*, s.33(5), (6).

[14] Reuben, *The Use of the Fisheries Act by the Department of the Environment in the Battle Against Pollution* (Federal Department of the Environment).

Apart from the minimal fines actually imposed, a major drawback with the use of penal sanctions is that they may never be applied at all. The *Clean Air Act* authorizes the federal government to set national emission standards where there is a significant danger to health, where treaty obligations are affected and for federal works.[15] As yet, no binding emission standards or regulations have been established, so the provision for maximum fines of $200,000 has never been applied.[16] The failure to set emission standards and to pass regulations may be partly ascribed to the technical difficulty inherent in such an undertaking, though bureaucratic inefficiency and neglect may be blamed as well. One might also suspect that the failure to apply penal sanctions may in some situations be a matter of official policy formulated with deference to the interests of industry.

It is instructive to note the discrepancy in the application of penalties for the contravention of environmental protection statutes between relatively economically depressed regions, such as the Maritime provinces, and the more prosperous provinces of British Columbia and Ontario. Whereas in Ontario and British Columbia penal sanctions are applied with some degree of frequency, they are applied rarely or not at all in Eastern Canada.[17] It is not unfair to

---

[15] *Supra*, f.n.4, ss.7, 11.

[16] Estrin and Swaigen, *Environment on Trial* (1974), 44.

[17] Under the Ontario *Environmental Protection Act, supra*, f.n.3, and its predecessor, the *Air Pollution Control Act*, S.O. 1967, c.2, nearly 130 convictions had been obtained up to the spring of 1975 (*supra*, f.n.8). Under the British Columbia *Pollution Control Act*, S.B.C. 1967, c.34, there were at least 21 successful prosecutions completed in 1973 and 1974 alone (letters to the author dated March 11, 1974 and March 10, 1975, from the office of the Attorney-General of British Columbia). By contrast, no prosecutions have been taken under the Nova Scotia *Environmental Protection Act*, S.N.S. 1973, c.6 (letter to the author dated March 11, 1974, from the Nova Scotia Communications and Information Centre). Nor have any convictions been obtained under the Prince Edward Island *Environmental Control Commission Act*, S.P.E.I. 1971, c.33 (letter to the author dated March 9, 1974, from the Prince Edward Island Environmental Control Commission). One prosecution has been successfully concluded under the New Brunswick *Clean Environment Act*, S.N.B. 1971, c.3 (letter to the author dated March 22, 1974, from the office of the Minister of Fisheries and Environment, New Brunswick). Under the Newfoundland *Clean Air, Water and Soil Authority Act*, S.N. 1970, No. 81 (now repealed), and the Newfoundland *Department of Provincial Affairs and Environment Act*, S.N. 1973, No. 39, four stop orders have been issued, and two convictions obtained (letters to the author dated August 8, 1974 and April 7, 1975, from the Environmental Management and Control Division of the Newfoundland Department of Provincial Affairs and Environment). Quebec forms a sort of middle ground between these extremes. Approximately

conclude that the necessity of attracting industry is an important, if not the determining, factor explaining the lack of prosecutions in the East.

Criminal penalties may also fail to be applied simply out of a lack of awareness of their potential applicability to environmental offences. At least four sections of the Criminal Code — common nuisance,[18] mischief,[19] criminal negligence,[20] and deposit of an offensive volatile substance[21] — could be applied to serious environmental offences, but it does not appear that they have been so used. While none of the sections is expressly intended to cover pollution offences, all are worded broadly enough to include such activities.

Common nuisance is defined as the doing of an unlawful act or the failure to discharge a legal duty which

> (a) endangers the lives, safety, health, property or comfort of the public, or
>
> (b) obstructs the public in the exercise or enjoyment of any right that is common to all the subjects of Her Majesty in Canada.[22]

Clearly, this definition would encompass serious cases of pollution; yet the only reported case which is remotely related to environmental matters is that of *Raymond* v. *Cook*,[23] where the defendant was convicted of creating a nuisance by using a music box on an ice cream van in violation of a municipal by-law. It is important to note that for an activity to constitute a common nuisance, the act causing the nuisance must itself be unlawful. In pollution cases, it is likely that any offence serious enough to warrant prosecution as a common nuisance would be contrary to either a municipal by-law or a provincial statute, and therefore would come within the definition.

Mischief is defined as the wilful destruction or damaging of property, the rendering useless of property, or the interference with the lawful use of property.[24] "Wilful" means the doing or the omission of an act "knowing that the act or omission will probably cause the occurrence of the event and being reckless whether the event

---

40 penal prosecutions have been initiated pursuant to the *Environment Quality Act*, S.Q. 1972, c.49 (letter to the author dated June 19, 1975, from the Legal Services Branch of the Quebec Ministry of the Environment).

[18] R.S.C. 1970, c.C-34, s.176.

[19] *Ibid.*, s.387.

[20] *Ibid.*, ss.202-204.

[21] *Ibid.*, s.174.

[22] *Ibid.*, s.176(2).

[23] [1958] 1 W.L.R. 1098.

[24] *Supra*, f.n.18, s.387.

occurs or not".[25] This section could be applied to the situation where a polluter "wilfully" introduces a harmful substance into the environment and causes damage to property, although it has not yet been used for this purpose.

