

**NATIONAL  
ACTION  
COMMITTEE**  
ON THE STATUS OF WOMEN

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D'ACTION**  
SUR LE STATUT DE LA FEMME

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**PRESENTATION**

to the

**Standing Committee on Environment and Sustainable Development**

**Regarding**

**THE REVIEW OF THE  
CANADIAN ENVIRONMENTAL PROTECTION ACT**

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**For the  
NATIONAL ACTION COMMITTEE ON THE STATUS OF WOMEN**

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## **Introduction**

We would like to begin our presentation by calling your attention to the composition of this Standing Committee. It is notable that there is only one woman on this Committee of ten, when women make up 52 percent of the population. It is central to the position that we will present today, that women, along with aboriginal peoples, people of colour, and workers have traditionally been excluded from environmental decision-making, as they have from full participation in society due to structural discrimination based on gender, race, and class. It is imperative that women, and especially women of colour, aboriginal women, and working women, play a key role in environmental decision making, since a large proportion of the burden of environmental degradation falls on women.

The discussion and various recommendations that follow in this document have been provided from an environmental justice perspective.

## **Environmental Racism and Environmental Justice**

Environmental racism was first named in the 1987 report *Toxic Wastes and Race in the United States - A National Report on the Racial and Socio-Economic Characteristics of Communities with Hazardous Waste Sites*,<sup>1</sup> released by the Commission for Racial Justice of the United Church of Christ. In this report, Dr. Benjamin Chavis defines it as:

"racial discrimination in environmental policy making and enforcement or regulations and laws, the deliberate targeting of people of colour for toxic waste facilities, the official sanctioning of the presence of life threatening poisons and pollutants in communities of colour, and the history of excluding people of colour from leadership of the environmental movement."

Environmental justice is a concept similar to social justice. It entails rectification of social inequities inherent in the design and enforcement of environmental policies. It recognizes, along with environmental racism, a gender bias in environmental policy making and enforcement. Environmental justice does not mean "environmental equity" where we are all poisoned equally, but rather means that all of us, regardless of gender,



race, or occupation, are guaranteed a healthy and sustainable environment, now and in the future.

We introduce these concepts in the context of the review of the Canadian Environmental Protection Act (CEPA), because environmental racism exists in Canada, and because women are disproportionately suffering from the impacts of the environmental degradation in this country. We feel that this CEPA review must take this into account, and integrate an approach that facilitates the achievement of environmental justice. We believe that CEPA must guarantee the rights of all citizens, regardless of gender, race, or occupation to a healthy and sustainable environment on our traditional lands, in our communities, and in our workplaces. The federal government must not only take a strong leadership role in the protection of Canada's environment, but must also show leadership in ensuring that all people living in Canada are equally protected. We strongly recommend that the federal government recognize this right in the preamble of the CEPA, and that this right guide environmental policy making in Canada.

We would like to provide a few illustrations and explanations of these concepts with respect to the Canadian context. Our first example shows how gender bias in both scientific research and in environmental policy making translates into disproportionate impacts of environmental degradation on women.

### **Women and Toxins**

Gender bias exists in both scientific research and environmental policy making. For example toxicity of chemicals on the Priority Substances lists is often determined, as in the example of dioxins, using scientific and medical studies in which rats serve as models for the human system. Rats, however, unlike humans, do not menstruate. Studies done with primates, who do menstruate, indicate significant effects of dioxin on women's reproductive health, including increased incidence and severity of endometriosis, birth defects, and reproductive tract disorders. As a result of depending on rat studies alone to determine toxicity levels for dioxins under CEPA, potential impacts on half the population are ignored!<sup>2</sup> Failure to account for women's specific physiology when conducting scientific studies with the purpose of determining toxic levels for the whole population means



women are now being exposed to levels of dioxin which could be causing devastating reproductive and other health effects.

### **Aboriginal peoples and Environmental Racism**

Our second illustration regards the differential enforcement of environmental regulations on Aboriginal lands in Canada. Environment Canada's own documents acknowledge that because Aboriginal lands fall under federal jurisdiction, they are not governed by provincial regulations setting requirements for sewage treatment, limits for emissions and effluents, and waste handling and disposal<sup>3</sup>. Although Part IV of CEPA does attempt to deal with this "regulatory gap," CEPA has a very poor enforcement record, meaning that even those regulations that do apply to aboriginal lands are not enforced.

