DIRECT CONTROL OF INDUSTRIAL WASTE WATER POLLUTION (NORTH AMERICAN LEGAL TECHNIQUES AND INDONESIAN EXPERIENCE AS A COMPARISON)

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1. Introduction

Conscious of public demands for an end to pollution, the governments of both Canada and the United States have enacted comprehensive environmental quality laws establishing not only substantive standards, but also regulatory agencies needed to ensure compliance with those standards. The purpose of these laws is to prevent pollution before it occurs, rather than to provide judicial judgments after the fact. Civil remedies, however, have not been replaced entirely by public regulation. Persons suffering from the ill effects of pollution may still seek the aid of the courts if they are not satisfied by the results achieved by the actions of government agencies.

The public regulations were enacted to overcome the limitations of private civil remedies in controlling pollution. In practice, the civil remedies have proved to be less effective legal tools for controlling pollution. First, because they are designed to provide remedies to private rights, the plaintiff must show that he has suffered damage beyond that suffered by the community at large, if, for example, gross water pollution causes fish kills, a person concerned by the condition of the water would not be entitled to bring an action in respect to the injury to the fish. Nor has he in interest in the stream bed, and is not a riparian owner, then, unless the pollution causes damage to his person or property, he has suffered no injury that is not common to the general public, or at least to a general class, that of Saltwater. The pollution might constitute a public nuisance or an interference with the public right to fish, but in either case the right to bring or permit a civil abatement action lies solely with the Attorney-General as the guardian of the public interest. An individual would have to apply to the Attorney-General for permission to bring a relator action with the Attorney-General as nominal plaintiff, or he would have to persuade the Attorney-General to bring the action in his own right.

A second problem is that of proof; it must be shown that the de-

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1. G. Lawrence, Kemper Co. v. Crownall (1971) 430 T. R. 96 (Ont. A.C.)
fendant's action caused pollution on the plaintiff's premises. This can be extremely difficult where there are numerous effluent dischargers. In nuisance actions, damage to the plaintiff's property caused by the defendant's pollution must be proven. However, it is possible to associate several polluters as defendants, with multiple polluters being held severally liable for the entire damage caused.

Expert scientific and technical evidence is usually vitally important in establishing the link between the plaintiff's claim of damages and the defendant's activity. Unfortunately large industrial polluters frequently can afford to hire first class experts to verify their claims while the individual plaintiff often cannot. Moreover, since evidence is usually extremely complicated and detailed, courts which are convened without the benefit of scientific training often have difficulty in assimilating and weighing conflicting scientific evidence.

In the United States, although the plaintiff may have selected the proper suit action and the proper defendant, and proved that the defendant caused the harm, the serious obstacles of carrying the burden of persuasion must still be faced. Whether the action is brought forward under erosion rights or nuisance or negligence claims, the plaintiff has to persuade the tribunal that the polluting activity was unreasonable or unnecessary.

To decide this question, the court has to "balance the equities"; the economic utility of the activity must be weighed against the special damage to the particular plaintiff. For example, the contribution a pulp and paper mill would make to the general economy would be balanced against the financial loss to a particular complainant. Given the monetary basis of prevailing values, the result of such balancing is inevitable. The economic contribution of the enterprise would be found to be more substantial than the individual harm incurred and the plaintiff would ordinarily lose.

Even a successful showing of inquisitive harm might not guarantee victory in court for other doctrines are added to; be high risk of non-persuasion. The degree of compatibility acceptance, custom and prescriptive rights, and adverse possession rules could produce relief. If the defendant's business has been in operation prior to the arrival of the plaintiff, relief could also be inhibited because of the doctrines of assumption of risk, contributory negligence or "coming to the nuisance".

Even if the plaintiff is successful in a tort action for environmental injury, the victory might not lead to the abatement of the harmful activity. Money damages could be awarded. The company could simply pay the costs involved and continue polluting operations. A court will seldom mandate changes in operations and even more rarely will a court temporarily or permanently enjoin such operation.

All of these problems combine to render private remedies ineffective legal tools for controlling water pollution. As a result, it becomes clear to governments that statutory controls are necessary. The statutory measures to prevent water pollution may take various forms: prohibitions coupled with criminal sanctions, civil penalties, permit systems, administrative orders, zoning restrictions, subsidies and efficient charges. Whatever form of regulation is applied in the field of water management, the underlying aim is to limit the traditional de facto right to discharge waste water and thus to limit overall levels of contamination. Although similar in principle, in practice, the various forms of direct regulation produce different results, and should therefore be examined individually.

B. Criminal Sanctions

Criminal sanctions traditionally have been used to deter antisocial conduct, including that which is detrimental to the environment. As long ago as 1307, a Royal Proclamation with the aim of alleviating air pollution prohibited the burning of coal in London furnace. To ensure compliance with the proclamation, the death sentence was prescribed for offenders. Although more lenient, current Canadian and American environmental legislation ge-

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3 Freeman, P.K., "Judicial Evasion in water quality control: California's State Water Quality Board," 1963 at 86, see also Hino, "Not any drop in drink: Public regulation of water quality" (1966-67), 52 Iowa L. Rev. 106 at 188.
6 Ibid at 225, see also J.ergenmeyer, "Control Of Air Pollution Through The Abatement Of Private Rights" (1969), Duke L.J. 1126 at 1126.
7 Supra note 6, at 269, see also Jergenmeyer supra note 7 at 1150-37 (only when this addition consideration (of harm to all citizens) is added to the scale can there be a true balancing of the equities).
9 Ibid
10 Rodgers W.H., "Environmental Law (Minneapolis: St. Paul Mine West Publishing Co., 877) at 117, 1148, see also Jergenmeyer supra note 7 at 1151, 1148, see also Versailles Borough v. McKersig Coal & Coke Co., 83 N.J.L. 379 (0. Co. 1955 custom and community acceptance).
11 Ibid
nearly follows the same principle: it prohibits certain types or levels of waste discharge and it punishes the offenders with fines and, in some instances, imprisonment. There is no doubt that this approach can be crudely effective in controlling specific sources of pollution. Unfortunately, in practice, such sanctions have been generally ineffective in reducing violations of environmental protection laws, due to industry's traditional de facto right to deposit wastes in the natural environment. This right plays an important role in the market economy by enabling producers to pass the cost of pollution, in the form of damages and clean-up costs, onto society as a whole rather than adding such expenses to the cost of production. In view of the importance of this right and its longstanding existence, it is unlikely that he public will demand, or the court impose, sanctions severe enough to have a demonstrable deterrent effect.13

Apart from the industry's traditional de facto right, environmental offences involve a wide range of activities, of effects, and of degrees of fault. The offender may vary from actual pollution to mere carrying on, without first filling out a required form or without a required permit, of an activity which has a potential to cause harm. If actual pollution is involved, its effect may range from causing minor discomfort or temporary interruption in the use and enjoyment of property, to human death or the extinction of an entire animal or plant species. The act may be deliberate, reckless, or negligent, or, where the offence is one of absolute liability, it may simply be the result of reasonable error in judgment.14

These differences in the degrees of fault or culpability create conceptual problems. Stuart J. recognizes this when he states R. v. United Hill Mine Ltd:

The range of intent, culpability in pollution offences can be extreme. Actions may be negligent or premeditated and the consequences may range from trivial limiting offences to offender precipitating unusual destruction to resources, property and in some cases, death.15

Stuart J. states unequivocally that "pollution is a crime".16 This contrasts markedly with the decision of the Supreme Court of Canada in R. v. City of Saulnierville, in which the court suggested that environmental offences are no crimes and are morally blameless because they fall into the category of "public welfare offences."17 The court distinguished between real crime and public welfare or regulatory offences and it established in effect three categories of offences distinguished by the degree of mens rea required and the defences available.

They are:

1. Offences in which the prosecution must prove mens rea. They are true crimes, usually found in the Criminal Code, but they can include statutory offences using such words as "willfully," "intentionally," "knowingly."