Criminal negligence involves the omission or commission of an act in such a way as to show "wanton or reckless disregard for the lives and safety of other persons".[26] If this type of negligence results either in the bodily harm or death of a person, the offender is liable to imprisonment for, respectively, ten years or life.[27] Again, the potential for application of this provision to environmental offences is evident, although prosecutions for criminal negligence are currently restricted almost exclusively to automobile accident cases.

Section 174 (a) of the Criminal Code makes it an offence punishable on summary conviction to deposit in a public place a volatile substance that is likely to "alarm, inconvenience, discommode or to cause discomfort to any person or to cause damage to property . . .". "Volatile substance" is not defined in the Criminal Code, but may encompass some of the chemical wastes deposited in the environment by industry.

The sanctions for these offences are rather severe, ranging from a short term of imprisonment for the summary conviction offence of depositing a volatile substance in a public place to life imprisonment for mischief causing actual danger to life.[28] The severity of the penalties, coupled with the stringent burden of proof required and the necessity to show *mens rea* make these sections inappropriate for all but the most serious pollution offences. It is, however, unlikely that these sections of the Criminal Code will be applied to environmental offences: pollution is largely the result of otherwise legitimate and socially desirable activities carried on by respectable enterprises, and the majority of the public, as well as the courts, simply do not recognize it as criminal behaviour.

A possible solution to governmental reluctance to prosecute pollution offences is the exercise by private citizens of the common law right to act as a "private prosecutor". For summary conviction offences, which would include most environmental protection statutes, it appears that any citizen has the right to act as prosecutor where the Attorney-General fails to prosecute,[29] unless the statute

---

[25] *Ibid.*, s.386(1).
[26] *Ibid.*, s.202(1).
[27] *Ibid.*, ss.203, 204.
[28] *Ibid.*, ss.174(b), 387(2).
[29] Berner, *Private Prosecution and Environmental Control Legislation: A Study* (1972, Department of the Environment), 9. *Cf.* Burns, *Private Prosecutions in Canada: The Law and a Proposal for Change* (1975) 21 McGill L.J. 269.

creating the offence expressly limits this right.[30] For indictable offences such as common nuisance, mischief and criminal negligence, there is some uncertainty as to the extent of the individual's right to prosecute.[31] In any case, the problems of expenses and proof, and the possibility of a civil action for malicious prosecution may inhibit the exercise of this right,[32] particularly since the prosecuting citizen has nothing to gain other than the satisfaction of bringing an offender to justice.[33] On occasion he may even be deprived of this satisfaction. For example, in the Ontario case of *R. (ex rel McCarthy)* v. *Adventure Charcoal,*[34] an individual successfully prosecuted Adventure Charcoal for undertaking a pollution-causing enterprise without obtaining a certificate as required by the *Ontario Environmental Protection Act.*[35] The company was fined a mere $500, obtained the certificate and continued operations. For his trouble, the citizen-prosecutor was ordered to pay the court costs, although this order was overturned on appeal.[36]

Aside from these essentially human failures in the application of criminal penalties to environmental offences, there are certain intrinsic problems in the use of penalties generally which make them inappropriate for the control of environmental quality. On the practical side, criminal penalties are applied after the fact, when irreparable harm may have been done to the environment. The problem is exacerbated by the time-consuming task of gathering sufficient evidence for a criminal prosecution (which is notoriously difficult and expensive in environmental cases), and the defendant's inevitable use of stalling tactics and appeals designed to prolong court proceedings.

Even when prosecutions are successfully concluded, criminal courts are not usually empowered to issue injunctions,[37] and the

---

[30] See the Quebec *Environment Quality Act,* S.Q. 1972, c.49, s.116, for an instance of the statutory limitation of this right.

[31] Berner, *supra,* f.n.29, 11.

[32] *Ibid.,* 18-22.

[33] A unique exception to this rule is afforded by the *Penalties and Forfeitures Proceeds Regulations,* SOR/73-46, promulgated under the *Fisheries Act,* R.S.C. 1970, c.F-14, which provides that one-half of a fine imposed for violation of the Act shall be awarded to the citizen who commences the prosecution.

[34] (1972) 9 C.C.C. (2d) 81.

[35] *Supra,* f.n.7, s.8(1).

[36] Unreported. See (1972) 1:3 Can.Env.L.News 5.

[37] Some of the important Canadian statutes dealing with the environment do empower the courts to issue restraining orders. For example, see the *Fisheries Act, supra,* f.n.12, s.33(7).

small fines imposed are unlikely to have the necessary deterrent effect. The burden of proof resting on the prosecution is of course onerous, and is augmented in some cases by the necessity of proving *mens rea*.[38] Where the prosecution must rely only on a vague statutory prohibition, the problem of proof may be insurmountable. The setting of precise maximum emission and effluent standards helps to alleviate this difficulty, but there remains the possibility that these standards may not have the desired effect of lowering overall contamination to a harmless level, since our understanding of the interaction and long-term effects of various contaminants is still rudimentary. Also, as sources of pollution proliferate, the standards will have to be constantly adjusted to maintain desirable environmental quality.

