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Contamined lands: a Canadian perspective

Gilles Létourneau and Beverley A. Chomyn



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Article abstract

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At the provincial level legislation is being developed, directed at making persons responsible for the pollution they cause. Nonetheless, there are shortcomings under the present system in matters concerning victim redress and clean-up and restoration of contaminated sites. Victims are still struggling to obtain redress and compensation, especially in cases of defendant bankruptcy. It may be necessary as in the U.S. to create a Superfund to ensure compensation when there are orphan sites or when the defendant has become insolvent. There may be merit in establishing at the Federal level and in the other provinces a class action scheme along the lines of the Quebec model with an Assistance Fund to help litigants. In addition, there is a need to develop in legislation comprehensive requirements of clean-up and restoration of contaminated sites, that can be applied consistently nation-wide.

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Contaminated lands: a Canadian perspective

Gilles LÉTOURNEAU*
Beverley A. CHOMYN**

The existence of contaminated sites in Canada has become a problem of nation-wide concern. Actions at civil and common law based on the traditional requirements of showing that property interests have been affected or personal injury has resulted are inadequate to address widespread harms arising from pollution. At the national level programs and policies have been developed to address clean-up of contaminated sites.

At the provincial level legislation is being developed, directed at making persons responsible for the pollution they cause. Nonetheless, there are shortcomings under the present system in matters concerning victim redress and clean-up and restoration of contaminated sites. Victims are still struggling to obtain redress and compensation, especially in cases of defendant bankruptcy. It may be necessary as in the U.S. to create a Superfund to ensure compensation when there are orphan sites or when the defendant has become insolvent. There may be merit in establishing at the Federal level and in the other provinces a class action scheme along the lines of the Quebec model with an Assistance Fund to help litigants. In addition, there is a need to develop in legislation comprehensive requirements of clean-up and restoration of contaminated sites, that can be applied consistently nation-wide.

La question des sols contaminés au Canada est devenue une question d'intérêt national. Les recours du droit civil et du droit commun, qui requièrent un dommage à la propriété ou un préjudice personnel, ne sont plus adéquats pour faire face aux dommages considérables qui résultent de la pollution. Au niveau national, des politiques et des programmes de décontamination des sols ont été élaborés.

^{*} Président, Commission de réforme du droit du Canada.

^{**} Avocate-conseil, Commission de réforme du droit du Canada.

Au niveau provincial, des efforts législatifs sont en cours et visent à imputer la responsabilité aux pollueurs. Toutefois, le système en place accuse certaines faiblesses particulièrement en ce qui a trait aux recours des victimes ainsi qu'à la décontamination et restauration des lieux contaminés. Les victimes doivent lutter pour obtenir une indemnisation surtout lorsque le défendeur fait faillite. Il peut s'avérer nécessaire, à l'instar de ce qui s'est fait aux États-Unis, de créer un fonds spécial d'indemnisation dans les cas des sites orphelins ou lorsque le défendeur devient insolvable. Il pourrait être utile au niveau fédéral et dans les autres provinces canadiennes d'instaurer un mécanisme de recours collectif comme celui qui existe au Québec de même qu'un fonds d'aide pour soutenir financièrement ceux qui exercent un tel recours. Au surplus, il importe de légiférer pour établir des standards de décontamination et de restauration des lieux contaminés qui puissent s'appliquer à l'échelle nationale.

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Environmental issues are becoming priority issues nationally and internationally. Advancing industrialization around the world has resulted in unprecedented depletion of the earth's natural resources, deterioration of air and water quality and soils. Canada has responded in several ways to its commitment to a cleaner environment through the implementation of programs and policies and tougher and more comprehensive environmental legislation. For the most part these initiatives are recent.

One area of concern in Canada is the existence of contaminated sites that pose a threat to human health and the environment. The paper examines the national response both legislative and administrative to the restoration of these sites. The focus is on how the current legal regimes address contaminated sites from the perspectives of liability, restoration of the environment, pollution prevention and victim redress.

Contaminated sites, as used here, is a broad term to describe locations at the earth's surface and subsurface, that are infiltrated with toxic or hazardous substances. Most commonly such sites are the result or byproduct of industrial activities. For example, some are former toxic waste dump sites, others are or were industrial properties, such as railway yards, former chemical manufacturing plants, mine/mill sites, gas stations. In some instances, sites become contaminated by toxic runoff from other properties.

A characteristic of these sites is that they contain toxic substances, often from a variety of sources. The effects of the contamination may not be readily apparent. It may be years, even decades before damage from the contamination manifests itself in human beings and the environment. Moreover, toxic substances can move from one medium to another (from land into water, from soils into plant and animal life), from one jurisdiction to another.

The problem is serious when one considers that Canada alone produces some 8 million tonnes annually of hazardous wastes, only 40 percent of which is treated at off-site commercial facilities. For the most part the remaining 60 percent ends up as landfill or discharged into municipal sites¹.

Public outcry over the health risks associated with hazardous wastes from contaminated lands has mandated that the federal and provincial governments take a more active role in cleaning up contaminated sites. The response has been twofold; a program, the National Contaminated Sites Remediation Program, was initiated to address clean-up of high risk contaminated sites and, secondly, the implementation of tougher more aggres-

S. Hart, "Waste Management in Canada", Speech presented at Canada-Europe Conference on Environmental Waste, Montpellier, 28-31 May 1991 [unpublished].

sive environmental legislation directed at making persons who pollute responsible for the damage they cause.

1. Canada's response to the problem of contaminated lands

1.1 Programs and policies

Canada has responded both domestically and internationally to the problem of waste management². The thrust of which is both regulatory and non-regulatory. Non-regulatory measures include the development of waste reduction policies and guidelines, inter-governmental co-operation and consultation on matters of waste management, industry-government consultation, private sector and government joint ventures in the development of pollution abatement technology and public consultations.

In the forefront of these developments was the creation of a joint-federal provincial program, the National Contaminated Sites Remediation Program, to clean up contaminated high risk orphan sites³. This \$ 250 million program, based on a 50/50 federal-provincial cost sharing formula, has three objectives: (i) to apply the "polluter-pays principle" to the clean-up of contaminated sites; (ii) to clean-up high-risk orphan sites (sites where the parties responsible for the contamination cannot be identified or are unwilling/unable to pay for the clean-up and where governments consequently must undertake the task); and (iii) to work with industry to stimulate the development of new and innovative clean-up technologies⁴.

^{2.} The commitment to a safer and healthy environment is detailed in the recently released *Canada's Green Plan* (Hull, Environment Canada, 1990).

^{3.} The program was announced at the meeting of the Canadian Council of Ministers of the Environment, Charlottetown, P.E.I., 19 October 1989. For additional information, see The National Contaminated Sites Remediation Program, News Release and Backgrounder (30 November 1990).

^{4.} The program has developed a national system of classification of contaminated sites. The purpose of the system is twofold: to classify and to prioritize contaminated sites. Contamination is site specific and can vary depending on a number of factors including, the nature and extent of the contamination; chemical and physical characteristics of the site (e.g. reducing or oxidizing environment); types of physical cover, vegetation, soils, bedrock, etc.; proximity to urban centres. A national system provides a scientifically-based means to assess contaminated sites comparably nation wide thus contributing to overall national consistency. Furthermore the system screens those sites that require immediate attention. Not every site will require clean-up. Currently the Program is focusing on the clean-up and restoration of high-risk contaminated sites: locations at which soils, sediments, wastes, groundwater or surface water are contaminated by hazardous substances at levels that pose an existing or imminent threat to human health or environment. Currently there are an estimated one thousand (1,000) high risk contaminated sites in Canada, 5 % (50) of which are considered to be orphan/abandoned

The program is to operate for five years and at the end of its term it is anticipated that the various jurisdictions will be in a position to continue the management of contaminated sites on their own. In furtherance of this objective one of the requirements of the program is that provinces are to have in place by December 1991 the legislative authority to make persons who pollute liable for the clean-up of the contamination they cause⁵. Legislation is currently being developed.

It is to this aspect, the regulatory aspect — the development of legislation nation-wide directed at making persons clean-up the pollution they cause and at preventing pollution at source—that we now turn.

1.2 The present law

Primary among the fundamental considerations of any regime that addresses harms arising from pollution are those of liability, that is, duties, responsibilities or certain conduct required by law; measures to clean-up or restore the environment; prevention of future occurrences of contamination; and mechanisms or devices that permit victim redress for environmental harms. Each of these will be considered from the viewpoint of the common law, Quebec civil law and statute law.

1.2.1 The common law and civil law

1.2.1.1 Liability

Private or civil actions are available to the public for redress for environmental wrongs where a cause of action exists. At common law there are five causes of action: nuisance, trespass, riparian rights, negligence and strict liability. These actions concern either interference with a proprietary right, like nuisance and trespass, or pertain to the defendant's conduct notably a standard of care owed to the plaintiff in negligence, and

sites. M. Dober and M.A. Drake, Selected Superfund Sites in the U.S.: Lessons for Canada, Hull, Environment Canada, 1990, p. 1.

The program has also developed interim environmental quality criteria to be used in the clean-up and restoration of contaminated sites. (Interim CCME Environmental Quality Criteria for Contaminated Sites. Final Draft prepared by the Canadian Council of Ministers on the Environmental Sub-Committee on Environmental Quality Criteria for Contaminated Sites (14 February 1991)).

^{5.} As per terms of agreements between the government of Canada and the respective provincial governments regarding the Implementation of Remedial Measures of Orphan High Risk Contaminated Sites and the Development and Demonstration of Contaminated Site Remedial Technologies. To date, Newfoundland, Nova Scotia, New Brunswick, Quebec, Ontario, Alberta and British Columbia have signed federal-provincial agreements.

perhaps even a higher standard of care, strict liability (independent of fault and negligence) owed to society when defendant engages in abnormally dangerous activities.

Under the Quebec Civil Code⁶ there are a number of provisions that are similar to common law principles and can be used to provide redress for environmental harms. The main provision dealing with civil responsibility for environmental harms based on fault is article 1053⁷. Other principles that play a significant role in environmental matters are, the good neighbourhood rule as expressed mainly under articles 399 and 406⁸ of the Code, and responsibility for latent defects as under articles 1522 and 1524⁹. Obligations of lessor and lessee as enumerated under articles 1604 and 1652.4¹⁰ may have relevancy where lessee engages in activities that have a potential to pollute.