2. Strict liability offences, not requiring proof of mens rea. The carrying out of the prohibited act, theactus reus, is all the prosecution need prove, but the accused will have available a defence of due diligence. These strict liability offences are bound to constitute a new "half-way house" between "mens rea" offences and those of absolute liability.

3. Offences of absolute liability, requiring only proof of the prohibited act and allowing no defence of due diligence.18

With reference to this decision, Kevserlink has pointed out:

From the pollution perspective the decision is particularly flawed. Though primarily descriptive in this respect, it implies that it is really more that the


16 Ibid at 46.


18 Ibid

"we" can readily and without more consideration be "ought". Insofar as pollution offences are to be fixed, exclusively in the form of "public welfare" legislation, the picture presented by Saulnierville is at least accurate. But it implies that this is as it should be that according to the nature of pollution offences they are and should be always, not only regularly offences. Not the slightest illusion is made to the possibility of serious harm or serious, not resulting from pollution activity, or that actions (even non-stocks) might severely threaten a fundamental value such as our society's commitment to a clean and safe environment. There is no mention at all by these means, some instances of pollution might be by their nature and effect, as opposed to simple where they are presently found in habitat, relevant other in the fullest sense.

Nor, it might be added, is there any mention of the fact that although most pollution is accidental, some of it is deliberate. Professor Frasen has expressed the problem neatly:

The existing law assumes that all polluters and all pollution problems are the same. They are not, of course, and perhaps we are to be invited for not having developed some sort of classification scheme for analyzing environmental problems. The starting point in most disciplines is the creation of a taxonomy. We have no such taxonomy in environmental law. We care about existing and intended industries, which might be described as "dirty," and "clean," or "dirty" about their pollution problems at the same time, we talk about individuals who knowingly dump toxic chemicals in the dark of night, and we fail to dis-

19 Kevserlink, E., Environmental Pollution As Crime: Some Conceptual Considerations (First draft, prepared for the law Reform Commission of Canada, 1982) emphasis in the original).
...towards deprivation of life or destruction of property. The latter lies in a field of clear value, as do criminal offences involving the protection of similar interests. The former, as the Supreme Court of Canada has pointed out, lies in the field of conflicting values. In Canada, the sentence permitted for most environmental offences is a fine. When an offence can encompass such a wide range of activities, effects, and degrees of fault, fines alone may not be adequate to cover all circumstances. Moreover, assessing a typical fine for a first offence can range from one dollar to five thousand dollars, as in the case in Ontario's Environmental Protection Act, such a fine structure has several inherent difficulties. When a single offence can involve such a wide range of degree of seriousness in intent and outcome with, no reflection of the different levels in the imposed fines, the range may be both too broad and too narrow; too broad because the highest fines are out of proportion to the means of most offenders and the gravity of minor infractions, and too narrow because the fines do not reflect the extreme wealth of some offenders and the great gravity of a minority of some flagrant offences.

The second dilemma faced by the courts is that the vast majority of spills, emissions, and other offences that are brought before them fall into one or more categories. They are accidental, or have little or no long-term impact on human health or the environment, or are committed by individuals or small corporations whose ability to pay is limited. In these kinds of cases it becomes difficult to impose the high maximum fines established to impress upon the public the concern of the politicians with environmental protection, or to reflect the fact that some pollution is deliberate and extremely dangerous or dangerous. However, such fines do not take into consideration the everyday realities of incidents with which the courts are asked to deal. It can be quite inappropriate in some cases for the courts to impose fines far below the maximum. Unfortunately this has a negative effect, fuelling a public perception that polluters are being let off easily.

A third problem is that fines alone, even a combination of fines and imprisonment, are not adequate to accomplish the purposes that punishment should serve. While capable of punishing past behaviour, fines are ill-suited to deal with ongoing problems, with offenders who are so wealthy that no fine within the existing legislative limits can have a substantial financial impact on them, with offenders who are so poor that they can not be made to pay a substantial fine, with offenders who have arranged their business affairs so that their assets and income are sheltered from the law, and with those offenders whose pollution is an almost inevitable by-product of production methods.

A substantial component of this problem is the fact that pollution offences seldom fit the stereotypical crime, and that pollution offenders are predominantly middle-class entrepreneurs or artificial contracts such as corporations. Thus, environmental law may be seen as a micropsy of all the vexing questions about what is fair and effective in sanctioning corporate and white-collar crime.

In Canada, there is a wide variety of federal and provincial statutes and municipal bylaws which contain provisions prohibiting various species of acts of pollution, and which impose penalties or breaches of the law. For example, s. 16 (1) of the Ontario Water Resources Act forbids "every person or municipality to discharge, deposit or cause or permit the discharge or deposit of any material of any kind into or in any well, lake, river, pond, stream, reservoir or other water or wastewater or on any shore or bank thereof or into or in any place that may impair the quality of such water." The first offence is punishable

20 Finkbeiner, P.Z. and Lucas A.R., Environmental Law in The 1980s, a New Beginning (Calgary: Canadian Institute of resources Law, 1982) at 126.
21 Ibid note 14, at 3.
22 Ibid.
24 Supra note 14 at 5.
25 Ibid.
26 Ibid at 6.
by a maximum five thousand dollar fine and each subsequent conviction is punishable by a ten thousand dollar fine in addition to possible imprisonment. Each day the conduct continues constitutes a separate offence.\(^{30}\) Notwithstanding the fines just specified, where any person is convicted of an offence under S.16(1) in respect of hazed liquid industrial waste, or hazardous waste (as designated in regulations made under Part V of the Environmental Protection Act), and the action or failure to act giving rise to the conviction results, or may result, in certain specified effects including impacts on "the natural environment, plant or animal life, the health or safety of any person, enjoyment of property or interference with normal conduct of business," the person is liable to a minimum fine of two thousand dollars and maximum of twenty five thousand dollars for the first offence and a minimum and maximum, respectively, of double these amounts for every day or part thereof upon which the offence occurs or continues, in addition to imprisonment. These higher penalties do not, however, apply unless the court is satisfied that the accused was notified before plea that the higher penalties would be sought, nor do they apply in any event concerning an offence covered under Part IX of the Environmental Act, regarding spills.\(^{31}\)

The Fisheries Act\(^{32}\) is a good example of a federal statute which provides for criminal sanctions. Section 33 (2) of the Act forbids "any person, including the Crown in right of Canada or any province,"\(^{33}\) "from depositing or permitting the deposit of a deleterious substance of any type in waters frequented by fish or in any place under any conditions where such deleterious substance or any other deleterious substance that results from the deposit of such deleterious substance may enter any such water."\(^{34}\) Breach of s. 33(2) is punishable by a maximum fine of one thousand dollars for a first offence and a maximum fine of one hundred thousand dollars for each subsequent offence. Each day constitutes a separate offence.

In addition, there are at least four sections of the Criminal Code companion nuisance,\(^{35}\) mischief,\(^{36}\) criminal negligence,\(^{37}\) and deposit of an offensive volatile substance\(^{38}\) which could be applied to serious environmental offences, but they are seldom used as the basis of prosecution for conduct seriously harmful or endangering to the environment.\(^{39}\) Rarely are such prosecutions successful.\(^{40}\) Undoubtedly a part of the explanation for this lies in the existence of a large number of environmentally-related federal and provincial statutes and municipal by-laws. Moreover, most of this legislation is relatively recent, thus postdating the formulation of the Criminal Code. However, part of the explanation may also lie in the working and focus of the present Criminal Code offences.\(^{41}\)

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

1. endangers lives, safety, health, property or comfort of the public, or
2. obstructs the public in the exercise of enjoyment of any right that is common to all the subjects of Her Majesty in Canada.\(^{42}\)

Clearly, this definition would encompass serious cases of pollution. 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

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\(^{33}\) Fisheries Act, s.71 (as R.S.C. 1970, C.17 (5th Supp), s.9).
\(^{34}\) Fisheries act, s.33 (2) (as R.S.C. 1970, C.17 (5th Supp), s.101).
\(^{36}\) Ibid. s. 387.
\(^{37}\) Ibid. ss. 203-204.
\(^{38}\) Ibid. s. 174.