The use of maximum emission standards gives polluters no incentive to seek to lower their levels of waste discharge below the prescribed standards even where technically and economically feasible. Furthermore, the use of inflexible maximum standards for waste discharges creates a situation in which minute differences in discharge levels distinguish criminal activity from perfectly legal activity, although the effects on the environment may be virtually identical. This anomaly is aggravated by the fact that criminal prosecutions are inevitably sporadic and the penalties inconsistent. Even assuming that the penalties were imposed universally and consistently, economically marginal enterprises are bound to suffer disproportionately since they can least afford the expenses of legal fees, fines and abatement measures.

In sum, while criminal sanctions have the advantage of simplicity and may fulfil both an educational and a deterrent function if applied vigorously, the numerous disadvantages discussed above suggest that penalties alone cannot provide the remedy to environmental contamination. Such controls are most effective as regards the punishment and deterrence of singular, fortuitous instances of pollution, such as the discharge of pollutants by sea-going vessels. The occasional nature of these occurrences, unlike continuing discharges from stationary sources, does not lend itself to more sophisticated methods of control.

---

[38] *Mens rea* is not generally a necessary component for offences under environmental protection statutes since they are not criminal offences in any real sense, but are rather actions prohibited in the public interest with penalties attached. See *R.* v. *Peconi* [1970] 3 O.R. 693. Offences such as mischief and common nuisance would require proof of *mens rea*.

The *Oil Pollution Regulations*[39] under the Canada *Shipping Act*,[40] for instance, have been applied frequently and successfully. In 1971 there were 49 successful prosecutions, with fines averaging nearly $1,700; in 1972 there were 66 successful prosecutions, with fines averaging $2,140; and in 1973 there were 42 successful prosecutions, with the fines imposed averaging $3,620.[41] Although not astronomical, it must be borne in mind that these fines were imposed for isolated incidents, not ongoing, pollution-causing activities. It is reasonable to assume that these prosecutions and the fines imposed have caused shipmasters to take greater precautions in Canadian waters than would be the case if no controls were in effect.[41a]

B. Licensing Arrangements

An alternative means of direct regulation which is also in widespread use in Canada at the provincial level is the use of licensing arrangements.[42] Of course, as with any statutory enactment which seeks to compel a particular mode of behaviour, licensing arrangements must rely on penalties to enforce compliance, although these penalties are not intended to be the principal control mechanism. Licensing is generally used in conjunction with discharge standards, although the British Columbia *Pollution Control Act*[43] and the Nova Scotia *Environmental Protection Act*[44] rely solely on this method of control.

The basis of licensing arrangements is the requirement that operators of sources of pollution, or those proposing to operate such sources, must apply to an administrative body for authorization to

---

[39] SOR/71-495.

[40] R.S.C. 1970, c.S-9, as amended by R.S.C. 1970, c.27 (2d Supp.), s.730.

[41] Letter to the author dated August 8, 1974, from the Bureau of International and Environmental Affairs, Transport Canada.

[41a] See Mostert, *Supership* (1974), 191: "The Canadians ... have become extremely vigilant, actually as well as legislatively, and sailors are going to be much more careful in those [Canadian] waters in the future."

[42] Some form of licensing is used under the Ontario *Environmental Protection Act*, *supra*, f.n.7; the British Columbia *Pollution Control Act*, S.B.C. 1967, c.34; the Nova Scotia *Environmental Protection Act*, S.N.S. 1973, c.6; the New Brunswick *Clean Environment Act*, S.N.B. 1971, c.3; the Quebec *Environment Quality Act*, S.Q. 1972, c.49; the Alberta *Clean Air Act*, S.A. 1971, c.16 and *Clean Water Act*, S.A. 1971, c.17; the Manitoba *Clean Environment Act*, S.M. 1972, c.130; the Newfoundland *Department of Provincial Affairs and Environment Act*, S.N. 1973, No.39; and the Saskatchewan *Water Resources Management Act*, S.S. 1972, c.146.

[43] S.B.C. 1967, c.34.

[44] S.N.S. 1973, c.6.

carry on the activity.[45] To facilitate the evaluation of the environmental impact of the undertaking or proposed undertaking, the application must be accompanied by information concerning the nature and quantity of the discharge as well as plans and specifications of the works.[46] The administrative organ may grant the permit, with alterations or additions if necessary, or may refuse it altogether.[47] Provision may also be made, as in the British Columbia Act, to alter the terms of the permit at a subsequent time if conditions so require, or to suspend or cancel it for non-compliance with its terms.[48]

The obvious advantages of licensing schemes are that offences are relatively easy to detect, and proof of failure to obtain a licence or to comply with its terms is not difficult to obtain. The revocation or suspension of a licence, threatening the cessation of the operation in question, is a harsh and not generally practicable remedy, but it can be of highly effective coercive power. Furthermore, the licensing of potential polluters approaches environmental quality control from a preventive rather than punitive perspective. Requiring polluters to identify themselves and, if necessary, to take control measures, is an approach more consonant with the desired end of environmental protection.

Licensing is, however, by no means an ideally efficient and effective control technique. Its implementation requires a large staff, including numerous qualified engineers and other technicians, to administer the scheme, to assess the impact on the environment of the regulated activities and to insure that the terms of the licences are fulfilled.[49] Unless licensing is carried out in a well coordinated and sophisticated fashion, free from pressure by special interests, it is unlikely that desirable overall levels of clean air and water can be achieved. If licences are granted indiscriminately and on an individual basis rather than as part of a comprehensive design, overall levels of contamination may be unacceptable, although no single source is responsible for a serious and immediate pollution problem. As with the use of discharge standards and criminal penalties, licensing offers no incentive to polluters to take abatement measures beyond those required by their licence, even when more efficient processes are available.