Nuisance actions are based on an unreasonable¹¹ interference with another's use and enjoyment of property and as such can provide remedies for smell, noise, vibration and any manner of interference affecting the

^{6.} Civil Code of Lower Canada (1866).

Ibid., art. 1053: "Every person capable of discerning right from wrong is responsible for the damage caused by his fault to another, whether by positive act, imprudence, neglect or want of skill."

^{8.} Ibid., art. 399: "Property belongs either to the Crown, or to municipalities or other corporations, or to individuals. That of the first kind is governed by public or administrative law. That of the second is subject, in certain respects as to its administration, its acquisition and its alienation, to certain rules and formalities which are peculiar to it. As to individuals they have the free disposal of the things belonging to them, under modifications established by law."

Art. 406: "Ownership is the right of enjoying and of disposing of things in the most absolute manner provided that no use be made of them which is prohibited by law or by regulations."

^{9.} Ibid., art. 1522: "The seller is obliged by law to warrant the buyer against such latent defects in the thing sold and its accessories, as render it unfit for the use for which it was intended, or so diminish its usefulness that the buyer would not have bought it, or would not have given so large a price, if he had known them."

Art. 1524: "The seller is bound for latent defects even when they were not known to him, unless it is stipulated that he shall not be obliged to any warranty."

^{10.} Ibid., art. 1604: "The lessor must deliver the thing in a good state of repair in all respects, maintain the thing in a condition fit for the use for which it has been leased and give peaceable enjoyment of the thing during the term of the lease."

Art. 1652.4: "The lessee is bound to comply with the obligations imposed on him by law, by regulation or by municipal or other-by-law respecting the safety and sanitation of a dwelling. These obligations form part of the lease."

^{11.} A.M. LINDEN, Canadian Tort Law, 4th ed., Toronto, Butterworths, 1988, p. 501. To determine what is unreasonable interference with the use and enjoyment of another's land, courts balance the gravity of the harm caused against the utility of the defendant's conduct in all the circumstances. When describing harm, the courts examine the type

enjoyment of one's land. In addition an action in nuisance can be brought by an individual in the case of a private nuisance or by the public at large when the nuisance affects more than one person. This is commonly the case with environmental pollution as its effects are widespread, affecting neighbourhoods, towns etc. Defences to nuisance include¹²: statutory authority¹³ for the activity; the existence of a prescriptive right¹⁴; plaintiff's consent to the defendant's activity and actions of third parties e.g. pollution was caused by another source and not by the defendant's activities.

At civil law the "good neighbourhood principle" or rather the principle that one's activities should be conducted so as not harm or annoy one's neighbours has its counterpart in the common law nuisance¹⁵. That is, it recognizes that property rights are absolute to the extent that these rights do not interfere with another's use and enjoyment. While it is generally accepted that there is a minimum of annoyances that must be tolerated, it is the unreasonableness or abnormalness of the annoyance that comes into question¹⁶. In consideration of the duty owed courts will consider such things as the nature of the location (whether residential or industrial), ordinary or general practices, uses, zoning and by-laws¹⁷. Common defen-

- and severity of the interference, its duration, the character of the neighbourhood and the sensitivity of the plaintiff's use. As for the defendant's conduct, the courts look at the object of the activity undertaken and the attitude of the actor toward his neighbours.
- 12. *Ibid.*, p. 513-518, for a detailed discussion of defences available in nuisance actions. Harm can be actual damage, i.e. injury, property damage, economic loss. Harm can also be an annoyance or inconvenience which must be substantial, recurring or continuous to a person of ordinary sensitivity.
- 13. Ibid., p. 514. Where nuisance is the result of an activity that has been authorized by statute no action lies. The defence has been interpreted strictly. No liability will lie where the legislation authorizes a particular use in a particular area, and where the defendant acts within the bounds of the permit he has been issued.
 - For a recent discussion of statutory authority see also *Tock* v. *St. John's Metropolitan Area Board*, (1980) 2 S.C.R. 1181.
- 14. A.M. LINDEN, note 11, p. 516. In certain instances a prescriptive right to continue a nuisance may exist if the nuisance has continued uninterrupted for a period of generally twenty years.
 - This is similar to the principle in real estate law whereby an easement may be acquired through the uninterrupted, open and peaceful use of land for a period of time as prescribed by provincial statutes. J.A. Yogis, Q.C., Canadian Law Dictionary, 2nd ed., New York, Barrons Educational Series Inc., 1990, p. 174.
- 15. Y. Duplessis et al., La protection juridique de l'environnement au Québec, Montréal, Les Éditions Thémis inc., 1978, p. 9.
- 16. Ibid.; Gibb c. Pépinière Abbotsford Inc. C.P. Bedford, n° 460-02-000599-7, 19 novembre 1980, juge Genest.
- 17. J. HÉTU, «Les recours du citoyen pour la protection de son environnement », (1989) 92 R. du N. 169, p. 177-179.

ces used by polluters include, legislative or administrative authorization, prior possession and use, "l'antériorité de possession" (known at common law as "plaintiff comes to the nuisance"), plaintiff's past tolerance of the nuisance, and financial considerations, that is, the high cost of anti-pollution devices has precluded their implementation¹⁸.

Trepass at common law involves the unlawful interference with another's property. Unlike nuisance the interference must be physical, direct and intentional¹⁹. This definition considerably narrows the application of trespass for polluting activities. Not all polluting activities are direct or even intentional. They can be carried by wind, water, etc. Many spills or leaks are accidental and unknown. Defences to trespass include plaintiff's consent to the activity, statutory authority authorizing the activity²⁰, the fact that the defendant's act was involuntary and that the trespass was done out of necessity²¹.

The common law has also provided certain rights for owners of land bordering rivers, lakes or streams²² that if violated may give rise to a cause of action. These rights are rights of use: the right of access to the water; the right to flow of the water in its natural state²³; the unrestricted right to use water for domestic purposes; a right to use water for secondary or extraor-

^{18.} *Ibid.*, p. 176-183.

^{19.} R.F.V. HEUSTON, Salmond on the Law of Torts, 17 ed., London. Sweet and Maxell, 1977, p. 1600-1161. The author makes the following distinction between trespass and nuisance: "In all cases, in order to be actionable as a trespass, the injury must be direct, within the meaning of the distinction between direct and consequential injuries [...] it is a trespass and therefore actionable per se, directly to place material objects upon another's land: it is not a trespass, but at the most a nuisance or other wrong actionable only on proof of damage, to do an act which consequently results in the entry of such objects. To throw stones upon one's neighbour's premises is the wrong of trespass; to allow stones from a ruinous chimmey to fall upon those premises is the wrong of nuisance."

^{20.} A.M. LINDEN, supra, note 13.

^{21.} To qualify as a necessity the activity must be reasonably necessary to avoid the threat of harm and must not cause more than unavoidable damage. A.M. LINDEN, *supra*, note 11, p. 73-75.

^{22.} Blacks Law Dictionary, 5e éd., St. Paul, Minn., West Publishing Co., 1990, p. 1385. These rights are usufructuary. That is... the temporary right of using a thing, without having the ultimate property, or full dominion of the substance.

^{23.} John Young and Company v. The Bankier Distillery Company, (1803) A.C. 691 (H.I.). The right to the flow of water in its natural state has been interpreted to mean that riparian owners are entitled to the water of the stream in its natural flow without measurable diminution or increase and without sensible alteration in its character or quality.

dinary purposes²⁴, for example industrial use, provided this use does not interfere with the rights of lower riparian users; and the right to any land formed through the natural accretion processes.

Unlike nuisance, the plaintiff in a riparian action need not prove actual damage; a riparian right need only be affected. Plaintiff must be able to show that the polluting activity is likely to continue; that the water has been made less suitable for some use; and that the defendant's activities caused the pollution²⁵.

Defences to actions based on riparian rights include statutory authority authorizing the activity complained of and prescriptive use, usually twenty years or more of continuous, uninterrupted use.

Unlike nuisance and trespass an action in negligence does not depend on a proprietary right but is based on a duty of care owed by the defendant to the plaintiff. To succeed in an action in negligence three elements must exist: a duty of care, a breach of this duty and damages or injuries arising from the breach²⁶. Damages and injuries must be actual and reasonably foreseeable. The standard of care in negligence actions is what the reasonable person of ordinary prudence would do in the circumstances²⁷. Under the Civil code the notion of fault or lack of diligence in one's conduct is enumerated in article 1053²⁸. To prove fault the victim must establish a harm suffered, the fault of the wrongdoer and a causal connection between the fault and the damage or harm suffered. Fault occurs when either voluntarily or by simple imprudence an individual transgresses the general duty to not harm others²⁹. This duty is both determined by legislation and jurisprudence. The standard of conduct as in common law negligence actions is that of the reasonable person under similar circumstances³⁰.

One of the difficulties encountered by a plaintiff in bringing an action under article 1053 of the Civil Code, as well as commencing an action in

^{24.} R.T. Franson et A.R. Lucas, Canadian Environmental Law, Commentaries and Digests of Cases, t. 1, Toronto, Butterworths, 1976, p. 379. Secondary use or extraordinary use is allowed provided the use is reasonable. What is reasonable is a question of fact and depends on and concerns such things as the character of the stream and the nature of the respective water uses.

^{25.} D. ESTRIN and J. SWAIGEN, *Environment on Trial*, Toronto, Canadian Environmental Law Foundation, 1978, p. 406.

^{26.} A.M. LINDEN, supra, note 11, p. 28.

^{27.} J.G. FLEMING, The Law of Torts, 6th ed., Sydney, Australia, The Law Bank Co., 1983, p. 101

^{28.} C.C.L.C., supra, note 7.

^{29.} J.-L. BAUDOUIN, La responsabilité civile délictuelle, 3° éd., Cowansville, Les Éditions Yvon Blais inc., 1990, p. 55.