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\(^{39}\) Crimes Against The Environment: Working Paper Prepared in the Law Reform Commission of Canada (Ottawa, Ont: The L.R. Commission, 1985) at 51. A good example of this "act of wickedness is the decision in the American Iron and steel Company case, involving a prosecution for the Code offence of mischief, subsection 387(9).\(^{40}\) Supra note 29.

\(^{40}\) R.S.C. 1985, C.1 (7th Supp), s.176(2).
restricted almost exclusively to automobile accident cases. Even the potential for application of this provision to environmental offences again is evident.

Section 174(a) of the Criminal Code might also be applied to environmental pollution cases. It makes it an offence punishable on summary conviction to deposit in a public place a volatile substance that is likely to "alarm, inconvenience, discommodre or cause discomfort to any person or to cause damage to property..." Volatile substance is not defined in the Criminal Code, but may include some of the chemical wastes deposited in the environment by industry.30

The sanctions for these offences range in severity 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.31 But these sections are seldom used as the basis for prosecution in pollution cases. One of the reasons is that, because of its wording and focus, the Criminal Code, in effect, prohibits offences against persons and property and does not in any explicit or direct manner prohibit offences against the natural environment itself. The Law Reform Commission of Canada, therefore, makes and supports the proposition that in some cases the natural environment should now become an interest explicitly protectable under the Criminal Code. Some acts or omissions which are seriously harmful or endangering to the environment should be characterized and prohibited in such a way that first instance, if they meet the various tests of a real crime.32 The commission recommends that a new and distinct Criminal Code offence be added, that of a "Crime against the Environment."33

Aside from the essentially human failure to apply criminal sanctions to environmental offences, there are certain intrinsic problems in the use of penalties in general 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 almost inevitable use of stalling tactics and appeals designed to prolong court proceedings by defendants.34

Even when prosecutions are successfully concluded, criminal courts are not usually empowered to issue injunctions, although some of the important Canadian statutes dealing with the environment do empower the courts to issue prohibition orders.35 The small fines, usually imposed are unlikely to have the necessary deterrent effect. The burden of proof resting on the prosecution is onerous, and is augmented in some cases by the necessity of proving mens rea.36 Where the prosecution must rely only on a vague statutory prohibition, the problem of proof may be insurmountable. The setting of precise maximum efficient standards helps to alleviate this difficulty. There remains however the possibility that these standards may not have the desired effect of lowering overall contamination to a harmless level, because persistent understanding of the interaction and long-term effects of various contaminants is still rudimentary. Moreover, as sources of pollution proliferate the standards will have to be constantly adjusted to maintain desirable environmental quality.37

The use of maximum efficient standards gives polluters no incentive.

30 Supra note 12, at 410.
31 Ibid.
32 Ibid, s. 174(6), 387 (2)
33 Ibid note 12, at 412.
34 For example, see the Fisheries Act.37
35 Mens rea is not generally a necessary component for offences under environmental protection statutes since they are not criminal offences in any sense, but are rather actions prohibited in the public interest with penalties attached, see K.E. Perdue (1970) 3 O.R. 693.
36 Offences such as mischief and common nuisance would require proof of mens rea.
37 Supra note 12, at 412.

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

III. Criminal Sanctions In Indonesian Environmental Law

The present Indonesian Criminal Code, like the Canadian Criminal
Code, in effect prohibits offences against persons and property. It does not, however, explicitly or directly prohibit offences against the natural environment itself. Because the Code was designed and passed during the colonial period, long before environmental concerns and awareness gained prominence, the provisions contained in it cannot be expected to give satisfactory solutions to modern environmental problems. Even where some consideration of the environment is apparent, the sanctions do not always reflect current concerns, and outdated laws, adapted to deal with pollution cases, are not always effective.

One ordinance made during the colonial period, which is still in effect and which is often resorted to in coping with pollution cases, is the Public Nuisance Ordinance of 1926. Article 15 of the Ordinance prohibits the construction, the initiation or the continuation of the operation of specified activities without having a required permit, or the carrying on of these activities in a place which is different from that designated in the permit. Failure to obtain a permit is punishable by a maximum two-year prison sentence or a maximum fine of five hundred rupiah. Violating any conditions stipulated in the permit is punishable by a maximum imprisonment of two weeks or a maximum fine of two hundred rupiah. Although this ordinance is still valid, it is not comprehensive enough to handle modern environmental problems. It was originally directed toward the preservation or conservation of the natural environment in the traditional sense. The chief characteristic of the classical environmental law is its static nature. The scope of the ordinance is also too narrow; it is only applicable to pollution which occurs in the area not more than 200 meters from the source.

There are many reasons why the Indonesian Government re incorporated criminal offences in article 22 of EMA. It states:

(1) Whoever intentionally performs any act which causes damage to or pollution of the environment shall be liable under this provision and other acts to imprisonment for a maximum of ten years and/or for a fine of a maximum of ten million rupiah.

(2) Whoever, through negligence, performs an act which causes damage to or pollution of the environment under the provision of this and other acts shall be liable to imprisonment for a maximum of one year and/or a fine of a maximum of one million rupiah.

(3) Actions stated in paragraph (1) of this article constitute a crime and actions stated in paragraph (2) of this article constitute a misdemeanor.

The elucidation of article 22 points out that "taking into account the fact that environmental damage and/or pollution can be of different kinds, this article specifies only the maximum penalties which can be imposed. Legislation regulating aspects of the environment can specify other penalties but not any exceeding those specified in this Article." The amounts of the fines stated in the article are considered to be the nominal value at the time when the Act comes into effect.

IV. Civil Penalty

To date neither injunctions nor criminal sanctions, the most frequently used methods of implementing policies, have proven to be effective deterrents to polluters. When attempts to internalize pollution costs have been frustrated by the inability to quantify those costs, The civil money penalty may therefore provide a technique that will prove to be an effective means of enforcing environmental laws and implementing their policies.

The civil money penalty has been employed by the U.S. federal government and many U.S. states to aid in the enforcement of environmental laws. For example, section 309 of the Federal Water Pollution Control Act Amendments of 1972 as amended by the Clean Water Act Amendment of 1977 provided that violators of certain sections of the Act "shall be subject to a civil penalty not to exceed ten thousand dollars per day of such violation." These civil penalties may be imposed for violations of compliance orders issued under section 309(a) (3) or imposed directly for violations of a permit issued under the National Pollution Discharge Elimination system (N.P.D.E.S.) described in section 402.

A civil penalty is simply a monetary sum that is assessed and recovered in a civil proceeding for a violation of law. The money award...

59 Article 15 (a) of the Public Nuisance Ordinance 1926.
60 Ibid article 15(b).
62 Ibid.
63 Article 6 (1) (c) of the Public Nuisance Ordinance 1926.
64 Article 22 of EMA 1982.
65 Ibid. Elucidation of article 22.
66 Ibid.
67 Marshall, D.W. "Environmental Protection And The Role of Civil Money Penalty: Some Practical and Legal Considerations" (1973), 4 Envil. all. 320 at 325.
68 Ibid.
70 33 U.S.C. S.1319(a).
71 Ibid.s.1342.
ed goes to government or society. Although the civil penalty may be viewed as a sanction in the sense that it is imposed to produce obedience to environmental laws, it is designed to discourage violators. Its purpose is deterrence or compensation, not retribution. It is not designed as a revenue measure, although the money collected might be used to finance the government’s environmental protection efforts. Rather, the primary objective is to avoid collection of the penalty by inducing the polluter to abate excessive effluence. An alternative rationale for applying the civil penalty is to give compensation to society in the form of liquidated damages for environmental harm caused by the violation. This alternative rationale is particularly suited to forswearing, one-time discharges, where the deterrent effect of the penalty may be relatively insignificant.