---

[45] For example, see the Ontario *Environmental Protection Act, supra,* f.n.7, s.8, as amended by S.O. 1972, c.106, s.2.

[46] *Ibid.,* s.8(2).

[47] *Ibid.,* s.8(4).

[48] *Supra,* f.n.43, s.7A, as amended by S.B.C. 1968, c.38, s.4.

[49] Krier, *The Pollution Problem and Legal Institutions: A Conceptual Overview* (1971) 18 U.C.L.A. L.Rev. 429, 465.

As sources of pollution increase, the terms of the licences will have to be constantly revised to maintain a consistent maximum level of contamination. Alternatively, under this scheme new pollution-creating enterprises may be banned, or face much more stringent emission requirements, both of which are highly inequitable possibilities.

Licensing arrangements ultimately depend upon penalties to ensure compliance, so that many of the problems, discussed above, which are associated with the use of such sanctions again apply, *e.g.*, the tendency of courts to impose insignificant fines. Thus, for example, in 1973 and 1974, the average fine under the British Columbia *Pollution Control Act* for permitting a contaminating discharge without a licence or failing to comply with the terms of a licence was about $460,[50] hardly a compelling incentive to enforce compliance with the licensing scheme.

Despite these disadvantages, licensing arrangements are potentially effective in controlling certain sources of pollution. However, the necessity of maintaining a large and expensive administrative staff and of bringing prosecutions to ensure compliance makes this method a less than ideal remedy to environmental offences.

As with prohibitions and criminal penalties, licensing finds its most appropriate application as a means of pollution control in the field of transportation, for the regulation of normal emissions such as exhaust fumes and smoke. For example, it is more efficient to issue licences certifying that vehicles meet specified standards of emission control, and to require regular inspections, than to attempt to control emissions from these sources by occasional criminal prosecutions.

C. *Administrative Orders*

Most of the major provincial environmental protection statutes provide for the issuing of administrative orders to polluters requiring either the temporary or permanent cessation of the offending activity ("stop orders") or the application of control techniques to lessen the quantity of the discharge ("control orders").[51] Stop orders are reserved for situations where pollution presents an immediate

---

[50] Letters to the author dated March 11, 1974 and March 10, 1975, from the office of the Attorney-General of British Columbia.

[51] For example, see the Ontario *Environmental Protection Act, supra*, f.n.7, ss.70, 74. The Quebec, Nova Scotia, New Brunswick, Alberta, Manitoba, Newfoundland, Saskatchewan and British Columbia statutes mentioned in f.n.42, as well as the Prince Edward Island *Environmental Control Commission Act*, S.P.E.I. 1971, c.33, contain similar provisions.

threat to life, health or property,[52] and are consequently rarely issued.[53] Control orders may be issued when discharges exceed standards set by regulation or present a threat to environmental quality.[54] These orders may prescribe the limitation of contaminant discharges, and may specify the procedures to be taken in controlling the discharge.[55]

The advantage of the use of these orders, as compared with criminal sanctions, is that the strict requirements of proof, the expense and the delay of a trial are avoided. These orders may be appealed, however, and in the case of control orders, an appeal suspends the operation of the order.[56] Administrative orders depend on penal sanctions for enforcement but, as in the case of licensing, proof of non-compliance is a relatively simple matter. One would expect that the courts would be willing to impose heavy fines where the offender has disobeyed a reasonable administrative order; in fact, it appears that these orders are generally complied with.[57]

Stop and control orders share with criminal penalties the drawback of being crisis-oriented. They are best suited to remedy the immediate hazards caused by individual sources of pollution rather than to control overall pollution levels. As with criminal penalties, these orders are necessarily applied sporadically, as individual offenders are discovered, and significant disparities in the frequency of their application may be found between regions of varying economic strength.[58] Whereas citizens may usually act as private prosecutors to ensure the application of criminal penalties, there is no machinery by which an individual may force the issuing of a stop or control order, since they are wholly discretionary. Public pressure may be successfully applied to obtain an order,[59] but the possibility

---

[52] *Environmental Protection Act, supra,* f.n.7, s.7.

[53] In Ontario, only four such orders have been issued (letter to the author dated March 12, 1974, from the Legal Services Branch of the Ontario Ministry of the Environment).

[54] *Supra,* f.n.7, s.6.

[55] *Ibid.,* s.70.

[56] *Ibid.,* s.79(2).

[57] In Ontario, only one conviction has been obtained for the failure to comply with an order. The offender was fined only $150 due to his subsequent compliance at a cost of $10,000 (*supra,* f.n.8).

[58] In Ontario, some 142 control orders had been issued up to early 1974 (*supra,* f.n.53). In British Columbia, 93 engineers orders were issued in 1973 (*supra,* f.n.50). On the other hand, only two control orders have been issued in Prince Edward Island and none in Nova Scotia or New Brunswick (*supra,* f.n.17).

[59] Estrin and Swaigen, *supra,* f.n.16, 51.

of countervailing pressures from industry to discourage their issuance must not be discounted.