^{30.} Ibid.

negligence at common law, is that plaintiff must prove the causal link between the defendant's act and the harm suffered and actual damages. In pollution cases this often is not an easy task. Long periods between disposal and injury make it both difficult for plaintiff to first identify and locate defendants and secondly to establish that the defendant's activities caused the injury. The requirements of causation may be further complicated where there is more than one contaminant source, i.e. several leaking hazardous waste sites. Plaintiff's chances of proving causation, of linking a particular contaminant to a specific injury are considerably reduced. In cases where more than one person is responsible for the same fault but it is difficult if not impossible to allocate the fault amongst the various defendants, article 1106³¹ provides that two or more persons are joint and severally liable for the harm caused³², a principle which also finds its counterpart in the common law. The circumstance becomes more complex where there are several fault contributing to the damage. The faults may be successive as well as simultaneous. Where successive faults occur, creating a precise damage, Quebec courts have not applied article 1106³³. Here the plaintiff must prove the respective fault of each defendant. Where however the fault is virtually simultaneous, such that it is impossible to ascertain the respective fault of each defendant, Quebec courts have in matters pertaining to general law applied joint and several liability and, by reversing the burden of proof, have compelled defendants to establish their respective share of liability³⁴ in order to avoid full liability. It is uncertain whether this liberal-minded approach to compensating victims with multi-defendants will be extended to cases involving environmental harms³⁵.

In the area of real estate transactions there are countless horror stories of purchases unknowingly buying toxic real estate. At common law the doctrine of caveat emptor³⁶ (let the buyer beware), governs real estate transactions in general. However, in transactions involving toxic real estate the application of the doctrine may be limited. Vendors may no

^{31.} C.C.L.C., art. 1106. The obligation arising from the common offence or quasi-offence of two or more persons is joint and several.

^{32.} J.-L. BAUDOUIN, note 29, p. 208.

^{33.} Ibid., p. 209.

^{34.} Ibid., p. 210-211.

^{35.} M. BÉLANGER, « La faute civile en matière de responsabilité pour dommages environnementaux », dans Développements récents en droit de l'environnement, Barreau du Québec, Service de la formation permanente Cowansville, Les Éditions Yvon Blais Inc., 1991, p. 154.

^{36.} B.J. REITER, R.C.B. RISK and B. McLellan, Real Estate Law, 2nd ed., Toronto, Edmond-Montgomery, 1982, p. 280. It is well established law that absent fraud, misrepresentation and warranties, the purchaser takes the property as he finds it.

longer be protected if they are silent about a defect. If the defect is patent. that is, visible to the naked eye on cursory examination, caveat emptor prevails. However, latent defects going beyond mere quality and which are not obvious to a reasonable person on inspection have entitled buyer to recision of the agreement and damages. Moreover, failure to disclose a potentially dangerous latent defect, as in the case of land contaminated by radioactive soils³⁷ has been found to constitute fraud. The aspect of liability for latent defects is also founded in the Ouebec civil law. Article 1522 provides that seller must warrant to buyer that the property or thing sold is free of latent defects. This warranty exists even where seller has no knowledge of the latent defect unless however he stipulates otherwise. Where latent defects are known to seller, seller is obliged to pay for the diminution in the price of the property as well as damages plus interest³⁸. Where they are unknown to seller he is obliged only to pay for the diminution in the price of the property and expenses incurred by buyer in the sale³⁹.

The doctrine of strict liability as articulated in the case of Rylands v. Fletcher⁴⁰ is the last cause of action at common law. Narrowly construed it provides that a person who brings a substance onto his land which escapes and causes damage is strictly liable for the damage caused. For the rule to apply the defendant's activities must constitute a "non-natural" use of the land and there must be an escape of the substance from the defendant's control. Recently the Supreme Court of Canada in Tock v. St. John's Metropolitan Area Board⁴¹ confirmed the narrow interpretation by refusing to apply the rule to the escape of water from a sewer system. Following prior decisions⁴² non-natural use has been interpreted to exclude all activities which, although dangerous, are ordinary uses of the land for

^{37.} Sevidal v. Chopra, (1987) 41 C.C.L.T. 179. Prior to closing, vendors had a duty to warn purchasers that a neighbouring property contained radioactive soils. Second, vendors had a duty to disclose a material change in circumstance, the discovery that vendor's soils were also contaminated with radioactive material. The court held that vendors were guilty of concealment of facts so detrimental to the purchasers that it amounted to fraud.

^{38.} Bourque c. Carle, supra, note 17, p. 189, C.P. Trois-Rivières, n° 400-32-001079-800, 26 novembre 1980 (p.c.).

^{39.} C.C.L.C., supra, note 6, art. 1528.

^{40. (1868)} L.R. 3 H.L. 330.

^{41. (1980) 2} S.C.R. 1181.

^{42.} Rickards v. Lothian, (1913) A.C. 263, 82 L.J.P.C. 42. In this case which involved the escape of water from a lavatory, Lord Moulton considerably limited the application of the rule in Rylands. In defining the term "non-natural" use, he stated that it is not every use to which land is put that brings into play the principle. It must be some special use bringing with it increased dangers to others, and must not merely be the ordinary use of the land or such a use as is proper for the general benefit of the community...

the general benefit of the community. The common law principes of strict liability may thus be of limited use for plaintiffs seeking compensation for environmental harms arising from activities such as contaminated landfill sites, where such activities are classed as ordinary uses of the land for the general benefit of the community.

1.2.1.2 Prevention and restoration

The remedies or relief available to the plaintiff for environmental harms may be used in some circumstances to prevent or deter future occurrences of pollution as well as restore or clean up the environment. There are two types of relief provided, damages or injunctions, and, depending on the nature of the harm, both may be awarded. However, where damages are adequate an injunction will rarely be granted.

Damages are either compensatory or non-compensatory in nature⁴³. As a means of preventing polluting activities tort law which results in the granting of damages suffers certain limitations. The fundamental function of tort law is compensation to the victims and it operates after the fact. However, some deterrence may also result from successful actions in tort. Individual deterrence may accrue to those who are condemned to pay for the losses resulting from their actions, especially when the losses are significant. General deterrence, that is to say the deterrence of anyone who might be tempted to embark upon a polluting activity, will occur only if the awards for personal injury and damages to property are large. Sizeable awards are generally made for activities that cause severe personal injury, that is to say, bodily harm or death, or serious damage to property while smaller awards will be granted for less serious environmental harms, such as inconvenience, discomfort, annoyances, etc. The same reasoning can be applied in awards made for damages for restoration of contaminated property. Damage awards to clean-up the contamination, to put plaintiff in his pre-loss position, must be sizeable in order to deter future occurrences of the harm.

Secondly, awards of damages are made for personal or individual harm and as such may be ineffective mechanisms for dealing with environmental harms which often are widespread, that is affecting neighbour-

^{43.} S.M. Waddams, *The Law of Damages*, Toronto, Canada Law Book, 1983. Compensatory damages are awarded for losses or injuries sustained by the plaintiff and can be special damages in which case proof of the loss or injury and actual cost must be provided. General damages are normally those that flow from the consequence of the act; they are actionable per se. Exemplary, punitive or aggravated damages are noncompensatory in nature, designed to punish the defendant for malicious, oppressive, brutal... behaviour (p. 998). Nominal damages (usually negligible amounts) are awarded where plaintiff establishes a legal right but no losses are proved (p. 976).

hoods, towns, etc. Although public nuisance actions have the potential for greater impact in resolving environmental harms, the requirements of standing⁴⁴ have limited its usefulness.

The second mechanism of granting relief to plaintiffs who have suffered environmental damages is the granting of an injunction. While injunctions may be useful in preventing or prohibiting conduct of the defendant that causes harm to the environment they cannot be used to clean-up or restore the environment once damage has been done to it. In addition they are difficult to obtain and only granted in exceptional cases. That is, there must be no other form of relief available to plaintiff and plaintiff must have a strong prima facie case against the defendant showing substantial harm. Moreover, the traditional analysis used by the courts in the balance of convenience (does the benefit of granting an injunction outweigh the benefit of withholding an injunction?) usually leans in favour of allowing a polluter industry to continue its operations at risk to the environment.

1.2.1.3 Victim redress

Both at common law and in civil law, victims or plaintiffs may seek redress for personalized interests that are adversely affected by the polluting activity, for example, redress for compensation for injury or loss or damage to property. The common law addresses individualized interests that are adversely affected by pollution. However, the time delays between disposal and injury and the determination of causation may severely limit the use of all these individualized actions in pollution cases. In this respect Quebec civil law has gone a step further and has permitted the bringing of class actions, to facilitate compensation for victims of widespread harms such as are characteristic of pollution cases.

^{44.} In public nuisance actions concerning the environment the Attorney General has the authority to bring proceedings either on his own or by another person acting in his name (relator action). Individuals however may bring an action in public nuisance without the consent of the Attorney General, only if the individual can show that a personal or private interest has been affected by the nuisance. There are problems with these approaches. In the former, the Attorney General may not consent to the bringing of the action for political reasons, as well, he may want to limit access to the courts to prevent "floodgates" or a multiplicity of actions. (For more discussion see, A. ROMAN "Locus Standi: A Cure in Search of A Disease", in Environmental Rights in Canada, Toronto, Butterworths, 1981.)

In the latter, to bring an action without the consent of the Attorney General the individual must show special or personal damages suffered. While personal injury of property damage suffered will always qualify as special damages regardless how many have suffered (T.A. Cromwell, Locus Standi A Commentary on the Law of Standing in Canada, Toronto, Buttwerworth, 1986, p. 24), widespread harms affecting the public not related to interests in land would not be actionable. (For a detailed discussion see, Report on Standing, Ontario Law Reform Commission, 1989.)

As mentioned the effects of environmental pollution are widespread affecting large areas, different mediums such as water, land, air, plant and animal life, and the public at large. Persons may also want to seek redress for a non-personalized and non-proprietary interests such as damage to the environment. However, the individualized or personal nature of actions at both common and civil law renders them unsuitable for protecting the much broader interest, the protection of the environment.

1.2.2 Legislative or statutory regimes

Much of the common law has been incorporated as well as expanded in statute law. Some examples of extension of the common law principles include: liability regimes which have broadened the classes of persons that may be liable for pollution; regimes that impose civil and quasi-criminal liability for polluting activities; new types of duties and responsibilities on persons who pollute or undertake activities that have the potential to pollute; and in some cases regimes that have facilitated victim compensation for environmental harms.

Some recent initiatives of the federal and provincial governments to legislate in environmental areas are worth examining. In particular, legislative regimes for imposing liability on polluters, requirements for restoration and prevention of contaminated lands and mechanisms of victim redress for environmental harms.