Briefly, the civil penalty functions as follows. If a polluter violates applicable effluent standards or permit conditions, he will be liable to pay a money penalty to the state in a civil action brought by either the attorney general or the environmental enforcement agency. The legislature may fix the amount of the penalty to be imposed in any given situation, or it may set the limits of the penalty, leaving the amount in individual cases to the discretion of the court or the administering agency. To insure that the civil penalty will deter a polluter from discharging waste at excessive rates, its amount must be greater than the violator’s compliance cost. As with any sanction, it is also important that enforcement be uniform, swift, and certain.

The greatest attribute of the civil penalty is its effectiveness in a wide variety of situations where neither injunctions nor criminal sanctions are appropriate. It may function as a deterrent in cases where an injunction cannot. Thus, where it is not in the public interest to enjoin the entire operation of a plant that is important to the local economy, the civil penalty is an appropriate remedy. The threat of the penalty would act as a deterrent or at least as a disincentive to further discharges. If imposition the penalty becomes necessary, it would reflect a balancing of societal interests. In situations such as this, where the environmental enforcement authority has only the choice of no remedy or a drastically harsh one, the Administrative Conference of the United States has recommended use of the civil money penalty.

Except in the case of intentional, wanton, or reckless violations, a civil penalty has distinct advantages over a criminal sanction. Since the civil penalty effects deterrence by the use of economic disincentive rather than by fixation of moral blame, it avoids the problem inherent in the use of criminal sanctions to prevent acts, such as pollution, which are not considered morally culpable. Furthermore, imposition of a civil penalty avoids subjecting the offender to the stigma of a lifetime criminal record for conduct which he may not have known was wrongful. As the economic effect of the civil penalty may best be illustrated by its comparison with the effluent charge system. This system acts primarily as a deterrent to excessive pollution rather than as a cost internalization device. Such deterrence is accomplished by setting the fee schedule according to a polluter’s abatement cost instead of according to the environmental damage caused. The civil penalty is directly analogous to this effluent charge. In both cases the optimal level of environmental quality is determined by the government rather than the market. Specific effluent standards are then set to facilitate achievement of this level. Where the civil penalty is used, the standards are directly set by the government. Violation of these standards are enforced by imposition of civil penalties. In the effluent charge system, the government would directly determine the effluent standards through the setting of a fee schedule. Although the polluter would make the decision as to how much water he can afford to discharge, the fee would ideally be set so that the level of discharge he can afford to pay for is the same level that the government has established as the desired discharge rate. This would be done by making payment of fees for effluent in excess of the desired standard more costly than abatement. Thus, under one system, excessive effluent would cost the violator a "civil penalty" and, under the other, an 'effluent charge." As the penalty fees are

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73. Schacht, "Some Criteria For Evaluating State and Local Air Pollution Control Laws" (1975), 16 B.C. Ind. & Comm. L. Rev. 533 at 537.
75. supra note 66, at 331.
76. supra note 59, at 331.
77. supra note 64, at 632 see note 70, "Economic incentives for Pollution abatement: Applying Theory to Practice" (1970)
79. ibid Rev. 32 (A).
80. Greves & Gare, "Housing Code Enforcement; Sanctions and Remedy" (1968), 46 Colum. L. Rev. 1254 at 1254, see also National Commission of Reform of Federal Criminal Law, Final Report 71 (1971).
82. supra note 59, at 332.
set to achieve the optimum level of environmental quality, they have the potential to indirectly approximate the value of environmental damage and thus aid in the internalization of pollution costs. It should be recognized, however, that the penalties set are not direct approximations of environmental damages, but are economic devices to discourage pollution discharges.\(^8\)

Although the two systems have similar goals, they also have important differences. The civil penalty, as it now exists, is not a true equivalent of effluent charge, because factors other than abatement cost enter into the determination of the amount of the penalty. Another important difference is that the civil penalty is a much more direct method of environmental quality enforcement. Despite these differences, the civil penalty and the effluent charge are enough alike that one may probably be used as effectively as the other.\(^9\)

1. Criteria Used to Determine the Amount of Penalty

In prescribing a civil money penalty, the legislature must provide the adjudicatory body with a basis for determining the severity of the penalty in a given case. It should prescribe both a minimum and a maximum penalty for the violation in question. The minimum penalty

should function to deter polluters from small, yet significant violations, but should not be so large as to cause administrators and court to hesitate to impose it. On the other hand, the maximum penalty must be sufficiently substantial to exceed the cost of compliance for the largest polluters.\(^8\) The proper basis on which to impose the penalty must also be selected. As most water pollution violations are repetitive, a per diem penalty is much more definable than a per violation penalty. A per diem penalty helps to deter continuing violations by allowing sums to accumulate over time, more closely approximating the cost of abatement and thus acting as a significant deterrent.\(^9\)

To protect against arbitrary imposition of a penalty, the legislature should provide the adjudicatory body with criteria to guide it in setting the amount, and should as well uphold and lower limits of the penalty. In cases of continuous discharges, the critical guideline necessary to insure real deterrence is that the penalty exceed the cost of pollution abatement.\(^7\) A second basis for computing the penalty is related to the damage to the environment caused by the violation.\(^8\) The employment of this basis may help to shift the cost of pollution from society to the polluter in cases where the environmental damage is susceptible to approximation, but any deterence depends on the relation of the polluter's economic status, costs of abatement to the amount of financial recompense for environmental damage caused. It may be useful, however, to portray the civil penalty in some cases as a form of liquidated damages. This rationale is particularly appropriate in cases of nonrepetitive violations, such as oil spills.\(^6\) The penalty's predominant function here is not deterrence, but rather compensation for the harm caused to society.

A third criterion involves the ability of the polluter to pay either the penalty or the full cost of compliance.\(^6\) It may be a better policy to assess a penalty that the violator can afford, and hope that he will attempt to comply to the extent that his resources allow.\(^9\) From a broader perspective, however, it may be unfair to subsidize marginal operators whose pollution rates are relatively high as a result of antiquated and inefficient facilities. In addition, expenditures made by the polluter in compliance or in clean up efforts should be considered in mitigating the penalty.\(^6\) Such efforts are not only evidence of a violator's good faith, but also represent a voluntary partial internalization of pollution cost by a violator. For the same reasons, some states now provide for the remission of all or part of the penalty if the polluter promptly corrects the violation.\(^8\) This position is commendable as it induces compliance after the penalty is collected, and helps to emphasize that primary purpose of the civil money penalty is to improve the quality of the environment, not to punish the violator.

Unfortunately, other criteria have been used which tend to produce the opposite effect. For instance, the amount of care exercised by the violator is sometimes considered in computing the penalty,\(^6\) but in the case of a continuous violation, the consideration of due care, apart from expenditures made in attempted compliance, contributes to the violator's moral culpability. This can lead to the belief that the matter should be considered for a criminal prosecution.\(^6\) Other statutes penalize the violators who have past records of violations.\(^6\) It may be

\(^{8}\) See note 64, at 632.
\(^{9}\) Ibid.
\(^{7}\) See, e.g. 40 C.R.S. 734-736 (1973).
\(^{8}\) See, e.g. 40 C.R.S. 734-736 (West 1973).

80 See note 64, at 333.
80 Supra note 59, at 334.
argued that the increase of a penalty on the basis of past violations, which theoretically have been paid for, can only be interpreted as punishment. Some environmental statutes possess the drawback that a penalty cannot be assessed for statutory or regulatory violations which occur prior to the issuance of a cease and desist order. Such a penalty will have negligible deterrent value compared to one that may be assessed commencing with the day that the polluter first receives notice of the violation. Cease and desist orders, however, should not function so as to allow the violator to escape responsibility for his harmful waste discharges until such time as the government orders him to stop violating the law.

2. Methods of Imposition and Collection of the Penalties.

The flexibility, and thus the efficacy, of a civil penalty is profoundly affected by the choice of procedure used in assessing and collecting the penalty. Two basic types of procedure have been used most frequently. These may be designated as judicial imposition and administrative imposition.

