

## An Ecological Analysis of the Problem of Hazardous Wastes

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Montreal, April 1982

### Origin of the problem

Since the mid-seventies, we have been persuaded to accept industrial pollution because it could supposedly be controlled.

In response to the problems of damage to the environment, the 'anti-pollution' sector was created and soon became highly profitable, its growth being directly proportional to the quantity and toxicity of industrial wastes. However, the anti-pollution systems established only capture and concentrate contaminants. The problem therefore remains unresolved and has only been shifted: instead of releasing contaminants directly into the air and water, we concentrate hazardous discharges in a semi-liquid sludge which is difficult to store and may escape to contaminate the soil and underground water.

Faced with this new situation, the authorities are again trying to shift the problem by proposing that large industrial waste treatment centres be constructed. However, it is becoming increasingly clear that people do not want these centres in their communities.

As a result of this series of shifts, the management of hazardous wastes is no longer simply a technological problem but has become a highly political and social issue.

### Hazardous wastes and government

In a pamphlet published by Environment Canada entitled "The Hazardous Waste Problem: (...)", the Department tells us that our hazardous wastes must be treated, that the technology for such treatment exists and that the public should stop systematically opposing the construction of treatment centres. Thus, according to Environment Canada's reasoning, the problem of hazardous wastes is not caused by a type of industrialization that produces more and more of these wastes but rather by the citizens who refuse to accept treatment centres in their municipalities.

Moreover, the Department believes that we must accept these centres since, as consumers of manufactured goods, we are directly responsible for the wastes generated in their production.

Such logic! At first glance, we are almost tempted to believe it. The Department's environmental dialectics are about as sophisticated as its system for checking the quantity of Mirex in the eels of the St. Lawrence. In other words, the Department's analysis of the industrial waste problem is incomplete and likely to perpetuate the public's refusal to cooperate.

A public opinion poll done by CROP in 1981 confirmed that 70 per cent of Canadians were dissatisfied with the government's control of toxic wastes. Another CROP poll shows that this dissatisfaction rose ten points to 80 per cent in 1982. On the basis of these polls, it seems clear that if the government really wants public participation in solving the problem of hazardous wastes, it will have to change its approach. It is not by accusing the public of irresponsibility that the Department will eventually manage to detoxify a country contaminated by hazardous wastes.

On the contrary, Environment Canada's current position seems to imply that there is nothing really wrong with a type of industrialization that is dangerous and costly in terms of human health and environmental deterioration. This is the position put forward by the Department's technocrats who persist in believing that for every hazardous waste problem there exists an immediate technical solution, provided, of course, that the citizens can be convinced to accept this solution.

This 'solution' is generally a waste treatment plant that will have to be constructed within a municipality.

While everyone can understand the need to treat hazardous wastes, nobody wants the plant near their home. This is what has come to be known as the 'not-in-my-back-yard' syndrome.

The 'not-in-my-back-yard' syndrome

The technocrats of the country's various environment departments think that this syndrome is due to the fact that people do not know about the techniques of hazardous waste management. This attitude only alienates the public and shows once more that the technocrats have still not understood anything.

It is not out of ignorance that people say 'no' to treatment centres, but rather out of a lack of confidence. One has only to list past errors (the IBT scandal, urea formaldehyde foam insulation) to understand that the public's mistrust of government assurances should now be considered normal and even desirable.

After the South Cayuga fiasco in Ontario, the contamination of underground water on the toxic waste site in Mercier, Quebec, and the quasi-criminal actions of the Hooker Chemical Company in Niagara Falls, how can one ask the public to blindly accept the government's proposals?

The 'not-in-my-back-yard' syndrome must be understood as a normal, healthy reaction on the part of a public that understands government indifference only too well.

The risks: real and perceived

People are always somewhat apprehensive about hazardous waste treatment centres. Often these apprehensions cannot be expressed in terms of concrete, measurable risks. One then speaks of perceived, non-quantifiable risks. These perceived risks may have as much of a negative impact on the construction of a centre as the real risks. Furthermore, perceived risks underlie such general questions as the choice of the type of municipal development. To refuse to discuss perceived risks is often to extend the debate.

To take an example of perceived risk, the construction of a treatment centre might encourage plants that produce hazardous wastes to locate nearby. This risk of attracting other pollution producing 'satellite'

plants around the centre has often been evoked during public hearings. Even though this is a difficult risk to quantify, the fact remains that people do not want to see their municipality become an industrial park made up of factories with a high output of hazardous wastes. This fear may lead the public to strongly reject the construction of a centre. In this case, the people are rejecting more than just a centre; they are also questioning a form of industrial development that produces hazardous wastes.

This in turn leads to the overriding questions: must we continue to measure a country's prosperity in terms of the quantity and toxicity of the industrial wastes it produces? <sup>1</sup>

#### Industry's silence

There is one important party missing in all this debate. Indeed, during the public hearings held in Quebec and Alberta, very few waste producing industries were heard from.

We may well wonder why producers have thus far remained so silent. Could they be hiding something from us? (For example, the sites where they have been dumping their toxic wastes for the last twenty-five years). Yet the American chemical industry lobby was very voluble when Washington (before Reagan) decided to adopt important legislation on hazardous wastes. Could it have been that the knowing silence of the Canadian industry was directly related to the weakness of our environmental laws? Why complain when most provincial governments still tolerate the dumping of untreated industrial wastes into landfill sites that are more or less watertight (if not directly into a stream or river).

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1. Even today, we still measure a country's industrial productivity by the quantity of chlorines and ethylene it produces annually. These two products come from chemical (chloralkali) and petrochemical (plastics) industries well known for the toxicity of their wastes.