Environmental legislation addressing contaminated lands is relatively new, thus there is little established law in this area. For the most part, authority for environmental matters lies mainly with the provincial governments while federal involvement in environmental regulation has been limited to matters of exclusive federal jurisdiction. To understand the developments or lack of developments in this area constitutional limits on federal involvement must first be considered.

1.2.2.1 Constitutional division of powers in environmental issues

The division of legislative powers in Canada between the provincial and federal legislatures does not specifically address environmental issues. Traditionally the provinces have assumed jurisdiction to legislate and regulate in relation to the environment under s. 92(16) of the *Constitution Act*, which gives provinces legislative jurisdiction in "generally all matters of a merely local or private nature in the Province⁴⁵".

^{45.} Constitution Act 1867 (U.K.), 30 & 31 Vict., c. 3, s. 92(16). Provinces have also legislated and regulated in environmental matters under s. 92(10) (Local Works and Undertakings) and s. 92(13) property and civil rights. Section 92A further provides provinces with the

Federal involvement in environmental regulation has largely been limited to matters of exclusive federal jurisdiction⁴⁶, such as shipping, trade and commerce, the sea coast and inland fisheries, Indian lands, criminal matters, taxation and works and undertakings for the general advantage of Canada. In addition, the Constitution grants the federal government the right to make laws for the "peace, order and good government of Canada" (POGG or residual powers) in any matter not coming within the provincial heads of powers. Matters of national concern, that is, of significance to the whole of Canada, have in some cases been used to invoke these residual powers.

Although some aspects of the environment are dealt with generally under the various heads of power, the three main powers relevant to federal jurisdiction in environmental matters have been criminal law, trade and commerce and "peace order and good government" powers. Of the three, POGG powers are the more likely for strengthening federal jurisdiction within environmental matters⁴⁷. An argument can be made that environmental matters affecting the health and well-being of Canadians is a matter of nation-wide concern. In R. v. Crown Zellerbach Canada Ltd. 48 the Supreme Court held that marine pollution was a matter of national concern and therefore included within federal powers to legislate with respect to the peace, order and good government of Canada.

According to the court, matters that fall within the ambit of national concern must have a singleness, distinctness and indivisibility that are distinct from provincial matters and furthermore must not prejudice provincial interests. It would seem by virtue of the scope of the recently proclaimed federal Canadian Environmental Protection Act (CEPA) federal regulation of toxic chemicals in the environment is a matter of national

right to make laws with respect to non-renewable resources such as forestry and electrical energy. In addition, they are vested with the ownership of all lands, mines and minerals within their boundaries (s. 109).

^{46.} Ibid., s. 91.

^{47.} According to R. Northey, Federalism and Comprehensive Environmental Reform: Seeing Behind the Murkey Medium, (1991) 29 Osgoode Hall L.J., p. 137-139, there are limits on both criminal law and trade and commerce powers as instruments of environmental reform. Criminal law is often seen as to blunt to handle environmental reform for the complexities of environmental problems where negotiation is essential. The Trade and Commerce power reduces the environment to an economic commodity a cause of current problems. Furthermore Canadian courts have interpreted the power too restrictively to have application to environmental reform.

^{48.} R. v. Crown Zellerbach Canada Ltd., (1989) 1 S.C.R. 401.

concern⁴⁹. It is yet too early to determine whether the *Canadian Environmental Protection Act* will meet the test as set out in *Zellerbach*.

1.2.2.2 Overview of existing legislation

At present contaminated sites legislation is in various stages of development in each of the ten provinces. The approach followed ranges from the development of specific legislation addressing contaminated sites to the formulation of special provisions in general environmental protection legislation. At the federal level contaminated lands are addressed indirectly through the regulation of toxic substances. Two pieces of legislation are noteworthy in this respect, namely, the Canadian Environmental Protection Act and the Transportation of Dangerous Goods Act (TDGA)⁵⁰. In addition, federal parliament has jurisdiction to regulate "prescribed substances" which includes uranium⁵¹.

The Canadian Environmental Protection Act passed in June 1989 is the foremost piece of federal legislation regulating toxic substances in the environment. The Act incorporates the previously existing Environmental Contaminants Act⁵², the Ocean Dumping Control Act⁵³, the Clean Air Act⁵⁴, section 6(2) of the Department of the Environment Act⁵⁵ and the nutrient provisions of the Canada Water Act⁵⁶.

The objective of the Canadian Environmental Protection Act is the protection of human health and the environment from toxic substances. The Canadian Environmental Protection Act is preventative, working through a system of toxic substance identification. Regulation is aimed at the source of the problem, preventing toxic substances from entering the marketplace in Canada and ultimately the environment⁵⁷.

^{49.} Canadian Environmental Protection Act, S.C. 1988, c. 22 as am. S.C. 1989, c. 9. The Declaration reads: "It is hereby declared that the protection of the environment is essential to the well-being of Canada". The Preamble: "Whereas the presence of toxic substances in the environment is a matter of national concern".

^{50.} Transportation of Dangerous Canada Act, R.S.C. 1985, c. T-19.

^{51.} In 1946 the Atomic Energy Control Act, R.S.C. 1985, c. A-16, was created and by virtue of the declaratory power under s. 92(1()(c) of the Constitution Act 1867, the Act created a category of prescribed substances which included uranium whose production, refining or treatment were declared works for the general advantage of Canada. See P.W. Hogg, Constitutional Law of Canada, 2nd ed., Toronto, Carswell, 1985, p. 585.)

^{52.} Environmental Contaminants Act, S.C. 1974-75-76, c. 72.

^{53.} Ocean Dumping Control Act, S.C. 1974-77-76, c. 55.

^{54.} Clean Air Act, S.C. 1970-71-72, c. 47.

^{55.} Department of the Environment Act, R.S.C. 1970 (2d supp.), c. 14, s. 2-7.

^{56.} Canada Water Act, R.S.C. 1984, c. C-11.

^{57.} The Canadian Environmental Protection Act regulates toxic substances throughout their life cycle from research and development, through manufacturing, importation,

The Transportation of Dangerous Goods Act, although not as comprehensive as the Canadian Environmental Protection Act, has certain similarities. The Transportation of Dangerous Goods Act legislation and regulations have established a framework for the movement of dangerous goods interprovincially and internationally, covering all modes of transportation by road, rail, air and ship⁵⁸.

The Atomic Energy Control Act⁵⁹ and Regulations⁶⁰ controls the development, application and use of nuclear energy in Canada through an extensive licensing system that covers all aspects of the nuclear cycle, from the mining of uranium ores to the production of nuclear energy. The Atomic Energy Control Board (AECB) establishes the health, safety, security and environmental standards for all uses of the nuclear cycle including the establishment of waste facilities⁶¹.

Wastes generated in the nuclear industry raise two major concerns: low-level radioactive wastes at uncontrolled tailings sites and the storage of high-level radioactive wastes. The low-level wastes, radioactive waste rock and effluents produced during the mining and milling of radiactive ores are for the most part under the control of the Board. These wastes or tailings are contained in tailings impoundment facilities designed to limit migration in the environment. As part of the licensing requirements, mining companies are required to submit detailed plans of their waste treatment and tailings impoundment facilities as well as plans for decommissioning of their mines⁶². However, not all these mine wastes are under the Board's control. Wastes from abandoned mines that have ceased production prior to 1975, the owners of which no longer exist, are not under the Board's control. The problem with these uncontrolled wastes is ultimately one of liability; who should assume the responsability for clean-up and restoration of the environment? A similar problem exists with pre-1975 mines that were located on lands leased directly from the provinces. On termination of the leases the lands have reverted to the provinces. There are no specific

distribution, use and disposal. It provides for assessment of the toxicity of substances. Once determined toxic, a substance is placed on a Toxic Substance List. These substances are then subjected to cradle to grave regulation; that is, the government may regulate their import, export, manufacture, use, transport, storage, packaging and labelling, disposal and release into the environment.

^{58.} Management of the transportation of dangerous goods is accomplished through a system of hazardous product identification. This involves disclosure, product identification and packaging, product tracing throughout its movement, incident reporting, product handling, training and emergency response.

^{59.} Atomic Energy Control Act, R.S.C. 1985, c. A-16.

^{60.} Atomic Energy Control Regulations, C.R.C., c. 365.

^{61.} Atomic Energy Control Act, supra, note 59, s. 9.

^{62.} Uranium and Thorium Mining Regulations SOR/88-243, s. 36.

provisions in the Atomic Energy Control Act indicating that the Act is binding on provincial governments. Provinces maintain, however, that since the control of radioactive material rests with the federal government, so should the clean-up and decommissioning of these former mines sites.

The storage of high-level wastes is perhaps one of the most contentious issues facing the nuclear industry and society at large. These wastes, with half-lives in the thousands of years, are by-products of irradiated fuel rods used in the production of electricity from uranium fuel⁶³ and, to date, there is no known solution to the safe disposal of spent fuel rods. Currently irradiated fuel bundles are stored in deep water in concrete pools on site at nuclear installations. Notwithstanding this disposal problem, the Canadian government is pursuing a policy of continued research and development in the nuclear industry⁶⁴.

Another area of concern is activities that give rise to contamination or pollution of Federal Crown lands. Federal Crown lands are owned by Her Majesty in Right of Canada. However the administration and control of these lands are often assigned for the use of specific corporations and departments. Departments use, acquire and dispose of real property for a variety of purposes.