A number of U.S. state statutes provide for the judicial imposition of environmental civil penalties. This is the least flexible of possible procedures. The appropriate enforcement agency must first make its assessment of the defendant's liability for the violation of an environmental statute, rule, regulation, standard, or order. The agency must then bring civil action in court seeking the imposition of whatever penalty is provided by statute. The court has complete discretion as to whether or not to impose any penalty, and of the amount of any penalty it chooses to impose. Under a slight variation of this procedure, the agency may determine the defendant's apparent liability and fix the amount of the penalty, the defendant has the right to a de novo trial on both the merits and the amount of the penalty.

A more flexible procedure is administrative imposition of civil penalties. Here the agency determines liability and fixes the amount of the penalty in an administrative hearing. The defendant is entitled to a judicial review, which is essentially limited to a determination of whether the agency's action, with respect to both the defendant's liability and the amount of penalty, is supported by substantial evidence and is neither an abuse of discretion nor an error of law. If the defendant does seek such a review and does not pay the penalty, the agency may either enforce the penalty as if it were a court judgement, or it may have to institute a streamlined collection proceeding in the courts where the issues of the defendant's liability and the appropriateness of the penalty may not be raised.

A variation of the administrative imposition procedure described is employed in several states in the U.S. It is similar to the above procedure in that the agency determines both the defendant's liability and the amount of the penalty assessed. Here, however, if the defendant does not voluntarily pay the penalty, the agency must institute a court proceeding to compel payment at

107 supra note 99 at 335.
108 Ibid.

which the defendant is entitled to limited judicial review of the agency's action. The only real difference in the two administrative imposition procedures is a shift in the burden of appeal from the defendant to the agency. The difference between this second administrative procedure and judicial imposition of penalties is much more significant. In stead of a de novo trial on the merits of the situation, the defendant is entitled to only a limited form of judicial review.

The main advantage of the judicially imposed penalty are that it is more familiar to enforcement institutions and it is clearly constitutional, avoiding some of the legal questions which might arise when an administrative agency performs tasks of a legislative or judicial nature. The judicial imposition system, however, lacks much of the flexibility that makes civil penalties a desirable sanction. In order for the civil penalty to be an effective economic deterrent, penalty cases must be adjudicated quickly, efficiently, and at relatively low cost. This is possible only under an administrative imposition system.

Under judicial imposition, speedy adjudication of violations and imposition of penalties is impossible.
As with other governmental actions dealing with the rights of private parties, due process should be the governing standard. Essentially this requires only that the defendants receive a fair and impartial hearing, which need not be before a court. A defendant is just as likely to receive a fair hearing before an administrative agency, especially because he may have the right to judicial review of the agency action. Specific safeguards should include adequate notice, right to counsel, opportunity to answer charges through the presentation of evidence or the cross-examination of witnesses, and the publication of agency findings and agency reasoning in order to preserve a reviewable record for the appellate court. The standard of judicial review should allow inquiry into whether errors of law have occurred, whether the agency has abused its discretion, and whether agency findings are supported by substantial evidence.

There are several points concerning the judicial imposition system which should be considered. Problems inherent in it may be mitigated by statutes which will allow the agency to recover, through the penalty actions, reasonable costs and expenses in detecting, controlling, and abating pollution violations. Such statutes would allow the agency to recover the penalty in an action brought to obtain an injunctive relief. Furthermore, judicial imposition of civil penalties will be more effective in states where there is a fair and impartial hearing by a court, and where the penalties sought are large.

V. Civil Penalty in Indonesian Environmental Law

Provisions for civil penalty in environmental issues can be found in article 20 of EMA. It states:

1. Whoever damages or pollutes the environment is liable for payment of compensation to victims whose rights to a good and healthy environment have been violated.

2. Procedures for the admission of complaints by victims, procedures for the investigation by a team of the type, kind, and extent of damage, and procedures for seeking compensation shall be established by legislation.

3. Whoever damages or pollutes the environment is liable for payment of costs of the restoration of the environment.

4. Procedures for the determination and payment of costs of the restoration of the environment shall be established by legislation.

113 Supra note 64, at 650.
114 Supra note 69, at 925-27.
115 Ibid. see also Smith, "The Environmental And The Judiciary: A Need for Cooperation or Reform?" (1974), 3 Env. 602 at 630.
116 Supra note 59, at 337.
117 Ibid.
118 Supra note 69, at 924.
119 Ibid at 925.
120 Supra note 59 at 337.
124 Article 20 of EMA 1982.
125 Ibid. (subdivision).
126 Supra note 37 at 15.
127 Resolution No. 5 of The European Council of Environmental Law 1977, in Pardowesanti, K., supra note 57 at 15.
VI. Permit Systems

Another means of direct regulation which is in widespread use in Canada at the provincial level is that of permit systems. As with any statutory enactments which seek to compel a particular mode of behaviour, permit systems must rely on penalties to enforce compliance, although these penalties are not intended to be the principal control mechanism. The permit system is generally used in conjunction with discharge standards, although the British Columbia Pollution Control Act(126) and the Nova Scotia Environmental Protection Act(127) rely on it solely as a method of control.

The basis of permit systems is the requirement that operators of sources of pollution, or those proposing to operate such sources, apply to an administrative body for authorization to carry on the activity. (130) 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 involved works. (131) The administrative organ may grant the permit, with alterations or additions if necessary, or may refuse it altogether. (132) 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 noncompliance with its terms. (133) Upon a permit application being made, a person whose lands or rights under a water licence or another Pollution Control Act permit are likely to be affected by the granting of the permit is entitled to file an objection with the Director, who solely has the discretion whether to hold a hearing. (135) Individuals or groups with no interest likely to be affected may object to the pollution Control Board, which then decides whether the public interest requires that the Director should consider such an objection. (136)

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 permit, 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 consistent with the desired end of environmental protection.

The permit system 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 ensure that the terms of permits are fulfilled. (137) Unless the permit system 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 water can be achieved. If licences are granted indiscriminately and on an individual basis rather than as part of a comprehensive design, over-all levels of contamination may become unacceptable, although no single source may be responsible for a serious and immediate pollution problem. As with the use of discharge standards and criminal penalties, the permit system offers no incentive to polluters to take abatement measures beyond those required by their permit, even when more efficient processes are available. (138)

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 may face much more stringent emission requirements, both of which are highly questionable possibilities. The permit system ultimately depends upon penalties to ensure compliance. Many of the problems discussed above, which are associated with the use of such sanctions again apply, such as the tendency of courts to impose insignificant fines. Despite these disadvantages, the permit system is potentially effective in controlling certain sources of pollution. However, the necessity of maintaining a large and expensive administrative staff, and of bribing prosecutors to ensure compliance makes this method a less than ideal remedy for environmental offences. (139)

VII. Transferable Pollution Permits

Transferable Pollution Permits (T.P.P.) were first proposed by the Canadian economist, J.H. 137

126 R.S.C. 1967, c. 29.
127 S.N.S. 1973, c. 4.
128 see 8 of the Ontario Environmental Protection Act, S.O. 1971, c. 86 as amended by s. 3 of 1972, c.106, s.9
130 s.1 ibid. 1.62.
131 see 8 of 1971, c. 86 as amended by s. 3 of 1972, c.106, s.9
132 ibid. s.9.
133 see 8 of 1971, c. 86 as amended by s. 3 of 1972, c.106, s.9
134 ibid. s.13(1), (2).
135 ibid. s.13(4).
136 ibid. s.13(4).
138 supra note 12 at 414.
139 ibid 445.
effect capitalizing on the implicit right to pollute that industry enjoys under the existing system. Alternatively, the government may auction off permits. New sources will buy permits in the permit market created by sales and purchases among holders of pollution rights. Improvements in environmental quality can be achieved by deprecating rights on a fixed annual schedule.