In some ways, then, stop and control orders are an improvement over the use of criminal penalties, but they can only provide stopgap relief since they do nothing to decisively resolve the fundamental conflict between the traditional right to discharge waste into the air and water on the one hand, and the increasing need to protect the quality of the natural environment on the other.

D. Zoning

"Zoning" involves the designation of certain areas as restricted to particular uses, *e.g.*, industrial, commercial or residential. Zoning can hardly be regarded as an effective means of controlling the quality of the environment. While zoning may have some application in facilitating the centralized treatment of effluent discharged into rivers and streams, it has no other relevance to controlling overall contaminant levels. As it relates to environmental matters, the objective of zoning is merely to separate the sources of pollution from the public by isolating residential areas from industrial zones. While this may have the short-term effect of making residential areas more comfortable, the net result, in the absence of other controls, is to subject the environment — and people — to "increasing amounts of pollution in the aggregate, but from increasingly numerous, remote, and unidentifiable sources".[60]

It has been suggested that a possible solution to pollution problems is to designate large areas as "clean" and allow other areas to be contaminated, in the same way that some railways provide "smoking" and "non-smoking" compartments.[61] This solution is clearly impractical in the long run in view of the essential unity of the natural environment and the interaction and interdependence of its various components.

E. Civil Remedies

Civil suits have been historically the principal means of defence available to individuals against pollution damage. Under the common law, property owners and possessors may obtain monetary compensation and injunctive relief under numerous heads of action, primarily nuisance, negligence, infringement of riparian rights and

---

[60] Esposito, *Air and Water Pollution: What to do While Waiting for Washington* (1970) 5 Harv.Civ.Rights-Civ.Lib.Rev. 32, 48.

[61] Dales, *Pollution, Property and Prices* (1968), 72.

breach of statutory duty. Under the Civil Code of Quebec, articles 1053 and 1054 provide the basis for damage actions arising from environmental contamination.[62] Although the nominate categories of the common law are not expressed in these articles, the Civil Code affords virtually the same protection against pollution damage as does the common law.[63] As at common law, the relevant civil law remedies are damages[64] and injunctive relief.[65]

It is beyond the scope of this paper to discuss in detail the advantages and disadvantages of the use of civil suits as a means of protecting the quality of the environment, but certain general characteristics of civil suits should be noted. Initially, there are serious problems of *locus standi* when the pollution does not directly affect the plaintiff's rights, or affects him in a manner common to a large class of people.[66] If the plaintiff succeeds in establishing his right to bring the action, he must invest considerable time and money to carry on the suit, and faces the possibility of appeals as well. Where the plaintiff is an individual of ordinary means and the defendant is a large corporation, the imbalance in resources may prove fatal to the plaintiff's case, particularly since convincing evidence of pollution damage is often expensive and difficult to obtain, and expert testimony will likely be decisive.

In the case of a successful civil action, injunctive relief, whether it be permanent or temporary, limited or complete, is an effective remedy, although economic considerations may sometimes prevent courts from imposing this remedy. Moreover, legislative dissolution of an injunction issued against a powerful enterprise is not unknown in Canada.[67] Because civil suits are a matter of individual initiative, they are brought in an haphazard fashion and are therefore unlikely to provide a comprehensive approach to environmental protection.

It is possible that concerted action by citizen groups may prove effective in controlling overall levels of contamination, but this requires a high degree of concern and dedication, as well as relatively

---

[62] Art.501 of the Civil Code provides the basis for the "action negatoire", by which a declaration may be obtained that an upstream owner is abusing the natural servitude of his land over land on a lower level, for example by adding contaminants to the water.

[63] For example, see Cohen, *Nuisance: A Proprietary Delict* (1968) 14 McGill L.J. 124.

[64] Punitive damages are not available, however, under arts.1053 and 1054: *Chaput* v. *Romain* [1955] S.C.R. 834.

[65] Code of Civil Procedure, arts.751-761.

[66] For example, see *Hickey* v. *Electric Reduction Co.* (1972) 21 D.L.R. (3d) 368.

[67] See the *K.V.P. Co. Ltd. Act*, S.O. 1950, c.33.

large financial resources. An example of the potential efficacy of citizen action is afforded by the Angler's Co-operative Association in England, an organization which brings civil actions on behalf of the owners of private fisheries when pollution threatens the quality of fishing. The A. C. A. is a fairly small organization, but it has been able to muster considerable support, largely due to the importance many Englishmen attach to good fishing. In its nineteen years of operation up to 1967, the A. C. A. had investigated some 700 cases of pollution, "and very rarely does it fail to get abatement or damages, as the case requires".[68] The A. C. A. is credited with having made a significant contribution toward the enviable state of cleanliness of England's streams and rivers.[69]

Of course, the same legal, social and economic conditions do not exist in Canada as in England. Nevertheless, given sufficient encouragement, citizen groups could contribute significantly to the control of Canada's environmental quality. Legislation modelled after the Michigan *Environmental Protection Act*[70] could have the effect of facilitating such citizen action. The principal provision of this statute is the granting of standing in environmental protection cases to virtually every potential plaintiff: government agencies, corporations and individuals are given free access to the courts in order to obtain equitable relief.[71]