Furthermore, as stated by Environment Canada, there has been "a reluctance on the part of governments to address outstanding environmental issues involving Indian lands"<sup>3</sup>. Also according to Environment Canada's own documents, the current wording of CEPA does not allow for regulatory action on issues such as storage tanks, cleaning up past pollution problems, the storage and handling of hazardous and solid wastes, pollution caused by inadequate or lack of sewage treatment, or spills, leaks and other environmental emergencies on Aboriginal lands<sup>3</sup>. This "regulatory gap," allowing the potential creation of pollution havens on Aboriginal lands, is part of the historic and ongoing systemic discrimination against Aboriginal peoples in Canada.

Another example of how environmental degradation strikes at the heart of the livelihood and health of Aboriginal peoples is the lack of regulation pertaining to mercury release arising from hydro-electric projects in Northern Québec. High levels of mercury have a devastating and disproportionate impact on the Cree of Northern Quebec and the fisheries and wildlife on which they depend. Aboriginal peoples depend to a greater extent on natural resources such as fish and wildlife as food sources, and as a result, are exposed to a higher degree to toxins released into the environment. Cultural factors and financial restrictions mean that consumption limits set by regulatory agencies are not realistic in the Aboriginal context or, for that matter, in low income communities in general.



Increased logging, mining, and damming on Aboriginal lands rubber stamped by environmental assessments that do not recognize aboriginal peoples as key players in the decision making process is an example of environmental racism. In addition, economic hardship is driving some aboriginal peoples to become unwilling participants in the pollution of their land and people. Aboriginal peoples are becoming, in the words of the Grand Council of the Cree of Québec, "environmental refugees in their own land, left with no land base in which to exercise our traditional activities which are the lifeline of our culture. Time and time again Aboriginal peoples have been pushed to small reserves and left without either a traditional land base or a true stake in the development of our territories."<sup>4</sup>

The solutions to this differential enforcement lie in Aboriginal self-government. In developing recommendations for options to address "regulatory gaps" in the short and long term, the Federal Standing Committee on the Environment must take direction from Aboriginal communities. In essence, environmental protection for Aboriginal peoples in Canada must be developed by Aboriginal peoples. Aboriginal women must be central to the negotiation of self-government and environmental protection for aboriginal lands. Assistance for sustainable economic development must also be an integral part of Canada's federal government responsibilities in negotiations toward self-government in order to eliminate conditions that force first peoples to be driven to environmentally degrading industries as a source of income.

## **Environmental Racism**

The *Toxic Wastes and Race in the United States*<sup>1</sup> study clearly demonstrates the occurrence of environmental racism in the US. It is our position that the environmental racism evident in the US occurs here in Canada. In the US three out of five Black and Hispanic Americans live in communities with uncontrolled toxic waste sites. Race proved to be the most significant among variables tested in association with the location of commercial hazardous waste facilities. Studies show that breast cancer rates and mortality are higher among African-American women<sup>5</sup>.

The *National Law Journal* reported in 1992 that "There is a racial divide in the way the US government cleans up toxic waste sites and punishes polluters. White communities see faster action, better results, and stiffer penalties than communities where Blacks, Hispanics, and other



minorities live. The unequal protection often occurs whether the community is wealthy or poor."<sup>6</sup> The US EPA has acknowledged that those communities that do not have sufficient financial and political resources suffer from a disproportionate amount of pollution.

Although very little, if any, such data exists in Canada, and racial polarization is slightly less dramatic in the Canadian context, the similarities in our two societies, along with anecdotal evidence, would suggest a similar pattern here in Canada. Clearly aboriginal communities have suffered disproportionately from environmental degradation, as discussed above. A recent government study on the incidence of breast cancer found several toxic hot spots where rates of cancer were higher<sup>7</sup>. They were large urban centres such as, Montreal, QC, Toronto, ON, and Sydney, NS, and Brantford, ON, which is located near a combination of agricultural land (where pesticides are being used extensively), and industrial centres. Although no breakdown according to race, occupation, or neighbourhood was provided with these data, the urban centres cited have a high population of immigrant communities and communities of colour. In Toronto alone, toxic industries such as a lead plant known to have released toxic levels of lead and an incinerator are located in communities that are primarily populated by people of colour.