There is no legislation that addresses contaminated lands on federallyowned lands or for that matter, addresses environmental concerns in the general land management practices of the federal government⁶⁵. In circumstances where federal legislation is lacking regulations can be made under

- 63. The production of electricity from uranium fuel results in by-products, namely fission products (the splitting of uranium 235 atoms) and actinides (elements heavier than uranium). G.A. Pon, *The Fundamentals of Nuclear Power*, Atomic Energy of Canada Limited, 1978. These products have long half-lives and thus present a hazard to human life and the environment.
 - A half-life is the time required for half the radioactive atoms to decay. The majority of fission products will decay to more stable forms within 500 years. The remaining radioactivity is attributed to the presence of actinides with much longer half-lives. R. Lyond and M. Tutiah, Nuclear Fuel Waste Management Protection the Future, Pinawa, Man., Atomic Energy of Canada Limited, Whiteshell Nuclear Research Establishment, 1984.
- 64. Statement by Energy Minister Jake Epp, April 1989, that the nuclear opinion is part of Canada's energy mix. McGovern, "In a New Light", *The [Montreal] Gazette*, 25 June 1990.
- 65. In its capacity as landlord, manager and controller of its vast landholdings, the federal government is involved in the acquisition and disposition of real property, the leasing of Crown lands to third parties, the leasing of lands for its various departments and their uses, and the granting of licences for third party activities on its lands. Some of these activities may involve the sale or acquisition of contaminated lands as well as involve activities and uses that pollute. For example, leasing activities may involve third parties who engage in commercial/industrial activities (e.g. leases to pulp and paper operation)

Part IV of the Canadian Environmental Protection Act concerning the protection of the environment as applied to federal works and undertakings and federal lands⁶⁶. In addition, regulations concerning the waste management and disposal practices of the federal government, boards, agencies and corporations may be developed under this part⁶⁷. To date no regulations have been promulgated. Once regulations are developed, however, the potential application of Part IV of the Canadian Environmental Protection Act is considerable.

1.2.2.2.1 Liability

The term liability in a general sense refers here to responsibility for one's conduct in activities that may cause loss or damage to property or injury to persons. At a policy and legislative level allocation of this liability

on reserve lands, commercial leases at airports or harbours). On termination of the lease, the property returned to the federal government may be contaminated. Licences for pipelines and hydro transmission and fuel supplies on Crown lands may also result in contamination of these lands.

Another example of the need for legislation addressing environmental protection of federal lands is in the administration of Indian reserves. The Indian Act, administered by the Department of Indian and Northern Affairs, is the statutory authority for the administration and control of some 2.6 million hectares of reserve lands. There are no specific provisions under the Act that deal with protection of the environment; it provides only general authority to make regulations for the protection and preservation of fur-bearing animals, fish and game, weed and pest control and the provision of sanitary conditions on private and public places on reserves. Beside these general powers there are no provisions dealing with contaminated lands.

The extent to which native lands have become polluted is largely unknown; but the problem is serious. The lack of environmental regulation and enforcement on Indian lands and the fact that many reserves are sparsely populated and remote from urban centres makes these lands attractive waste sites. For a detailed discussion see: Commission d'enquête sur les déchets dangereux, Les déchets dangereux au Québec, Québec, Gouvernement du Québec, 1990, p. 108-120.

- 66. Canadian Environmental Protection Act, supra, note 49, s. 54(1). Regulations can be made by concurrence of the Minister who has the control of or duties and functions with respect to these works, undertakings or lands.
 - Federal lands include Crown held lands, Indian Reserves, the Territories and Arctic lands and submarine areas (not within a province) extending to the outer edge of the continental margin of two hundred miles from the baselines from which the territorial sea is measured, whichever is greater. All water and air above these areas is included.
 - "Federal works on undertakings" means any work or undertaking that is within the legislative authority of Parliament, including operations in connection with navigation and shipping, airports and airplanes, interprovincial railways, shipping, canals and ferrylines and telegraphs, banks and broadcasting. In addition, federal works and undertakings include works outside the exclusive jurisdiction of the provinces and for the general advantage of Canada. (s. 52)
- 67. Ibid., s. 54(2).

is reflected in the desire to make persons who cause pollution responsible for the damages or losses arising from the pollution, in other words "the polluter pays" principle.

While the polluter-pays principle has not been defined in Canadian legislation nor formally entrenched in Canadian policy, it has received international attention. According to the Organization for Economic Co-operation and Development (OECD), it is a market-based measure intended to force polluters to factor in environmental costs arising from their polluting activities. Through the imposition of such measures as regulations, prohibitions, pollution charges and other mechanisms, the polluter is the first to pay for degradation of the environment⁶⁸.

In Canada, legislatures have attempted to implement the principle in several ways, notably, through the imposition of increased liability for pollution, emphasis on restoration of the environment and finally through stricter enforcement measures.

1.2.2.2.1.1 Definition of polluter

One of the objectives or goals of polluter-pays legislation is to make persons who cause pollution responsible for damages or losses arising from the pollution. This, however, can be a difficult process. Polluting events tend to be complex. They often take place over a number of years involving a large number of persons some more directly involved, others less. With the passing of time identifying and locating defendants can be difficult. In addition, pollution or contamination may arise from more than one source making cause-effect relationships difficult to prove⁶⁹.

Canadian legislation has responded to this problem by extending liability to a broad range of persons including owners⁷⁰, persons in possession, charge or control of a pollutant⁷¹, as well as persons who directed,

^{68.} ORGANIZATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT, The Polluter Pays Principle: Definition, Analysis, Implementation, Paris, OECD, 1975, p. 12.

^{69.} Take the example of a present-day contaminated landfill site that has been operative for 25 to 30 years, during which the site has received hazardous and non-hazardous wastes from a variety of sources. A number of persons some more directly responsible, others less, may have contributed to the pollution on-site. These may include: the owners of the site, persons in charge or control of the overall business operation, operators involved in the running of the day-to-day activities, producers or generators and transporters of the wastes. In addition, lenders may have been involved in financing the business operations. To further complicate matters, neighbouring waste dumps and heavy industry, e.g. a steel fabrication plant, may also have contributed to the contamination.

^{70.} Environmental Protection Act, R.S.O. 1980, c. 141, s. 81(1).

^{71.} Waste Management Act, S.B.C. 1982, c. 41, s. 10(2).

acquiesced or participated in the polluting activity⁷². In some instances, as we shall see in the following section, persons who caused pollution in the past may also be classed as polluters for the purposes of determining liability for clean-up⁷³. Accordingly, legislatures have placed the responsability for the pollution not only on persons who actually caused the contamination but also on those in a position to prevent or control the contamination.

1.2.2.2.1.2 Liability for past events

Land contamination other than sudden events such as spills, explosions etc. often takes place over a number of years. Moreover, it may be years and even decades before signs or evidence of contamination are apparent. This is particularly true of buried wastes where migration processes in the sub-surface are slow. It may be decades before effects are felt at the earth's surface, for example contamination of drinking water systems, biological uptake in the food-chain, human sickness (usually illnesses that require long latent periods to develop). Once contamination is discovered, authorities are confronted with the problem of responsibility for clean-up and associated losses and damages occasioned by the harm. In circumstances where past polluters can be located there remains the issue as to whether they should be made liable for past acts or actions that may have been perfectly legal at the time they were committed. In other words, should present laws be applied retroactively to force polluters to clean up pollution they may have caused or contributed to before the law prohibiting such pollution came into force.

One of the main arguments against the retroactive application of law is the presumption that laws deal with future acts. Law guides behaviour; from this guidance the public forms expectations on how the legal system will react to a particular activity. Retroactive law change these expectations and penalizes actions taken in reliance on what existed when the action was taken⁷⁴. There is also the difficulty of gathering evidence against former polluters; past records may long since be destroyed. Environmental quality legislation in the province of Quebec imposes liability on persons who polluted prior to the legislation coming into force⁷⁵. This provision has

^{72.} Environmental Protection Act, supra, note 71, s. 147(a), Waste Management Act, supra, note 72, s. 34(10).

^{73.} Environmental Quality Amendment Act, S.Q. 1990, c. 26, s. 31.42, 31.43, impose liability on persons who have polluted prior to June 22 1990.

^{74.} S.R. MUNZER, "A Theory of Retroactive Legislation", (1982) Vol. 61, No. 3, Tex. L. Rev. 425.

^{75.} Environment Quality Amendment Act, supra, note 73.

not yet been contested and it is too recent to know its effect. In the United States under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)⁷⁶ former owners and operators may be liable for clean-up and restoration of a site. Liability is limited to circumstances where persons owned or operated the site when a hazardous release occurred⁷⁷. The constitutionality of the Act, however, has been challenged unsuccessfully on a number of occasions. The courts have held that Congress intended that CERCLA apply retroactively; in so much as it supports a rational purpose retroactive application of this legislation is not unconstitutional⁷⁸.

1.2.2.2.1.3 Strict or absolute liability

Pollution can arise from a variety of activities and have a range of effects, some minor others serious, as well as involve varying degrees of fault⁷⁹. In Sault Ste. Marie⁸⁰ Dickson J. attempted to distinguish between offences which are truly criminal requiring full mens rea and those which are more civil in nature or not "truly criminal" where negligence is the basis of liability. Pollution offences he categorized as public welfare offences or offences of a civil or administrative nature, which are not criminal in the true sense. In spite of severe penalties and prosecution for breaches of environmental offences this is the domain of administrative law rather than criminal. This categorization has raised various conceptual difficulties. It implies that pollution offences are and should be always and only

Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C., § 9601-9675.

^{77.} Ibid., s. 9607(b). Liability for clean-up includes persons who at the time of disposal of the hazardous substances owned or operated hazardous waste facilities, persons who arranged for disposal or treatment or transport of the hazardous materials, persons who accept or accepted hazardous materials for transport to treatment or disposal facilities.

^{78.} Two Supreme Court cases, Usery v. Turner Elkhorn Mining Co., (1976) 428 U.S. 1, and Pension Benefit Guaranty Corp. v. Gray & Co., (1984), 467 U.S. 717, have articulated the rational purpose. In Usery, coal mine operators were held liable for the compensation of former disabled employees. The court held that the imposition of liability for disabilities caused by activities of the past was justified as a rational measure to spread costs of the disabilities to those who had profited from the fruits of their labour. Gray confirmed the rational purpose in holding that the retroactive application of the Pension Plan Amendments Act of 1980 was justified on the basis that the Act's purpose could then be more fully effectuated.

^{79.} J. SWAIGEN and G. BUNT. Sentencing in Environnemental Cases, [study paper], Ottawa, Law Reform Commission of Canada, 1985, p. 2. If actual pollution is involved, its effects 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 a reasonable error in judgement.

^{80.} R. v. Sault Ste-Marie, (1978) 40 C.C.C. (2d) 353 (S.C.C.).

regulatory offences and there is no mention that in some instances pollution might be real crimes in the fullest sense⁸¹.