To further encourage citizen action, statutory measures could include a provision that costs not be assessed against losing plaintiffs in environmental cases unless the action is found to be "frivolous and vexatious". To alleviate the problems of assembling evidence, government experts could be provided for a nominal fee to recognized, responsible citizen groups. Additionally, as provided in the Michigan *Environmental Protection Act*, it may be stipulated that a *prima facie* showing that the defendant has or is likely to pollute will shift the burden of proof to him.[72]

Nevertheless, even the increased use of the civil courts to control pollution is unlikely to provide a complete solution to environmental problems. At least it would allow for the development of a common law of the environment (hopefully immune to the pressures of vested interests), and help to avoid the problems of narrowly worded statutes and unresponsive administrators. It is undeniably in the best interests of justice and democratic principles to promote

---

[68] Dales, *supra*, f.n.61, 68.
[69] *Ibid.*
[70] Mich. Comp. Laws Ann. (Supp. 1972), paras.691.1201-1207.
[71] *Ibid.*, ss.2(1), 4.
[72] *Ibid.*, s.3(1).

citizen participation in a matter as crucial as environmental protection, even if this participation is only secondary to some form of governmental control.

III. Economic Incentives

Governmental incentives to encourage polluters to take abatement measures include direct payments and grants for the elimination or reduction of waste discharges, loans to be used for the installation of waste treatment facilities, and tax incentives (principally accelerated capital cost allowances for pollution control equipment). With the exception of governmental loans granted at current interest rates,[73] all forms of incentives are subject to the fundamental objection that they inequitably force the cost of pollution control onto the public as a whole rather than placing the burden on the producers and consumers of pollution-creating products.[74] In this way the workings of the free market are somewhat undermined, as pollution-causing industries escape the full burden of their production costs, resulting in artificially lower prices for their products.

As with any form of government largesse, the use of economic incentives to encourage the control of pollution will inevitably give rise to attempts to defraud the system. For instance, under the federal *Income Tax Act*, taxpayers are granted an accelerated (50%) capital cost allowance for property "acquired primarily for the purpose of preventing, reducing or eliminating pollution" of the water or air.[75] No doubt some polluters will succumb to the temptation to pass off capital improvements intended primarily to maximize productive efficiency as pollution control measures in order to benefit from the accelerated capital cost allowance.

Another general objection which may be raised against governmental subsidization of pollution control programmes is that such funding in effect benefits those enterprises which have been most negligent in taking pollution abatement measures, to the economic detriment of those which took these measures voluntarily at their own expense.[76]

The most telling criticism of these incentives is that no subsidy, by itself, will serve to induce polluters to take measures which are

---

[73] Low-interest or forgiveable loans are, in effect, equivalent to grants.

[74] Grad, Rathjens and Rosenthal, *supra*, f.n.5, 249, 250.

[75] S.C. 1970-71-72, c.63, Itar 1100(1)(t). (Sch.B., cl.24, 27).

[76] Hines, *Controlling Industrial Water Pollution: Color the Problem Green* (1968) 9 B.C.Ind. & Com.L.Rev. 553, 598.

by their nature not remunerative and which involve continuing operating costs. It may be argued that the use of subsidies coupled with direct regulation would effectively encourage polluters to take abatement measures. While this approach would certainly be more effective than either direct regulation or incentives alone, most of the objections to both these approaches to pollution control would still apply. It would remain advantageous for polluters to avoid compliance by one means or another for as long as possible, in order to apply their capital to more productive investments. Should compliance with pollution standards finally be exacted by a combination of criminal penalties and subsidies, there would still be no incentive for polluters to seek emission levels below those prescribed by statute or to utilize the most efficient treatment process available.

These objections apply generally to the use of economic incentives to encourage pollution control. There are, as well, several specific problems with the use of tax incentives for this end. Tax incentives may not promote the use of the most efficient control measures, but rather the most beneficial from a taxation point of view. The means of controlling industrial pollution are varied, including changes in process, either in manufacturing or combustion; the utilization of more efficient equipment; the substitution of raw materials or fuels; or the operation and maintenance of cleaning equipment at the point of discharge into the environment.[77]

Under the federal *Income Tax Act*, however, tax benefits are only available for the acquisition of capital property intended to control pollution. Thus an enterprise may choose to install relatively inefficient pollution abatement devices in order to obtain the tax benefit, although a change in the manufacturing process, for instance, could effect a better result at a lower cost. Moreover, this tax incentive is unlikely to be very attractive to most enterprises, since the capital cost allowance only subsidizes the initial cost of the equipment and does nothing to defray operating costs, which may be considerable. Finally, the wisdom of granting further tax breaks to industry should always be regarded critically, particularly when the benefits tend to accrue, as here, to the more prosperous enterprises. Economically marginal industries are unlikely to benefit, since they have little or no profit against which the capital cost allowance may be written off.

It seems that the only entirely defensible form of economic incentive for pollution control is the goverment loan, at prevailing

[77] Hagevik, *Decision-Making in Air Pollution Control* (1970), 59.

interest rates, to enterprises which are unable to obtain private financing for this end. While subject to potential abuse, fully repayable loans do not have the undesirable effect of distorting competition and forcing the cost of pollution control on the general public. Since the loans would have to be repaid, and thus would in a sense represent their own capital, industries would be encouraged to use the money in the most efficient manner possible for controlling pollution.