Communities populated by aboriginal peoples, low income people, and people of colour must be given the opportunity to investigate local sources of toxic emissions under a "community right-to know". We are calling on the Minister of the Environment to use the authority given under CEPA to request studies and analyses, conducted in partnership with communities, of the extent to which low income communities and communities of colour are disproportionately targeted for environmentally degrading industries and sites. Expansion of the Act to allow the collecting and reporting of information from inventories such as the NPRI must be a part of this process, as the Toxics Release Inventory, on which the US inventory NPRI was modeled, was instrumental in enabling statistics on environmental racism to be compiled, documenting a problem community activists had long known existed.

Research conducted under CEPA must also examine the specific impact of chemicals on women's health, and in particular on women in the workplace, on women of colour, and on aboriginal women. Because some



toxins bio-accumulate, these populations are most likely at a higher risk due to multiple exposures. For example, people with higher -than- average body burdens of dioxin -- newborn infants and young children, occupationally-exposed workers, subsistence fish-eaters -- may already be experiencing health impairments from their dioxin exposure.

### **Workers' Environmental Rights**

Working women often suffer disproportionately from the production, use and release of toxic chemicals. With many hazardous substances, governments have established two standards for "acceptable contamination levels": a higher one for workers on the job, and a more stringent one for the community outside the workplace. There should be a single standard for everyone, based on health criteria with respect to the most sensitive receptor in the population. When levels of toxicity under CEPA are determined, they must consider potential workplace exposure.

NAC fully endorses the positions taken by the coalition of non governmental environmental groups (including the Canadian Labour Congress) in section 3 of their document, An Agenda for Reform, with respect to the provision of workers' rights with respect to the environment. We would like to add that we believe that not only should compensation be available for workers who lose their jobs due to environmental change, but that workers must be given the opportunity play a leading role in transition planning for their communities.

### **Waste Trade**

Environmental racism is not restricted to a country's behaviour within its borders. Chemicals intended for export are currently assessed differently than those intended for domestic use. Some substances prohibited for use in Canada can still be exported. Often the destination of these chemicals, along with hazardous wastes to be "recycled" is a "non-OECD" nation, an example of environmental racism on a global scale. Canada must apply the same standards to its exports as to its domestic usage, and must not use nations of the South as dumping grounds for hazardous materials we do not want here.



## **Public participation**

Public participation in environmental decision making is key to ensuring that women play a central role in setting environmental policy. NAC supports the recommendations made in section 3 of An Agenda for Reform with respect to instruments for public participation. For public participation to be effective for communities most affected such as women, Aboriginal peoples, people of colour, and workers, these communities must be given the resources to ensure meaningful participation. Therefore we are recommending that measures to do so be included in CEPA.

## **Economic Instruments**

Economic instruments should be used to encourage green initiatives and economic conversion, not to allow corporations to "pay to pollute." For many chemicals there are no "safe levels" of exposure, and no value can be placed on the effects on women's health of these pollutants. Increasing the price of pollution will not resolve the problem. It does not address the fact that the benefits of polluting still go to the polluter, and the costs are borne by society, and specifically by those less empowered in society. Making the polluter pay a fee does not eliminate or mitigate the costs, many of which are currently unknown and cumulative. Economic conversion must be planned with those most affected, particularly workers, taking a lead role in a democratic decision-making process. Elimination of types of production or resource extraction involving job loss should not penalize workers economically for the actions of their polluting employers. Polluters should be required to contribute to the costs of economic conversion, with the understanding that many of these initiatives are actually cheaper in the long run, and will thus benefit all of us.

## **Environmental Toxins**

It really comes as no surprise to those of us who work for clean air, water, and soil that many of the environmental toxins of concern impact more seriously on women and children than on adult males. The evidence continues to grow.



## Great Lakes Fish Studies

A series of epidemiological studies being carried out in the Great Lakes Basin is very interesting in this respect. Drs. Joseph and Sandra Jacobson of Wayne State University, and Dr. Harold Humphrey of the Michigan Department of Health have studied women who ate very ordinary quantities of Great Lakes fish - between one to three and a half fish meals per week during their pregnancies in the mid 1980s, compared to their counterparts in the control group. The fish, by virtue of living in the polluted waters of the Great Lakes had accumulated significant quantities of PCBs and other organochlorines, mainly in their fatty tissue.