Following Sault Ste. Marie pollution legislation is characterized by a mixture of offences, some importing penal liability requiring full mens rea⁸², others not requiring proof of fault or negligence as in absolute liability offences⁸³ and strict liability offences⁸⁴ where an accused may escape liability by showing he or she exercised all due diligence⁸⁵ in performing an activity even though a spill or polluting event resulted. In strict liability offences persons are thus encouraged to take all precaution to ensure that their activities will not cause pollution.

With absolute liability offences it is not open to offenders to prove they are free of fault. Proof of the mere commission of the activity is sufficient grounds for liability. Absolute liability offences may however be challenged under the Canadian Charter if and to the extent that it has the potential of depriving of life, liberty or security of the person⁸⁶.

^{81.} J. SWAIGEN and G. BUNT, supra, note 79.

^{82.} For example, under the Canadian Environmental Protection Act, (s. 114(c)), persons who knowingly give false or misleading information to the Minister can be subject to a fine of \$1,000,000 or imprisonment or be sentenced to both (s. 114(d)). More serious offences involving the wanton or reckless disregard for the lives or safety of other persons and thereby causing death or bodily harm can be prosecuted under the Criminal code and could result in life imprisonment.

^{83.} Under the Environmental Protection Act, supra, note 70, s. 87(4), persons are absolutely liable for the costs of clean-up of the pollution they cause.

The Nuclear Liability Act, R.S.C. 1985, c. N-28, provides that in the event of a spill, discharge or emission of radioactive material as a result of the operation of nuclear installation, the operator of the installation is absolutely liable for any injury or damage to the property. However, operator's liability is limited to \$75,000,000 per incident. Cases in excess of the amount may receive additional compensation to be authorized by Parliament, pending review by a Claims Commission.

^{84.} Environmental Protection Act, supra, note 70, s. 87(6). Strict liability is imposed for losses or damages from spills.

^{85.} The defence of due diligence and the burden put on the accused to prove it on a balance of probabilities were held not to offend s. 11(d) of the Charter. See R. v. Wholesale Travel Group Inc., S.C.C., October 24, 1991, nos. 21779.

^{86.} Reference re. Section 94(2) of the Motor Vehicle Act (B.C.), (1985) 2 S.C.R. 486. At issue was the constitutionality of s. 94(2) of the Motor Vehicle Act. Section 94(2) provided that a person who drives a motor vehicle while prohibited or while his licence has been suspended is guilty of an absolute offence and is liable to imprisonment. The provision further stated that guilt is established by proof of driving whether or not the defendant knew of the prohibition or suspension. Lamer J., stated that a law enacting an absolute liability offence will violate s. 7 of the Charter only if and to the extent that it has the potential of depriving of life, liberty or security of the person. Absolute liability per se does not violate s. 7.

1.2.2.2.1.4 Allocation of liability

Identifying all polluters who have contributed to the pollution is particularly problematic with respect to contaminated lands. As we have already mentioned, given the long latent periods between exposure and injury, or commission of the polluting act and manifestation of damage, it may be difficult for claimants to determine who is liable and to what extent.

To overcome a claimant's difficulty of identifying all responsible defendants the concept of holding defendants jointly and severally liable for damages has been introduced in some environmental legislation⁸⁷. Joint and several liability makes everybody who has contributed to the contamination liable for the full amount of the compensation and gives each defendant the right to contribution from other defendants in proportion to their respective fault, Claimants need only identify one defendant to compensate them for their losses⁸⁸. It is then left to those who are responsible for the pollution to work out among themselves their respective share of responsibility for the damage caused.

1.2.2.2.2 Prevention and restoration

Legislation that aspires to make polluters pay for the pollution they cause must include the means to achieve this goal. Canadian legislation provides a whole range of enforcement measures to ensure that persons comply with the legislation and to ensure that they are deterred from generating further pollution. At one end of the spectrum these range from routine administrative devices such as inspection and investigation⁸⁹, stop orders, control orders and court orders⁹⁰, injunctions, to more serious sanctions involving prosecutions, severe fines and penalties.

Several factors including the nature of the offence, impact on the environment, intent of the offender and steps taken to prevent the offence from occuring condition the enforcement measures to be taken. The more serious the offence the more serious the enforcement measure will be.

^{87.} Environmental Protection Act, supra, note 70, s. 87(7).

^{88.} Beyond requiring polluter to pay for clean-up or restoration of the environment, most regimes have not defined what losses or damages polluter may be liable to pay. The Ontario legislation has defined losses to include personal injury, loss of life, loss of use or enjoyment of property, pecuniary loss and loss of income. See *Environmental Protection Act, supra*, note 70, s. 87(1).

^{89.} Environmental Protection Act, supra, note 70, s. 126. Supra, note 71, s. 21. Environmental Quality Act, R.S.Q., c. Q-2, s. 119, 120.

^{90.} Environmental Protection Act, supra, note 70, s. 6(1), 7(1), 17, 85, 113, 115, 117, 146(d). Waste Management Act, supra, note 71, s. 10(2), 13, 22, 34.1.

Inspection measures are used routinely to examine and ensure compliance with the requirements of legislation. Several regimes provide for very broad powers of both inspection and investigation⁹¹. Inspectors can enter onto an operation to inspect the premises. Moreover, some have extensive powers to solicit information from persons who engage in activities that pollute. For example, the *Canadian Environmental Protection Act* confers very broad information gathering powers to collect data and conduct investigations⁹² and to solicit information from manufacturers, users and importers⁹³ of chemicals to identify the potential toxicity of substances on humans and on the environment. The onus is on persons in a position to prevent and control pollution in the environment to supply information as to the toxicity of these substances that they use in their activities. This allows for a close watch to be kept on persons who engage in activities that have the potential to pollute.

More serious enforcement measures permit severe penalties and even imprisonment. Recent environmental legislation has place heavy emphasis on this punitive aspect. Fines can range from less than \$1,000 for minor offences to \$1,000,000 per incident for more serious offences. Sentencing can range from six months imprisonment for knowingly supplying false and misleading information to five years for recklessly causing damage to the environment or showing reckless disregard for the lives or safety of other persons. Under the Canadian Environmental Protection Act, wanton disregard for other persons lives or safety can lead to prosecution under the Criminal Code⁹⁴ if harm or death results.

1.2.2.2.1 Requirements of restoration

Generally, legislation in Canada does not address the requirements of restoration, notably the required levels of clean-up and procedures for restoration of the environment. Most regimes recognize the need for legislation to provide a comprehensive program or system for the clean-up and

^{91.} Waste Management Act (British Columbia), supra, note 71, s. 21; Environmental Protection Act, supra, note 70, s. 126; Environmental Quality Act, supra, note 89, ss. 119, 120.

^{92.} Canadian Environmental Protection Act, supra, note 49, s. 15. Under the Transportation of Dangerous Goods Act, supra, note 50, s. 14, 15, inspectors have broad powers of investigation and search and seizure where they are satisfied on reasonable and probable grounds that there is non-compliance. Severe penalties can be imposed in instances of non-compliance. For example, for non-compliance with prescribed safety requirements in transporting dangerous goods, a summary conviction for a first offence may result in a fine of \$50,000; for a second offence a fine of \$100,000 can be imposed. S. 6(1).

^{93.} Canadian Environmental Protection Act, supra, note 49, s. 16, 17.

^{94.} Ibid., s. 115(2).

restoration of contaminated sites. Among other things such legislation would specify what sites should be cleaned and the procedures to be followed.

Currently regimes require that polluter or persons responsible for clean-up of the environment do whatever is necessary to abate, mitigate or lessen the adverse impact on the environment⁹⁵. Whatever these measures or methods are, they are at the discretion of the municipality or governing authority where the contamination occurs to provide.

Quebec's Environmental Quality Amendment Act, however, provides some guidance regarding requirements of clean-up and restoration. There are no less than four circumstances listed in the Quebec legislation that may trigger the obligation to restore the environment: i) the Minister believes on reasonable grounds that contaminants are present in the environment in the Minister establishes that contaminants are present in the environment in excess of permissible levels⁹⁷; iii) the Minister determines that contaminants are present in soils in excess of permissible levels⁹⁸; and iv) industrial activity is likely to contaminate soils⁹⁹.

Where contaminants are suspected, the Minister has authority to order the person responsible, in whole or in part, to prepare for ministerial approval an environmental study of the contamination and a plan for restoration describing the proposed work and timetable for completion¹⁰⁰. Where contaminants are actually discovered, the Minister may exercise broader powers and order the person responsible to remove, collect or neutralize the pollution, or to take any other measures to restore the environment¹⁰¹.

In addition, under the Quebec legislation owners of contamined soils must obtain authorization from the Minister before they undertake any

^{95.} Environmental Protection Act, supra, note 70, s. 80 and 81. Owners and controllers of a pollutant are required to report a spill to the Minister and to local authorities where the spill causes or is likely to cause an adverse effect on the environment. The owners and controllers are then under a duty to do everything practicable to prevent or ameliorate any adverse effect and to restore the environment.

Waste Management Act, supra, note 71, s. 10. Under the British Columbia Act persons in possession, charge or control of a polluting substance may be ordered by the Minister to do what is necessary to prevent or abate a spill, including providing contingency plans as well as tests to determine risk.

^{96.} Environmental Quality Amendment Act, supra, note 73, s. 31.42.

^{97.} Ibid., s. 31-43.

^{98.} Ibid., s. 31.49. (This section has not yet been proclaimed in force.)

^{99.} Ibid., s. 31-51. (This section has not yet been proclaimed in force.)

^{100.} Ibid., s. 31.42.

^{101.} Ibid., s. 31.43.

changes in the soil, excavation, construction, etc. ¹⁰². Similarly, persons who engage in activities likely to pollute are required to obtain Ministerial authorization prior to dismantling equipment or buildings ¹⁰³. This authorization is conditional on the owner or persons engaging in these various activities submitting to the Minister: soil studies, a plan for decontamination and restoration of the site, and a description of the proposed project ¹⁰⁴.

British Columbia is currently proposing the need for preliminary assessments to determine the extent of contamination at a site. The obligation to conduct a preliminary assessment would be triggered on the occurrence of several events, including development or redevelopment of a site, permit applications for removal of soils from a site, decommissioning of industrial/commercial facilities, waste permit applications and discovery of contamination¹⁰⁵. A preliminary assessment would reveal whether further and more detailed assessment is required.