The availability of government loans does not make pollution control expenditures any more attractive to industry; rather it makes such expenditures possible where capital is not available from other sources. Loans therefore must be used in conjunction with other measures to promote pollution control. The great advantage of loans over other forms of incentive is that they do not give the appearance of a governmental recognition of a right to pollute at the public expense, an attitude which must be discarded if effective environmental policies are to be implemented.

IV. Disincentives: Pollution Fees

The use of economic disincentives to control pollution is premised on the assumption mentioned above that the underlying cause of pollution is the traditional *de facto* "right" to use air and water as free waste disposal systems. As a result of this "right", the costs of pollution have been borne not by the consumer or producer of the product, but by individuals located downwind or downstream, and by society as a whole. The aim of economic disincentives is to create a charge for the use of the natural environment as a waste receptacle, thus encouraging polluters to seek to reduce their costs by reducing their waste discharges.

The prevailing approach to pollution control — maximum discharge standards coupled with fines for their violation — represents a crude attempt to force the internalization by industry of some of the costs of pollution by means of economic pressure. However, because of the disparity between the real costs of pollution and the level of fines, which are sporadically imposed, this approach rarely has the desired effect of rendering pollution unprofitable for the polluter. Economic disincentives, *e.g.*, emission or effluent fees, are a more systematic means of placing most or all of the costs of industrial pollution on the responsible producers and, in turn, on the consumers of their products.

An example of legislation relying on the use of effluent fees to control pollution is the Water Pollution Control sub-chapter of the

Vermont *Conservation and Development Act*.[78] This statute requires any person depositing waste into the state's water on a regular basis to apply for a discharge permit certifying that the effluent does not "reduce the quality of the receiving waters below the classification established for them".[78a] If the discharge does have this effect, the polluter will be denied a discharge permit and must apply for a "temporary pollution permit",[79] which will only be granted if the discharge is not unreasonably destructive.[80] The holder of a temporary pollution permit is required to pay periodic pollution charges based on the quantity and quality of waste discharged into the water.[81]

The stated aim of this charge is to provide:

> ... the economic incentive for temporary pollution permit holders to reduce the volume and degrading quality of their discharges ... thereby raising the quality of the waters of the state.[82]

The revenue obtained through these charges is to be used solely for the purposes of water quality management and pollution control. To ensure compliance with the scheme, any violation of the statute or any failure to comply with a permit is punishable by a fine of $10,000 or five years imprisonment.[83]

A similar and highly sophisticated system has been employed in the Ruhr Valley in Germany for over half a century. The revenue generated is used to provide centralized, large-scale treatment of the waste-receiving water. The system is credited with maintaining clean waters in that highly industrialized region.[84]

The Canada *Water Act* provides for the establishment of regional water quality management agencies empowered to make recommendations regarding the use of effluent fees as an instrument to maintain water quality.[85] No such agencies have as yet been established. On the municipal level in Canada, effluent charge schemes (actually surcharges on effluent of greater than "normal" strength) are employed in several cities,[86] apparently with significant success.

---

[78] Vt. Stat. Ann. (Supp. 1970), tit.10, pt.2.

[78a] *Ibid.*, para.911a(b).

[79] *Ibid.*, para.912a.

[80] *Ibid.*, para.912a(c)(7).

[81] *Ibid.*, para.912a(d)(5).

[82] *Ibid.*, para.912a(e)(1).

[83] *Ibid.*, para.918.

[84] Kneese, *Water Pollution; Economic Aspects and Research Needs* (1962), and Kneese, *The Economics of Regional Water Quality Management* (1964).

[85] R.S.C. 1970, c.5 (1st Supp.), s.13.

[86] Among them are Toronto, Edmonton, Winnipeg, Calgary, London and the Waterloo Region.

These municipal effluent charge schemes are credited with being "an effective weapon in the hands of municipal authorities in forcing or influencing industrial firms to reduce their water pollution loads" and with redistributing, to a large degree, "the responsibility and burden of reducing discharges of waste into the environment from the public to the polluter, in accordance with the principle that 'the polluter must pay' ".[87]

The advantages of this approach to environmental protection are numerous. The most attractive feature of levying fees on polluters is that it corrects the inequitable situation that has long prevailed, by which pollution costs were forced on the public at large. This situation has also had the effect of creating artificially low prices for some goods, since the pollution costs attendant on their manufacture are not included in their selling price. The low price tends to stimulate demand for the product and thus increases the strain on the environment, an effect which is countered by the imposition of pollution fees which must be added into costs. Indeed, the use of pollution fees encourages the expansion of "clean" industries since the lower fees they would pay would be reflected in lower prices for their products and therefore increased demand.

Pollution fees have the additional advantage of not absolutely limiting the right to discharge waste into the environment, as direct regulation seeks to do, but rather create a charge for the exercise of rights which used to be free. Because the right to pollute is not absolutely limited, the polluter has the choice of when and how to implement pollution abatement measures, so that he may choose to utilize the most appropriate and efficient method of abatement for his operation. With no prescribed limit separating legal discharges from illegal ones, the anomalous situation whereby a marginal increase in waste discharged transforms a legitimate activity into a criminal one is avoided. Pollution fees also provide a continuing incentive to enterprises to abate their harmful activities in order to lower their fees, whereas prescribed standards offer no such incentive.