As reported by Dr. Wayland Swain in the journal *Aquatic Toxicology* (vol. 11, pp 355-377, 1988)<sup>8</sup>, the children born to mothers consuming Great Lakes fish were observed to have "delays in developmental maturation at birth." They were smaller in physical size, had reduced head circumferences, altered lability of state (increased instability), increased startle reflexes, and were classified by attending physicians to be within the 'worrisome' neo-natal category. Dr. Swain put it more bluntly while testifying at an environmental hearing for a pulp mill in Alberta. These children, he said, "responded to changes in their environment more poorly... They were duller than their unexposed counterparts." It is worth noting that the adverse effects of chlorine-based toxins, passed on from fish via human mothers to their children in utero occurred more than a decade after production of PCBs had been banned in North America, testifying to their persistence and toxicity.

The mothers who were fish eaters in this study also fared worse than their control group partners. They tended to be anemic before and during pregnancy. Many experienced swelling edema while carrying their babies, and they were more susceptible to infectious diseases.

The comparisons are continuing as the children in this study age. Subsequent testing at age four has shown that the children whose mothers ate Great Lakes fish during pregnancy have 'diminished potential'. It appears that the effects of poisoning by toxic chemicals are a lasting -- probably life long -- legacy, and not a temporary passing phenomenon.



The International Joint Commission (IJC) -- an eminently conservative body -- has addressed the problem of persistent toxic chemicals in the Great Lakes Basin for over two decades. Recommendations in the IJC's most recent biennial reports (1992, 1994) reflect the futility of espousing half measures, since these had obviously fallen short in the past. The Commission has therefore called unequivocally for the virtual elimination of persistent toxic chemicals into the lakes, as well as the phase-out of chlorine as an industrial feedstock. We wholeheartedly endorse this approach as the only realistic way to address the problem of toxics in the Great Lakes (or any other ecosystem, for that matter).

### Breast Cancer

In 1950, breast cancer struck one in twenty North American women. By the mid-1990s, the figure is now a startling one in eight. While rates for prostate and testicular cancer (as well as several other cancers) have also increased significantly, breast cancer in 1993 ran a very close second to lung cancer in the cancer epidemic that all together strikes one in three Canadians. About 16,000 new cases of breast cancer are diagnosed in Canadian women every year, and about 6,000 women die of the disease. Breast cancer is the leading cause of death for women between the ages of 35 and 55.

For many health activists and environmental activists, there is no question there is a correlation between rising rates of breast cancer and the proliferation of the nuclear and chemical industries following the close of the Second World War.

Over three decades ago, *Silent Spring*<sup>9</sup> described the links between chlorine-based pesticides such as DDT and myriad health effects, including cancer (Rachel Carson herself died of breast cancer in 1964). Few people remember that *Silent Spring* was the first book to draw clear links between cancer incidence and environmental toxins ( See chapter entitled *One in every four*)

Now, in the mid-1990s, highly-acclaimed research by Dr. Devra Lee Davis (epidemiologist and senior advisor to the U.S. Office of the Assistant Secretary for Health) focuses on the link between increased rates of breast cancer and exposure to 'xeno-estrogens', foreign estrogens dumped into



the environment as pesticides, herbicides, and industrial chemicals (a high percentage of which are organochlorines)<sup>10</sup>. Davis and her colleagues posit the hypothesis that the more estrogen (including xeno-estrogens) a woman is exposed to during her lifetime, the greater her risk of breast cancer. As well, there is a large and growing body of research, much of it by Dr. Theo Colborn of the World Wildlife Fund and her colleagues, about the serious role that 'endocrine disrupters' (among them xeno-estrogens) play in the wide range of health problems now manifest in wildlife and, increasingly, in humans. Most of these disrupters are synthetic organics - often pesticides - which the World Wildlife Fund reported (April 20, 1994) are currently used at a rate of 1,600 pounds per person in the United States. Canadian figures are very likely comparable, although we couldn't find parallel statistics. (It is interesting to note that Rachel Carson drew the link between hormone imitators and health problems in *Silent Spring*).