1.2.2.2.2. Duties to notify

To ensure that the environment will be restored polluters are required to notify the appropriate authorities (i.e. Ministry or Department of the Environment, Health, etc.) of the occurrence or discovery of contamination 106. Moreover, some regimes require persons to provide information as to the nature of the hazardous substances that are used in their operations 107. Thus, persons or parties who cause pollution, or who are involved in activities that have the potential to pollute, are encouraged to conduct

^{102.} Ibid., s. 31.49.

^{103.} Ibid., s. 31.51.

^{104.} The proposed land use or project, if known at the time of clean-up, figures significantly in determining what the acceptable level of the clean-up should be. Clean-up intended for commercial use would not be acceptable for land that is later re-zoned for residential use. The issue of intended land use raises a set of related concerns. Should polluters be required to clean the site to meet future land uses? If not, what about future liability? That is, might a polluter who restores the site to meet the existing commercial use also be liable at some future date to restore the land to a higher level of use, e.g. residential. To date, these issues have not been addressed by legislation.

^{105.} W. Braul, New Directions for Regulating Contaminated Sites: A Discussion Paper, Victoria, Ministry of Environment, 1991.

^{106.} Environmental Protection Act, supra, note 70, s. 80. Waste Management Act, supra, note 71, s. 10(2).

^{107.} Canadian Environmental Protection Act, supra, note 49, users of chemicals are required to supply authorities with information concerning the potential toxicity of these substances on humans and on the environment.

their activities in an environmentally-conscious manner. Failure to do so can result in severe penalties 108.

Persons who engage in activities that have the potential to pollute are required to notify the appropriate authority when a spill has occurred or where contamination is suspected or discovered 109. Early warning of potential contamination can prevent its occurrence; immediate notification of contamination will ensure clean-up. These persons are also required to do all that is necessary to clean-up and abate or control contamination.

1.2.2.2.3 Emergency requirements

Several regimes have recognized that there may be emergency conditions requiring immediate attention. In these circumstances persons responsible are required to do whatever is necessary to clean-up the contamination and to mitigate any adverse impacts on the environment¹¹⁰.

In some cases persons responsible for the contamination may not be located. Under these circumstances the proper authorities are permitted to enter onto the site and take whatever measures necessary to clean-up the contamination. Costs or expenses of such measures may be recovered from the owners or controllers of the site or persons who caused the polluting event¹¹¹.

In summary, at the federal level, most legislation addressing the issue of contaminated sites does so from the aspect of prevention. The regulation of toxic or hazardous substances under the Canadian Environmental Protection Act and the Transportation of Dangerous Goods Act is directed at

^{108.} Most legislation provides severe penalties, fines and sentences for non-compliance. Depending on the seriousness of the offence, fines range from less than \$100 to \$1,000,000 per offence and sentences can run from six months to life imprisonment.

^{109.} Environmental Protection Act, supra, note 70, s. 80. Waste Management Act, supra, note 71, c. 41, s. 10(5).

^{110.} Environmental Quality Amendment Act, supra, note 73; Environmental Protection Act, supra, note 70. Section 81(1) provides that the owner or controller of a pollutant that has spilled, that causes or is likely to cause an adverse effect shall do everything practicable to prevent, eliminate and ameliorate the adverse effect and to restore the natural environment.

Section 22(1) of the Waste Management Amendment Act 1990, S.B.C. 1990, c. 74 (British Columbia), provides that where a substance is causing pollution, persons in possession, charge or control of the substance at the time of its escape, persons who authorized the pollution or occupiers or owners of land where the substance is located or was located prior to its escape, are required to carry out remediation in accordance with criteria established by the respective authority.

^{111.} Environmental Protection Act, supra, note 70, s. 87(2)(b). Environmental Management Act, S.B.C. 1981, c. 14, s. 6.

preventing these substances from ever reaching landfill sites. Secondly, persons who use toxic substances are required to undertake their activities in a more environmentally responsive manner. Owners and users of hazardous substances are required to provide information as to the safety of their products, register, handle, package and transport these substances in accordance with strict legislation requirements. Accordingly, federal legislation and in particular the *Canadian Environmental Protection Act* has made persons who engage in activities that have the potential to pollute assume some of the responsibility for their activities. This is consistent with the polluter-pays principle which is aimed at making persons who pollute responsible for the pollution they cause. In other areas such as the administration and control of Federal Crown lands, legislation addressing the management of contaminated sites is lacking.

In many respects provinces are further ahead of the federal government in the development of legislation addressing contaminated sites. However legislation is still in its initial stages of development. Detailed requirements of restoration have yet to be identified. Criteria for clean-up need to be applied consistently nation-wide.

2. The need to improve victims means of redress

2.1 Polluter bankruptcy

The polluter-pays principle provides that the polluter or person who caused the pollution should be responsible for restoration of the environment and in several regimes this has been extended to include compensating victims for personal injury and damages to property arising from the pollution¹¹². In some cases plaintiff or claimant may be unable to obtain compensation from the defendant. A defendant may be bankrupt and therefore unable to clean-up the pollution that he has caused. However, a recent Alberta Court of Appeal case has placed the obligation to clean up the environment, in this case, contaminated oil and gas well sites, above the claims of creditors¹¹³. In so doing the decision has considerably broad-

^{112.} Environmental Protection Act, supra, note 70, s. 87(1).

^{113.} Panamericana De Bienes Y Servicios, S.A. v. Northern Badger Oil & Gas Limited (otherwise known as Northern Badger), Alberta Court of Appeal, # 11698, # 11713, June 12 1991, Laycraft, J. The Court of Appeal ruled that the bankrupt Northern Badger oil company must comply with Alberta legislation requiring clean up of abandoned oil and gas wells before settling its claims with creditors. Alberta legislation detailing the requirements of abandonment is binding on every citizen of the Province, including the Court-appointed Receiver who was also a licensee of the company's oil and gas wells. So stating, Laycraft J. went on to say: "this is not a case of Provincial law subverting the scheme of the federal Bankruptcy Act, but rather [...] it is general law regulating the

ened the implications of lender liability. That is, lenders may have difficulty in recovering funds from a bankrupt polluter. Furthermore on repossession the asset may be contaminated. Consequently lenders may also be liable for its cleanup.

In other circumstances, in particular where there are long latent periods between the polluting event and manifestation of damage or injury (a charateristic of contaminated sites), the defendant may not be identified or located.

Under these circumstances there should be some means to compensate the victim for damages or losses suffered¹¹⁴. A requirement that a defendant industry post performance bonds prior to undertaking an activity might provide some financial guaranty against bankruptcy. Additionally, insurance coverage against environmental disasters might also ensure that the environment will be restored and victims will be compensated for their losses.

Where defendants cannot be identified or located, a fund set-up under the respective legislation would ensure that plaintiffs or claimants would nonetheless receive compensation. This could be financed by a tax on industries or individuals who engage in activities that have the potential to pollute. In accordance with the polluter-pays principle, polluters or persons who engage in activities that have the potential to pollute would thus be forced to internalize the cost of their activities. Such is the rational behind the creation of the American Superfund. The Superfund was created initially as a tax on chemical industries, the idea being that industries that profited from polluting activities should bear the cost of cleaning abandoned waste sites¹¹⁵.

operation of oil and gas wells, and safe practices relating to them [...] it may incidently affect the distribution [under the Bankruptcy Act] and it does so not by direct conflict in operation, but because compliance by the Receiver with the general law means less money will be available for distribution (p. 34)."

^{114.} The Ontario Environmental Protection Act, supra, note 70, has enacted two provisions, s. 89 and 91, that provide for state compensation. Section 89 provides that persons other than polluters or persons who own or are in control of a pollutant can apply to the Crown for compensation for the reasonable costs and expenses of clean-up. This section may thus serve to recompense third parties for their expenses in cleaning a spill in cases where the polluter or persons responsible cannot be found. Section 91 provides for victim compensation for damages arising from spills. Owners or controllers of the pollutant may also recover. Recovery for compensation is limited to the requirement of specific deductibles, thus requiring owners or controllers of the pollutant to absorb some of the liabilities of their activities.

E.A. GLASS, "Superfund and SARA: Are There Any Defences Left?" (1988) 12: 2
 Harv. Envtl. L. Rev. 385.

2.2 Class actions and the Quebec model

The current system of providing individual civil redress for harms arising from industrial and other forms of pollution can be both slow and costly. Claims often involve very complex medical and technical issues. Proving cause and effect between the defendant's act and plaintiff's injury is notoriously difficult. Expert testimony is often required from numerous witnesses. All of these factors add to the delay and high costs of individual civil actions for damages. As a result many victims or claimants may never get access to justice. They are thereby denied recovery for the harms they have suffered. One method however, which may permit claimant recovery for environmental harms, is the class action.

A class or representative action as defined by the Ontario Law Reform Commission¹¹⁶ is:

an action brought either by one or more persons on behalf of others having similar grievances, or against one or more persons defending on behalf of a group of persons similarly situated. The former is known as a plaintiff class action while the latter may be referred to as a defendant class action.

Class action is essentially a means or mechanism that allows a group of individuals who have similar claims to bring their claim to court. Usually the action is brought by an individual or representative of the group. The judgement is binding on all members of the class. Similarly, all costs and expenses associated with an action are shared by the group. Environmental pollution normally affects large numbers 117 of persons. The harm suffered by each individual may be relatively small, yet the total harm suffered by all claimants may be great. Class actions have potential to provide redress

^{116.} Ontario Law Reform Commission, Report on Class Actions, v. 1, Toronto, Ministry of the Attorney General, 1982, p. 2.

^{117.} A classic example is Love Canal. Households were forced to evacuate the area in 1978 when toxic dioxins, a legacy of Hooker Chemicals, were discovered in basements, sewers and yards. N. Angrier, "Hazards of a Toxic Wasteland", Time Magazine, 17 December 1984, p. 24. More recent, and perhaps the worst industrial disaster on record, was the escape of lethal methyl isocyanate gas from the Union Carbide plant in Bhopal, India. Five years following the incident a settlement was reached involving some 500,000 claimants. Currently claimants are looking to overturn the decision of the Indian Supreme Court approving the agreement. See Foreign General News, 15 February 1991. Other examples include the asbestos cases, "A Critical Report on Asbestos Suits", The New York Times, December 1985, in the United States involving some 30,000 claimants and the PCB fire at St. Basile-le-Grand, Québec, National General News, 2 January 1991, which forced some 3,500 residents from their homes.

where it would otherwise be uneconomical for victims to seek as individuals¹¹⁸.