Unlike a fee system, the permit system will automatically adjust to inflation and economic growth. Given a fixed supply of permits, the price that they command will rise with inflation and with increased demand for permits due to the entry of new pollution sources. A rise in price will, in turn, induce greater and more efficient methods of avoiding or controlling pollution by sources. The system will ensure that industry runs faster and faster to keep in place. Transferable pollution permits do not necessarily create more certainty for investors. It is argued that fees would have to be experimented with at first, due to imperfect information, in order to determine what response the polluters will make to different fees. The T.P.P. has its own source of uncertainty.

The T.P.P.'s are set for a fixed time. The choice of this time period is very important. If it is too short there will be very little certainty in the market because the authorities can always decide to change the number of new permits they will issue, once the old ones have expired. It would be difficult if not impossible to predict the costs of pollution permits in the future if they were subject to frequent arbitrary supply changes. The willingness of industry to commit itself to large, long-term investments in pollution control in such an atmosphere of uncertainty is unclear.

If the time period is lengthened to create a stable investment environment, it will decrease government ability to respond to new information. How this balance between the desirability of certainty for investment decision making and the desire to preserve the ability to respond to new information should be struck is a difficult question to which there is no satisfactory answer. Dales correctly points out that it will be necessary for the authorities to avoid changing the number of permits before the old ones expire. If new permits are issued midstream in response to industry pressure, then the whole pricing mechanism will be thrown into confusion. The price is set on the basis of a fixed number of permits. Any increase in the number of permits would dilute the value of the original permits.

The attractiveness of arguments of certainty rest on the assumptions that the quality of pollution is more important than price, that the time period of the permits is long enough to provide a suitable investment climate, and that the authorities do not bow to pressure to change the number of permits prematurely. Another argument for T.P.P.'s is that they automatically account for inflation whereas fees would have to be continually readjusted. This is correct but does not necessarily mean that the fees would not keep up with inflation. A fee system is said not to deal with the problem of entry into the market; as long as a firm pays the fee it can enter. With T.P.P.'s the entry is accounted for by the fact that the increased demand for the permits automatically increases the price. This is true as far as it goes but there is nothing to prevent authorities from increasing the fee to account for the growth. Similarly it is possible that the government could decide to issue more permits when they are up for renewal if it is felt the limited supply has created a very high price that has unduly inhibited growth.

Some argue that a permit system would be at least partially self-enfor-
cging. It is doubtful that there will be any significant effect in this situa-
tion because of the necessity to mon-
tor effluents to detect violations.
While individual permit holders
have an interest in seeing the rules
obeyed in order that the value of
their permits are not diluted, they
do not have the resources or power
to monitor all the other participants
in the market. For this reason en-
forcement would be primarily a
public responsibility.150

VIII. The Permit System In Indo-
nesia
The use of a permit system as a
means of controlling pollution has
been in effect in Indonesia since the
colonial period. Introduced under
the Public Nuisance Ordinance of
1926 it requires anyone wishing to
take part in activities specified by
the ordinance to apply to a designa-
ted administrative body for a per-
mit.151 The application must be ac-
compained by information concern-
ing the place where the proposed ac-
tivities are going to be carried out,
equipment which is going to be us-
ed, as well as plans and specifi-
cations of the proposed work.152 The
application for a permit may be re-
jected on such grounds as the fear of
damage to property, or fear of harm
to the health of other people be-
cause of the proposed activity.153
To ensure compliance with any re-
strictions on activities, criminal pe-
nalties for violations range from
two weeks to one month imprison-
ments or fines of from two hundred
to five hundred rupiah.154

Somewhat similar permit provi-
sions are found in the Ministry of Indus-
try Decision No. 12 of 1970 which
requires application to The Ministry of
Industry for permission to carry
out specified activities.155 An ap-

lication must be accompanied by
detailed information about all as-
pects of the proposed production ac-
tivity, and an emergency plan
for the prevention and abatement of
any pollution caused by the accid-
tal discharge of toxic substances.156

Another law which regulates the
licensing system is the Environmental
Management Act of 1982. Arti-
cle 7 of this Act states:

(1) Every person engaged in an enter-
prise that has the obligation to maintain
the nature of the capability of the
harmonious and balanced en-
virement necessary to support con-
tinued development.

(2) The obligation stated in paragraph
(1) of this article shall be included in
every operating license issued by
authorised agencies.

(3) Provided so re-stating the obligations

153 Ibid. article 6 (a,b,c).
154 Ibid. article 15 (a,b) of the Public
Nuisance Ordinance 1926.
155 Article 2 of the Ministry of Industry
Decision No. 12 of 1970.
156 Ibid. article 4.

referred to in paragraph (1) and pa-
sagraph (2) of this article shall be
established by regulation.157

The elucidation of paragraph (2) of
article 7 points out that "with the
inclusion of a stipulation of obliga-
tion as one of the requirements for
obtaining the license, to person
engaged in an enterprise must
always carry out activities that allow
the maintenance of the environment
in order to maintain its capability
to support continued develop-
ment.158 To enable enterprises to
fulfill the requirements, the Govern-
ment should continue the practice of
providing applicants with guidance.159

IX. Administrative Orders

Most of the major provincial en-
vironmental protection statutes in
Canada provide for the issuing of
administrative orders to polluters
requiring others: the application of
control techniques to lessen the
quantity of the discharge ("control
orders") or the temporary or per-
mance cessation of the offending
activity ("stop order").160 Control
orders may be issued when dis-
charges exceed standards set by reg-
ulation or when discharges present
a threat to environmental quali-
ty.161 These orders may prescribe
the limitations of contaminant dis-
charges, and may specify the proce-
dures to be taken in controlling the
discharges.162 As described in sec-
tions 113-116 the Ontario En-
vironmental Protection act (EPA),
the control order is a document
issued by a director requiring the
recipient to do any one or more of
the following:

(a) to limit or control the rate of addi-
tion, emission or discharge of the
contaminant into the natural en-
vironment in accordance with the di-
rections set out in the order;
(b) to store the addition, emission or
discharge of the contaminant into
the natural environment
permanently;
(c) for a specific period, or
(d) in the circumstances set out in the
order;

157 Article 7 of the EMA 1982.
158 Ibid. (explanation)
159 Supra note 171, at 12.
160 See, The Ontario Environmental Pro-
tection Act, S.O. 1971, C. 86, s.s. 70, 74; the
British Columbia Pollution Control Act,
S.B.C. 1967, c.34 The Nova Scotia Environ-
mental 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, 2 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
s.c.
161 The Ontario Environmental Prote-
162 Ibid. S.70.
(c) to comply with any directions set out in the order relating to the manner in which the contaminant may be added, emitted or discharged into the natural environment;

(d) to comply with any directions set out in order relating to the procedures to be followed in the control or elimination of the addition, emission or discharge of the contaminant into the natural environment; and,

(e) to install, operate or alter any equipment of thing designed to prevent or eliminate the addition, emission or discharge of the contaminant into the natural environment.

In addition, control orders frequently include requirements to undertake and report on studies of discharge sources, their contents, level and effects, and of abatement needs, of alternatives and of plans. While not included in the s.113 listing of legitimate control order contents, such requirements are legitimated by s.127(1), which holds that:

For the purposes of the administration of this Act and the regulations, a provincial offence may...make surveys, examinations, investigations, tests and inquiries...as he considers necessary.

Such requirements can be, and sometimes are, however, set out in a separate document called a Provincial Officer Requirement, which is apparently not subject to appeal. Under the Ontario E.P.A., control orders can only be issued after a report, containing a finding of contaminant discharge in violation of the Act or its regulations has been filed with the Ministry and the offending company. A copy of the report and a notice of intent to issue a control order must be delivered to the offending company at least 15 days before a control order is issued. The Act states that at any time before a control order is issued the intended recipients may make submissions to the director. In practice, submissions are likely to be received well before a notice of intent is issued. Preparation of the report may involve fairly frequent contact and close cooperation between the Ministry and company staff, especially under the Ministry policy which requires a report on the technical and economic aspects of relevant abatement options to be prepared by the company or failing that, by the Ministry. Moreover, notice of intent are often the product of detailed and lengthy discussions and negotiation between the two parties.