Instead of calling for a reduction of cancer-inducing environmental estrogens/endocrine disrupters, some researchers are working in the opposite direction, devising ways and means of manipulating women's internal hormones to prevent breast cancer. At the University of Southern California School of Medicine, for example, Drs. Malcolm Pike and Darcy Spicer of the Breast Cancer Committee, National Women's Health Network (Washington) "is no more than a radical extension of the trend in medicine to view women's bodies and biological processes as intrinsically defective, requiring treatment." The idea of the Pike-Spicer experiment is, through a complex mixture of drugs and hormones, to shut down ovulation by preventing the production of estrogen and progesterone, then counteract the menopausal side-effects with estrogen replacement therapy for 24 out of every 28 days, then give a synthetic progesterone to induce a menstrual period three times a year to ensure continuing fertility.

How does this drug/hormone regimen work in preventing breast cancer? As Rennie wrote in *Ms. Magazine*<sup>5</sup> (May-June 1993), Pike believes what is to blame (for breast cancer) is modern woman's 'incessant ovulation'. "Because women today give birth to fewer children, one or two instead of the five to nine that were once the norm, we experience an 'excess' of menstrual cycles, which are also increased by the earlier onset of menstruation. In Pike's words, "Exposure of the breast to high hormone levels over many years with only brief breaks, if any, in the ovulatory cycle, is a problem of Western cultures." Other suggested hormonal experiments



include inducing false teenage pregnancies, since it appears that breast cancer risk goes down in women who give birth before age twenty.

The first priority in dealing with cancers induced by a combination of foreign and natural estrogens surely must be to reduce or eliminate synthetic endocrine disrupters in the environment, not to engineer changes to women's natural hormonal functioning.

As for lifestyle factors causing cancer, instead of self blame, we support all suggestions that steer women (everyone!) away from high fat, diets toward low fat, vegetarian diets that emphasize organically grown/produced foods. We believe that more research into the content of fat is necessary, since it is well known that organochlorines such as dioxin and commonly used pesticides such as atrazine, for example, are lipophilic and these may trigger or promote cancers; in other words, it is not the fat itself, but chemicals transported in fat. We also know that women with lower incomes have less access to organically grown/ produced foods since these are more expensive and often not widely available. Once again, this problem should be addressed in a way that does not blame the victim for contracting cancer because of dietary habits, but rather lays the blame with those releasing toxins in to our environment.

Surely the least we can aim for is to reduce cancer incidence rates to their 1950 levels. And the key, surely, is prevention.

### **Imported toxins**

It is now well known that pollutants can and do travel thousands of kilometres from their points of origin. Wind and water are extraordinary couriers, carrying a host of poisons and depositing them in once pristine environments far from pollution sources. The most frequently cited example concerns levels of PCBs in the breast milk of Inuit women in the high Arctic, which are higher than PCB body burdens typical of residents living in Sarnia. We refer you to the submission to this Committee by the Inuit Tapirisat of Canada, which elaborates on the impacts on Inuit peoples of pollution generated in industrial centres around the world and proposes regulatory responses.



Food that we import in mass quantities from outside Canada is also a cause for concern. For example, California grapes, which have been promoted in Canada as a healthy food, in fact have been sprayed with more restricted-use pesticides - pesticides known to cause cancer and birth defects - than any other fruit or vegetable.

A National Academy of Sciences study brings into question standards used to determine what is an acceptable amount of poison in or on our food. The Academy believes that women, the young, the sick, and the elderly may well be at greater risk from pesticides, given that allowable levels are based on amounts tolerated by a healthy, 150 pound adult male.

There is a higher danger to children from pesticides for three reasons:

- ♦ body weight;
- ♦ eating habits - a child will eat a disproportionate amount of one food, such as cherries or grapes, if the child likes that food;
- ♦ the vital organs in a child are still growing and developing; poisons can dramatically alter this process.

At greater risk, of course, are the agricultural workers who tend crops in the United States and Mexico (who are primarily Mexican American, Central American, and Haitian), as well as in Central and South American countries, which supply Canadians with most of our fresh fruits and vegetables. In these places, birth defects are up to 800 percent higher than the average incidence rates experienced elsewhere, and childhood cancer rates are up to 1200 percent higher.

We in Canada have to be on guard. In the past, our governments have always established stricter tolerance levels than those set in the United States and Mexico. Now, with the North American Free Trade Agreement in force, chemicals previously not allowed in Canada are being permitted. Grape growers in Ontario, to cite just one example, are lobbying for chemicals previously banned in Canada.