In fact, we should consider industry's silence as a sign of their satisfaction with the relative lack of government coercion.

As long as the country's various environment departments do not force industry to better manage, recycle and reduce their "excess industrial production" (an industry euphemism for 'waste'), it is unrealistic to hope for more co-operation on the part of citizens.

One way of shaking these industries out of their stupor would be to assign them full legal responsibility for the wastes they produce. We could adopt legislation which stipulated that a producer is responsible for a waste from its production until its final elimination. This form of responsibility 'from the cradle to the grave' would surely incite industry to take a position in the debate.

Currently, the chain of responsibility for a waste product (from the producer to the transporter to the treatment centre) directly inhibits efforts to reduce hazardous wastes at the source, since the producer can still completely pass on responsibility.

#### Hazardous product implies hazardous waste

Because of the increase in the quantity and diversity of chemical products, it is becoming more and more difficult to control the thousands of substances released into the environment. This has led the Environmental Advisory Council to speak of "a sea of chemical products" that threatens to eventually engulf us.

It is strange, therefore, to find in government propaganda on hazardous wastes a clear distinction between "hazardous waste" and "hazardous product." Yet, to produce a hazardous substance, you must have hazardous ingredients.

Therefore, by reducing the quantity of hazardous products that enter into a manufacturing process we automatically reduce the quantity of hazardous wastes produced.

This reduction in the use of hazardous products must be one of the ultimate goals of any action on the problem of industrial wastes. In the final analysis, the question is whether we want to eliminate at the source the ecotoxic risks due to hazardous products and wastes or to continue to manage these risks by technical and bureaucratic controls.

It is now clear that the elimination of risks is not a priority of our government. Instead, they have taken refuge in the popular belief that is our industrial technology is capable of using, producing and regulating hazardous substances, it should also be capable of managing them.

This myth of the miraculous technical solution, the magic black box will solve all our problems, may still impress our politicians. The public, on the other hand, has become increasingly sceptical of simplistic solutions to complex problems.

Real detoxification of the country will not be achieved by technical management, but only by reducing and eventually eliminating hazardous products. The technical means currently being proposed will only delay and even complicate detoxification.

#### Hazardous wastes: the avoidable and the unavoidable

It is easy to become somewhat fatalistic in view of the growing production of hazardous wastes.

It is clear that we have not as yet studied the question sufficiently to know whether all these wastes are truly unavoidable.

A typical, well known case in Canada, regarding mercury wastes, shows how one of the supposedly unavoidable wastes in the eighties is now so well controlled that the mercury process (chloralkaline) is practically not used any more. The government thus decided that this type of waste was avoidable and took the necessary steps to discourage and prevent its production. This is the way decisions are made: only after there has been a leak, dumping or contamination.

It would obviously be preferable to act preventively. However, preventive action, as for example the gradual elimination of leaded gasoline, is often a source of frustration for those in charge of establishing programs to eliminate toxic substances at the source.

In the example cited, consumers do not want to pay more for unleaded gasoline, to the consternation of those who know that lead contamination is a serious public health hazard (especially for urban children).

This shows that if people are uninformed, they are not inclined to support a ban on a hazardous product. Add to this the administrative unwieldiness that discourages public participation (the review board on the use of BPC in 1980 is a perfect example), and we find ourselves in a situation where, even when a product or waste has been identified as hazardous, it is often difficult, if not impossible, to ban it.

#### Choosing the right tools

To merit a greater degree of public co-operation, governments must prove that they really want to reduce hazardous wastes and must choose the tools that reflect this determination.

Governments will have to opt for legislation that will bring about a decrease in hazardous products and wastes, and not just their bureaucratic control. At the federal level, the Environmental Contaminants Act could become a basic tool to limit or ban the use of numerous substances. This might make it easier for people to accept treatment centres, since the quantity of wastes would decrease and most centres would eventually be closed for lack of wastes to treat. In short, we must choose an approach that does not perpetuate the need to manage hazardous wastes.

The concept of the treatment centre itself is another important tool. A centre should be managed by all those concerned, that is by a joint board of directors with representatives from municipal and provincial government, the centre's client industries, ecological groups and local citizens.

Clearly, such a centre must not be run on a profit-making basis. Making money by treating hazardous wastes, in addition to being somewhat immoral, would not encourage reducing wastes, since the desire to maximize profits on economies of scale would always lead the centre to treat more and more waste. In any case, a centre with plans to expand would not be accepted by the local people. The idea of building immense regional centres to serve vast areas will also not be easily accepted. Citizens will refuse to have industrial wastes from all over imported into their municipality.

The creation of a network of treatment plants situated near or in already existing industrial parks will perhaps be more costly but will be more socially acceptable. The solution is not to force people to say 'yes' to a centralized plant by evoking reasons of state. Reasons of state have always been a poor substitute for democracy.

Treatment plants, in addition to preventing illegal dumping, must also be seen as an instrument of coercion to bring industry to reduce its waste production. Since the costs of compulsory treatment reduce their margin of profit, this will incite producers to choose processes that generate less hazardous waste.

The recycling of industrial wastes is in principle a good thing. On the other hand, it is important to recognize that the production of certain types of wastes, because they are so highly toxic, should simply be banned. To encourage recycling in this case only perpetuates the risk of contamination.

#### Wastes of the past

One way of making the public understand the seriousness of the situation would be to demonstrate what happens when a hazardous waste is badly managed. There are numerous hazardous waste sites in Canada that could serve as examples.

A public that understood the harmful effects of hazardous wastes would be more likely to support action aimed at reducing their production at the source.