Furthermore, class actions provide an effective means to make the polluter pay or internalize the cost of degradation of the environment. A potential class action involving a massive damage award reflecting the total cost of pollution to a widespread segment of society will be an incentive for the polluter to allocate resources to reduce pollution¹¹⁹.

In the United States class actions have been used since 1938¹²⁰ in areas involving civil rights, antitrust, securities and protection of the environment. Unlike the United States, Canada has not had much experience with class actions. Quebec is the only jurisdiction to have developed a true class action¹²¹. It was introduced in 1978 and to some extent has been inspired by the American model¹²². In the past ten years class actions in Quebec have

^{118.} The great advantage of class actions is their scope. They can secure access to courts for large numbers of persons who would otherwise be unable to recover for their injuries, either because their claims are too small to warrant litigation, because they do not realize they can recover, because they do not have access to legal counsel or because they have a continuing relationship with the defendant who may be an employer or a creditor. J. SWAIGEN, Environmental Rights in Canada, Toronto, Butterworths, 1981, p. 64.

^{119.} Ibid., p. 67.

^{120.} The Federal Rule governing class actions in federal courts was enacted in 1938. In the mid-sixties this rule underwent major changes and gave rise to Federal Rule 23. Since then Rule 23 has undergone various reforms.

^{121.} The main provisions form Book Nine of the Quebec Code of Civil Procedure, L.R.Q., c. C-25, art. 999-1051. Article 999 provides definitions. Article 1000 confers exclusive jurisdiction upon the Superior Court of Quebec to hear class actions. Article 1001 provides that the Chief Justice of the Superior Court may designate a judge to hear the class action. Articles 1002 to 1010.1 address the procedures to be followed in order to obtain the court's authorization to institute a class action. Once authorization has been obtained a class action may be initiated and must be commenced within three months of the authorization (art. 1011). Articles 1011 to 1026 detail procedures of how the action should be conducted. Articles 1027 to 1030 address the content and effect of the final judgement. (Final judgement as defined in art. 999(b) means the judgement which decides the question of law or fact dealt with collectively.) Every final judgement is binding on the group or class numbers (art. 1027). A money judgement may be recovered collectively or by the filing of individual claims (art. 1028). Procedures for collective recovery are detailed in art. 1031 to 1036. Claims are paid in the following order: law costs, fees of the representative's lawyer, and then the claims of the members (art. 1035). Articles 1037 to 1040 address individual claims. Defendants may at this point raise questions pertaining to the individual's claim (art. 1040). The final judgement of the court may be appealed by the class representative or a member (art. 1041 to 10444). Articles 1045 to 1051 deal with miscellaneous issues including, authority for the court to do what is necessary to hasten the proceedings, the content of court notices, requirements of a corporate representative etc.

^{122.} M. BEAUMIER, «Le recours collectif au Québec et aux États-Unis », (1987) 18 R.G.D. 775, p. 778.

been instituted in a number of areas including consumer protection, matters involving labour and employment, discrimination, retirement pensions and environmental protection¹²³.

The Quebec model permits not only collective claims to be addressed in the action but individual claims may be heard as well¹²⁴. The Quebec model has thus been described as a three-step process: the authorization of the class action; examination of the merits of the collective questions; and examination of the merits of individual claims. Authorization to institute a class action must be obtained from the court prior to a class action being initiated. The requirements that must be met are 125 : (a) the claim of the members raise identical, similar or related questions of law or fact; (b) the facts alleged seem to justify the conclusions sought; (c) the composition of the group precludes the application of other collective procedures under the Code of Civil Procedure (articles 59 or 67); and (d) the class representative will represent the members adequately. With the exception of (b) these requirements are similar to the American model.

In the past Quebec courts have interpreted these requirements strictly and, as a result, authorizations to institute a class action were often denied. However, in a recent case Comité d'environnement de la Baie Inc. v. Société d'électrolyse et de chimie Alcan Ltée¹²⁶, the requirement that questions of law or fact be "identical", similar or related" was more broadly interpreted by the Quebec Court of Appeal. According to the ruling of the Court in that case, the requirement of Art. 1003(a) is satisfied if the claims raise "some questions of law or fact that are sufficiently similar or sufficiently related to justify a class action". Furthermore, the Court held that it is not necessary that the questions of law or fact be totally identical, similar or related to justify a class action. It is sufficient that common

^{123.} A. ZILBERT, "Les plaideurs se réfèrent spontanément au recours collectif dans leur pratique", (1989) 5:4 Le Monde Juridique 10.

^{124.} Code of Civil Procedure, supra, note 121, art. 1037 to 1040 address individual claims. The individual claimant must file his claim within one year of notice of the final judgement of the case having been published.

^{125.} Ibid., art. 1003.

^{126.} Comité d'environnement de la Baie Inc. c. Société d'électrolyse et de chimie Alcan Ltée, (1990) R.J.Q. 655 (C.A.). An Environmental group sought authorization from the court to institute a class action against Alcan for damages arising from allumina, bauxite and coal dust. Since many of the members suffered differently from the operations, at issue was whether the questions of law and fact were too dissimilar to authorize a class action. The appeal was allowed on the grounds that some questions were sufficiently similar or related to justify a class action. The claims were based on the same source of bauxite, alumina and coal dust in the air in a certain sector of the municipality. These airborne particulates all emanated from Alcan's handling and storage of the substances at the port.

elements among them raise questions that warrant disposing of the related claims in a single class action.

Quebec has developed a mechanism or means to further facilitate class actions through the development of the Class Action Assistance Fund. The fund is financed by the provincial government ¹²⁷ and by a percentage taken from successful claims. The class representative can make application to receive assistance for such purposes as legal fees, court costs, costs of expert testimony etc. Applicants are required to pay back the fund on completion of the class action.

It is unfortunate that the future of class actions in Canada is uncertain. Future industrial growth and the development of new and sophisticated technology will create not only increased pollution but new types and forms of pollutions. These developments create a need for a mechanism similar to the Quebec model which would allow large numbers of persons to recover collectively.

In summary, at the federal level, most legislation addressing the issue of contaminated sites does so from the aspect of prevention. The regulation of toxic or hazardous substances under the Canadian Environmental Protection Act and the Transportation of Dangerous Goods Act is directed at preventing these substances from ever reaching landfill sites. Secondly, persons who use toxic substances are required to undertake their activities in a more environmentally responsive manner. Owners and users of hazardous substances are required to provide information as to the safety of their products, register, handle, package and transport these substances in accordance with strict legislation requirements. Accordingly, federal legislation and in particular the Canadian Environmental Protection Act has made persons who engage in activities that have the potential to pollute assume some of the responsibility for their activities. This is consistent with the polluter-pays principle which is aimed at making persons who pollute responsible for the pollution they cause. In other areas such as the administration and control of Federal Crown lands, legislation addressing the management of contaminated sites is lacking.

In many respects provinces are further ahead of the federal government in the development of legislation addressing contaminated sites. However legislation is still in its initial stages of development. Detailed requirements of restoration have yet to be identified. Criteria for clean-up need to be applied consistently nation-wide.

^{127.} The province has invested a total of \$1.5 million in the fund. A. GAGNON, « Après 10 ans, le recours collectif a atteint sa pleine vitesse de croisière » (1989) 5:4 Le Monde Juridique 15.

Conclusions

Harms arising from contamination of the environment differ from harms arising from traditional tort cases. Contamination is usually widespread affecting large areas and large numbers of persons. The polluting event or events are complex: the substances are normally very toxic and may come from a variety of sources over long periods of time. Moreover it may be decades before the effects of the contamination are apparent at the earth's surface and in human beings. Typically human sickness from toxic substances involve long latent periods to develop. Actions at civil and common law based on the traditional requirements of showing that property interests have been affected, or personal injury has resulted, are inadequate to address harms arising from pollution.

Recent legislative initiatives have addressed some of these short-comings. Legislation is directed at protecting the environment, not solely personal or property based interests.

Several innovations have been introduced to achieve this. Persons who pollute or undertake activities that have the potential to pollute are made responsible for the pollution they cause. Liability for pollution has been extended to include not only persons who cause pollution but also those in a position to control or prevent pollution. In addition, some regimes have broadened this liability to include persons who have polluted in the past. This broad net of liability increases the likelihood that the pollution will be cleaned-up. It also encourages all parties, no matter how remotely connected to an operation, to behave in a more environmentally-conscious manner.

Second, there has been a major shift away from the requirement to prove fault or negligence toward strict and absolute liability. Strict liability may not always be an effective deterrent against pollution. Where polluters establish a paper trail indicating the exercise of due diligence, it may be difficult for prosecutors to prove otherwise. Absolute liability offences may however be an effective deterrent against pollution in the initial planning stages of an activity. Persons knowing that they will be liable for their activities no matter what precautions they take will be forced to take account of the risk associated with the operation early. If the risk is great, they may decide against the undertaking. In addition, the existence of more onerous penal liability (severe fines and the possibility of imprisonment) will not only deter the commission of serious offences but underscores the importance of protecting the environment.

While the liability aspect of polluter-pays legislation appears to be well defined, the requirements of clean-up and restoration of contamination

have not. There is obviously a need for legislation to specify more comprehensive restoration plans.

Victim compensation or redress for environmental harms is a grey area that has not been addressed in detail by legislation. This issue arises in several contexts: the responsibility for clean-up and restoration of the environment in circumstances where polluters cannot be identified or located; and victim access to justice in what is becoming an area of costly litigation. Reform is needed in this area of the law.

Legislatures should be looking to the creation of a clean-up fund, perhaps as a tax on individuals or industries who engage in activities that have the potential to pollute, to pay for the restoration of contaminated sites and to compensate victims for their losses. The burden should not be on the state or society to clean-up and to compensate victims while polluters reap profits and walk away.

The implementation of class actions in legislation would facilitate victim access to justice. With the exception of Quebec, Canada has no effective procedure in place that would permit large numbers of claimants to recover collectively for harms arising from pollution.