Pre-notice negotiations and general agreement has been encouraged by the recent adoption of a policy requiring arrangements for pre-notice discussion of new or amended control orders proposed. Because the Ministry wishes to avoid stirring public skepticism about its commitments to ensuring maximum environmental protection, it prefers to publicly present control order proposals although these are unlikely to be weakened in response to subsequent objections from the companies involved.

Emphasis on pre-issuing negotiation and agreement is also encouraged by the nature of the appeal process. Control order recipient who are dissatisfied with the terms of an order may within 15 days of receipt require a hearing by the Environmental Appeal Board (E.A.B.). Within 30 days of the E.A.B.'s decision the company may appeal on a question of law to the county court, and within 30 days of either the E.A.B.'s or the court's decision, the company may appeal to the Queen's Bench on non-legal questions to the Minister. The process is long and can be expensive.

164 Gibson, R.B., Industrial Pollution Abatement And The Use Of Environmental Control Orders In Ontario (Ottawa Ont.: Canadian Environmental Law Research Foundation, 1983) at 37.

165 E.P.A. s. 6.

166 E.P.A. s. 116(5).

167 E.P.A. s. 116(2).

168 supra note 142.

169 ibid.

170 ibid.
probable grounds” for believing that contaminant discharges present “an immediate danger to human life, the health of any persons, or to property” may issue a stop order in writing, along with written reasons, to the person or company which is responsible, requiring that the discharges involved be immediately halted. Stop orders are appealable to the Environmental Appeal Board and to the court, but unlike control orders, they remain in effect while the appeals are being considered. Because of the difficulty of establishing that immediate danger to human life is present, because of the Ministry’s negative experience on the first occasion that the device was used, and because of a general desire to avoid the inevitably negative socio-economic effects of closings, stop orders are rarely used. The existence of such a device may, however, be used to encourage those apparently responsible for dangerous discharge to comply with control order requirements, and other aspects of the ministry request. Stop and control orders share with criminal penalties the drawback of being crime-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. 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 issuance of a stop or control order, because these are wholly discretionary. Public pressure may be successfully applied to obtain an order, but the possibility of countervailing pressures from industry to discourage its issuance must not be discounted.

The advantages of the use of control orders and stop orders, as compared with criminal sanctions, is that the strict requirements of proof, and the expense and the delay of a trial is avoided. These orders may be appealed, however, and in the case of control orders, an appeal suspends the operation of the order. Administrative orders depend on penal sanction for enforcement but, as in the case of licensing, proof of noncompliance 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. In some ways, stop and control orders can be seen as an improvement over the use of criminal penalties, but they can only provide stopgap relief since they do nothing to obviate the fundamental conflict between the traditional right to discharge waste into the water on the one hand, and the increasing need to protect the quality of the natural environment on the other.

XI. Administrative Orders in Indonesian Environmental Law

In Indonesian environmental legislation, provision for administrative orders can be specifically found in the Ministry of Industry Decision No. 12 of 1978. Article 8 of this Decision provides the General Directors of the Department of Industry with the authority to issue administrative orders to polluters. Such orders may require either a temporary or permanent cessation of the offending industrial activity. Under current Indonesian environmental laws, control of industrial wastewater is entrusted to several agencies such as the Department of Industry, the regional governments and the Department of Health is simply required to submit a report to the regional government whenever it finds out that discharges present a threat to environmental quality. In these cases the regional government will issue orders which either require the polluting industries to decrease the their discharges or require them to stop their operations temporarily or permanently, depending on the degree of the impact of the pollution on the environment.

192 Ibid.
193 Supra note 142, at 417.
of waste-treatment facilities, and tax incentives. The latter are principally accelerated capital-cost allowances for pollution-control equipment. With the exception of governmental loans granted at current interest rates, all forms of subsidies 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. In this way the workings of the free market are somewhat undermined, as pollution-causing industries escape the full burden of production costs, resulting in artificially low prices for their products.

The use of subsidies led also to other difficulties. As with any form of government subsidies, the use of tax 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 of Canada, 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."[200] No doubt some businesses 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 is that such funding in effect benefits those enterprises which have been most negligent in taking pollution-abatement measures. This is discouraging and an hardship to those who installed these measures voluntarily at their own expense.[201]

The most telling criticism of these incentives is that, no subsidy, by itself, will serve to induce polluters to take measures which involve continuing operating costs and which are not by their nature remunerative. 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 subsidies alone, most of the objections to both these approaches of pollution control would still apply. It would remain advantageous for polluters to avoid compliance by one means or another for as long as possible, allowing them to apply their capital to more productive investments. If compliance with pollution standards finally were exacted by a combination of criminal penalties and subsidies, there would be no incentive for polluters to seek effluent levels below those prescribed by statute or to utilize the most efficient treatment process available.[202]

These objections apply generally to the use of subsidies to encourage pollution control. There are, as well, several specific problems with the use of tax incentives for this goal. 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 processes, 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.[203]

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[197] supra note 128, at 72.
[198] Interest or forgone loan are, in effect, equivalent to grants.
[199] supra note 13, at 249, 250.
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. The wisdom of granting further tax breaks to industry should always be questioned, 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 to write off the capital cost allowance.

205

One particular approach, the use of unit subsidies or payment based upon a reduction in discharges, has predictable shortcomings. First, although it will induce a reduction in the effluents per plant, by making the industry more profitable than before, it may also generate the entry of new polluting plants. The end result may be that total industry waste effluents may be unchanged, or may conceivably even increase. The second objection is to the closely administrative problems. In order to pay polluters according to their reductions in effluents, a benchmark from which reductions are measured must be established; the question, in brief, is "reductions from what?". The environmental authority cannot simply take the initial workload for each polluter as the point of reference. It would hardly be fair, for example, to set a low emissions ceiling for a firm that has already gone to the expense and trouble of adopting elaborate pollution control techniques, while a competitor, who has continued to discharge raw wastes, receives a high benchmark with the potential for a correspondingly large subsidy payment. Moreover, such a procedure creates an immediate incentive for each firm to generate an initial waste discharge as large as possible in order to raise its benchmark. The environmental authority must determine some hypothetical "normal" level of emission for each polluter which would serve as the point of reference; this can obviously be a major undertaking and one that is likely to involve considerable bargaining with individual polluters who feel that their assigned benchmarks are unfair. It seems that the only entirely defensible form of economic incentive for pollution control is the government loan, at current interest rates, to enterprises which are unable to obtain private financing for this purpose. Although 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 even though it does make 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 advantages 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 discouraged and discarded if effective environmental policies are to be implemented.

206

XIII. Effluent Charges

Probably no other suggested approach to water quality improvement has attracted more heated discussion in the past several years than the idea of imposing effluent charges on polluters. This unconventional proposal is founded on a fairly conventional economic theory: if market forces do not allocate resources efficiently, an optimizing system should be created to stimulate the allocative process of a viable market. The economic essence of the pollution problem is that waste discharges were traditionally allowed cost-free use of the nation's waters at the expense of downstream users. Therefore, the most direct way to reduce the present imbalance in waste management costs is to impose a charge for the disposal of wastes into water. As a

207 Ibid.
208 ibid.
209 ibid.
210 ibid.
211 ibid.
matter of economic theory, if the charge is equivalent to the total of all downstream damages resulting from the wastes discharged by the firm against whom the charge is assessed, the external diseconomies will be eliminated and approximated market forces will begin to function. In other words, if disposal into water is not the least cost effective method, other less polluting measures may be used. In such a situation, private incentives would encourage the polluter to reduce waste loads by all relevant means, treatment, process adjustments, waste recovery and plant location to the extent that the costs of these measures can be profitably traded off against reduced effluent charges. Thus, by providing a relevant incentive for reducing waste discharge, the effluent charge promotes an optimal level of waste management that should minimize the social cost of pollution. Furthermore, because the charge is directly related to the costs occasioned by each individual polluter, it affects an equitable accommodation among polluters and between each polluter and the community.