Pollution fees are a highly flexible control instrument, and may be set to reflect the costs of cleaning up the contamination in question or simply to provide a sufficient incentive to promote abatement measures. Because such fees would be established in an across the board fashion, rather than on an individual basis, the possibility of industry pressure leading to abuses of the system are minimized.

---

[87] Demakeas, *Effluent Charge Schemes in Canada* (1974, Organisation for Economic Co-operation and Development), 18.

Pollution fees are most appropriate for the control of water pollution, since the revenue produced may be used to provide centralized treatment of the receiving waters. Contaminant emissions into the atmosphere are not susceptible to centralized treatment, but emission fees should nevertheless have the effect of discouraging continued emissions of airborne pollutants through economic pressure. The revenue could be used to promote the development of efficient pollution control systems and to pay for the administration of the programme.

Despite the apparent advantages of pollution fees as a means of protecting environmental quality, there are some important reservations concerning their application which must be examined. The principal objection raised against the imposition of fees is that they may not have the desired effect: polluters will simply pay the fees, raise their prices and continue polluting. The assumption underlying the pollution fees scheme is that the polluting firm, in seeking to maximize profits, would choose the least costly method — which would likely include some degree of pollution abatement.[88] This anticipation is of course only theoretical, and there is no guarantee that it would materialize in practice.

Considering the great number of variables inherent in economic activity, it is possible that little or no abatement would result. In the case of effluent introduced into water, this would perhaps be tolerable since the revenue produced could be employed to provide large scale treatment facilities on the river basin level. It would, however, be unacceptable if atmospheric contamination continued unabated despite the imposition of emission fees, since centralized purification of the atmosphere is not feasible.

The objection that pollution fees will not lead to abatement is plausible on the theoretical level, but empirical evidence from the experience of the Ruhr Valley and the Canadian municipalities mentioned above suggests otherwise. To avoid possible abuses of a pollution fee system and to ensure that discharges do not exceed tolerable levels, pollution fees could be used in conjunction with maximum discharge standards and penalties. Civil actions could also be expected to prevent serious abuses of the fee system.

The use of pollution fees also presents certain practical problems which must not be ignored. Among the most troublesome is the technological difficulty of monitoring waste discharges and determining their quantity and quality in order to assess the fees. Further-

---

[88] Hagevik, *Legislating for Air Quality Management: Reducing Theory to Practice* (1968) 33 Law&Contemp.Prob. 369, 373.

more, there is the informational problem of ascertaining how much pollution is too much, and what scale of fees must be established in order to force the lowering of pollution to an acceptable level. These objections apply with equal force, however, to systems of direct regulation, which also require at least spot-check monitoring, and which must be coordinated with information on overall levels of pollution. These technological problems must be resolved to achieve a desirable degree of control, by any means, over environmental quality.

The administration of a program of pollution fees would require a large administrative staff to monitor waste discharges, to collect the fees and to apply them to pollution control. Unlike other forms of legal control which require administrative staffs funded at the public expense, a pollution fee program would generate the revenue necessary to be self-supporting. Other expenses, such as the cost of prosecutions, would to a large extent be avoided.

V. Conclusion

The foregoing discussion of the various means of control of environmental quality leads one to the conclusion that the most appropriate form of control, in the light of the social functions of law outlined at the beginning of this paper, is the levying of fees for the discharge of contaminants into the air and water. This approach strikes at the basis of the pollution problem by establishing the notion that the natural environment may no longer be used as a free waste disposal system. With the imposition of fees for the discharge of waste, industry would be forced to seek the most efficient way to reduce waste discharges in order to lower production costs. Such a system would be highly equitable, applying in a uniform manner and placing pollution costs on the responsible parties.

Pollution fees would also ensure a high degree of certainty in the calculation of the legal consequences of pollution-causing activities, unlike the case with most forms of direct regulation. There would remain the flexibility necessary to permit experimentation, since pollution would not be banned but only rendered more costly. Although pollution fees would not have the dramatic public relations effect of criminal prosecutions, they would in the long run perform the educative function of eliminating the traditional notion that the environment may be freely abused.

The only serious drawbacks to the use of pollution fees are the technical difficulties and the delay involved in implementation. For these reasons, and to ensure that the fee system is not

abused, the use of maximum discharge standards coupled with penalties would need to be continued, and the increased use of civil remedies encouraged. In order to facilitate the introduction of pollution control techniques, it would also be advisable to provide governmental assistance to industry, principally in the form of loans, to help cover the necessary expenditures.

Constitutional aspects of the legal control of environmental quality have been deliberately avoided in this paper. Constitutional problems will inevitably arise in the implementation of environmental policies, and a large degree of federal-provincial cooperation, as envisaged in the Canada *Water Act*, is necessary.[89] In particular, the introduction of a system of pollution fees would demand a large measure of such cooperation, since this system would function to advantage on a river basin or air-shed level, which often span provincial boundaries. Federal-provincial partnership in planning a comprehensive environmental policy would in any case be a significant improvement over the current haphazard, fragmented and largely ineffective legal controls.

Finally, to ensure that public awareness of environmental issues is maintained and intensified, publicity must be given to these issues, and a vigorous and continuing educative program instituted. No important advances can be expected in the protection of our natural environment unless the public recognizes the hazards of continued pollution and fully supports measures for its control.

---

[89]*Supra*, f.n.85.