The concept of prorated effluent charges is derived from the practices of the Genossenschaften (Cooperative Water Associations)[227] which have experienced substantial success in managing the quality of water in heavily industrialized river basins in Germany. The German associations organize drainage districts to plan and operate a comprehensive program for managing the quality of waters in the basin. The principles behind this scheme is that the waste treatment and disposal systems of the entire river basin are integrated under one master plan to assure maintenance of an agreed level of quality in the basin's waters. An association builds necessary waste treatment facilities, reservoirs, and dams and locates them strategically in the basin to achieve the maximum quality control efficiency from the installations. These pollution control works are financed by a fee assessed against every city and industry discharging wastes into the river system. The fee is based on the strength and volume of the effluent discharged. Through the association, the costs of pollution are assigned directly to the polluter, rather than borne by downstream water users, as is usually the case. Waste treatment by the Association offers substantial advantages to industries in that the charges are fully tax deductible and the association's treatment works qualify for governmental financial assistance that private industry cannot obtain.218

In the United States, an example of legislation relying on the use of effluent charges to combat pollution is the Water Pollution Control Sub-Chapter of the Vermont Conservation and Development Act.217 This statute requires any person depositing wastes on a regular basis into the State's water 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."218 If the discharge does have this affect, the polluter will be denied a discharge permit and must apply for a "temporary pollution permit."219 which will only be granted if the discharge is not unreasonably destructive.220 The holder of a temporary pollution permit is required to pay periodic pollution charges based on the amount of damage to the water which his discharge causes.221 Such charges are established under statutory guidelines:

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215 Reed K.R., "Economic incentives for Pollution Abatement: applying Theory to Practice" (1976), Arizona L. Rev. 511 Rev., 512. See also Brow & Johnson, "Pollution Control By Effluent Charges: It Works In The Federal Republic Of Germany, Why Not In The U.S." (1964) 24 Natural Resources Journal 929 at 930.

216 Supra note 190, at 121-47.
218 Ibid. s. 911a(9).
219 Ibid. s. 912a.
220 Ibid. 912a(8).
221 Ibid. s. 912b(6)(c).

A pollution charge is the price to be paid per unit of waste discharged into waters of the state. The charge may vary among different types of classes of waters to account for variations in the degrading effects of various waters. The charges may also vary to account for variations in the water quality standards of different classes and the hydrologic conditions of different receiving waters. In establishing the charge the board shall attempt to approximate an economic terms damageto other users of the waters, both private users and the general public, caused by the degrading effect of various types of waste in varying volume and frequencies discharged upon water quality of the different classes of water. In determining relative degrading effects the board may employ any scientific or technical criteria of parameters such as biochemical oxygen demand and suspended solids and may express the unit charge in terms of such standards of measurements.222

In contrast to the manner of cost assessment utilized in the Genosschaften, the Vermont effluent charge system is based upon the amount of damage done to the environment and, thus, except for its nondeterioration features, is closer to the pure economy model.223 That the Vermont model was designed as an incentive to abatement rather than as a means of financing treatment plants is made clear by the statute: "The imposition of pollution charges shall have the principal purpose of providing the economic incentive for temporary polluter permits to reduce the volume and degrading..."
quality of their discharge during the limited period when such discharges are authorized thereby raising the quality of the waters in the area.224

In Canada, effluent charges have their legal base in the Canada Water Act, which provides for the establishment of regional water quality management agencies empowered to make recommendations regarding the use of effluent charges as an instrument to maintain water quality.225 No such agencies have as yet been established.226 On the municipal level in Canada, effluent charge schemes which take the form of surcharges on effluent of greater than normal strength, are employed, apparently with significant success, in several cities, including Toronto, Edmonton, Winnipeg, Calgary, London and the Waterloo Region.227 These municipal effluent charge schemes are credited with being an effective weapon in the hands of municipal authorities, forcing or influencing industrial firms to reduce their water pollution loads, and 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.228 The advantages of this approach to the control of water pollution are numerous. The most attractive feature of levying charges on polluters is that it corrects the inequitable situation that has long existed, 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, because the pollution costs incurred on their manufacture are not included in their selling price. The price tends to stimulate demand for the product and thus increases the strain on the rivers or streams. This effect can be counteracted by the imposition of effluent charges that are then added into costs. Indeed, the use of effluent charges encourages the expansion of clean industries because the lower charges they would pay would be reflected in lower prices for their products and therefore increased demand.229 Effluent charges have the additional advantage of not absolutely limiting the right to discharge waste into the waters, as direct regulation seeks to do, but rather creates a fee for the exercise of rights that 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 the water discharged transforms a legitimate activity into a criminal one is avoided.230 Effluent charges 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. Effluent charges are a highly flexible control instrument, and may be set to reflect the cost of cleaning up the contamination in question or simply to provide a sufficient incentive to promote abatement measures. Because such charges 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 is minimized.231

Despite the apparent advantages of effluent charges as a means of protecting water quality, there are some important reservations concerning their application which must be examined. The principal objection raised against the imposition of

226 Supra note 12, at 423.
227 Ibid.
228 Demestich, "Effluent Charge Systems in Canada (A Canadian Paper Submitted for Discussion at the "Comparative Review of the management Options" of the Organization for Economic Co-operation and Development) at 18.
229 Supra note 12 at 424.
230 Ibid.
231 Ibid.
232 supra note 184, at 244.
234 Supra note 12, at 425.
XIV. Incentives And Disincentives In Indonesia Environmental Law

The Indonesian Governmental policies regarding incentives and disincentives are set out in article 8 of EMA, which authorizes the government to take certain measures to encourage efforts to sustain the condition of the environment necessary to support continued development. 227 Elucidation of this article points out the effectiveness of taxation as a tool which can be used as an incentive for maintaining the environment and as a disincentive for preventing and abating environmental damage and pollution. 228 According to paragraph 2 of the article, the governmental policies and measures concerning incentives and disincentives are to be established by legislation. 229 Unfortunately, because no such legislation has as yet been forthcoming, there is no indication of what kinds of incentives or disincentives will in fact be implemented to encourage the adoption of abatement measures.

XV. Conclusion

The foregoing discussion of the various statutory control techniques of environmental quality also leads to the conclusion that there are other important forms of control which are worth applying in Indonesia. These are government loans at prevailing interest rates to enterprises which are unable to obtain private financing for controlling pollution and the system of effluent charges.

While subject to potential abuse, fully repayable loans do not have the undesirable effect of distorting the construction and forcing the cost of pollution control on the general public. Since the loans would have to be repaid, and thus would in some sense represent in industry's own capital, the borrower 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 it be used in conjunction with other measures to promote pollution control. The great advantages of loans over other forms of incentives is that they do not give the appearance of recognition by government of a right to pollute at the public expense, an attitude which must be discarded if effective environmental policies are to be implemented.

The system of effluent charges 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, if applied in a uniform manner, and would impose pollution costs on the responsible parties. Effluent charges 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 freely abused.

The only serious problems that Indonesia would encounter in enforcing the effluent charge system would be the technical difficulties and the delay involved in implementation. These problems are due to a scarcity of information, financial backing and skilled manpower available for 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 in-

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227 Article 6 of EMA of 1982.
228 Ibid. (Footnote).
229 Article 8 of EMA of 1982.
industries, principally in the form of loans, to help cover the necessary expenditures. 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 educational program instituted. No important advances can be expected in the protection of the natural environment unless the public recognizes the hazards of continued pollution and fully supports measures for its control.

**PERLINDUNGAN HUKUM BAGI KONSUMEN MUSLIM TERHADAP PEREDARAN MAKANAN HARAM**

Oleh
Abdul Ghofur Anshori

Latar Belakang dan Permasalahan


Kemajuan di bidang teknologi