### **House and Garden Pesticides**

There has been too little written about the effects of common house and garden pesticides on our health, but clearly there are serious poisons



being used not just close to home, but in and around it. The following information is drawn from an American Cancer Society brochure from Erie County, New York:

"The EPA [Environmental Protection Agency] has identified health effects such as eye, skin, respiratory, or throat irritation and muscle spasms in humans and animals. There may be long-term health risks from pesticide exposure:

- ◆ A National Cancer Institute study indicates that children are as much as six times more likely to get childhood leukaemia when pesticides are used in the home and garden.

- ◆ The *Journal of the National Cancer Institute* suggests that non Hodgkins lymphoma may be linked to pesticide exposure.

- ◆ According to a report in the *American Journal of Epidemiology*, more children with brain tumours and other cancers were found to have had exposure to insecticides than children without cancer,

- ◆ According to the U.S. Attorney General, 95 percent of pesticides, used on residential lawns are considered probable or possible carcinogens by the U.S. EPA.

- ◆ Organophosphates, like Diazinon and Dursban, and carbamates are designed to act as nerve poisons and may cause headaches, dizziness, fatigue, twitching muscles and mental confusion. Diazinon is banned for use on golf courses and on farms, but it is widely used on lawns and gardens.

- ◆ 2,4-D was a component of Agent Orange and is used in about 1,500 lawn care products."

We ask: How many women must die of breast cancer, how many people (of all ages and both genders) must contract a variety of other diseases, supposedly 'unknown' in origin, although public health statistics and common sense surely point to their environmental links? When will the testing of known toxic chemicals stop on a human population that is already experiencing record rates of cancer, birth defects, reproductive failures, and a whole range of health effects caused by damage to our immune,



endocrine, and nervous systems? We have a health crisis on our hands - and, as a result, a health system bending under the weight of this crisis.

We recommend that CEPA incorporate the weight of evidence approach to determining whether chemicals can be safely used and discharged into the environment. Again, the IJC offers an excellent definition / commentary: "This approach takes into account the cumulative weight of the many studies that address the question of injury or the likelihood of injury to living organisms. If, taken together, the amount and consistency of evidence across a wide range of circumstances and/or toxic substances are judged sufficient to indicate the reality or a strong probability of a linkage between certain substances or class of substances and injury, a conclusion of causal relationship can be made. This conclusion is made on the basis of common sense, logic, and experience, as well as formal science."(1992)

Finally, we fully support the recommendations contained in the document "An Agenda for Reform" on toxic substances, and on new chemicals, particularly:

- that the definition of 'toxic' needs to be amended in CEPA to reflect the intrinsic characteristics of a toxic substance. Assessments of chemicals should be based on weight of evidence.
- there should be a legislated declaration of a national policy of Canada that the use, generation, and release of pollutants should be prevented. Further, there should be a commitment to virtually eliminate the use, generation, and discharge of persistent toxic chemicals by 2004 and to reduce the use, generation, and release of other toxic substances by 50 percent by the year 1999. An improved National Pollutant Release Inventory could be used to measure progress in this regard.

### **The Risk Assessment Process and Public Participation**

We would like to indicate upfront that we do not support the use of risk assessment techniques for environmental remediation. It is our understanding that risk assessment is a scientific technique which purports to estimate the risk posed to humans or the natural environment by the exposure to a contaminant at a known concentration. It is one of many tools that is available to aid an environmental pollution prevention and



remediation decision making process. We feel that risk assessment is a tool used primarily for rationalizing decisions that have already been made.

We feel that it is important to point out that the risk assessment process involves a number of scientific limitations such as a large degree of uncertainty and errors in emission estimates and the modelling of the data, limited epidemiological and toxicological data, and in addition errors resulting from input data and methods of calculation. To quote Joan D'Arco of Greenpeace Canada, from a speech entitled The Politics of Risk Assessment, "risk assessment is a highly politicized subjective process that is couched in the guise of strict scientific methodology. However, by very simply changing an assumption here, tweaking an equation there, in essence, manipulating data to yield a predetermined result, risk assessors can justify virtually any policy they desire." For any cost/benefit approach to environmental degradation, in the words of Cesar Chavez "The polluter benefits, the people pay."

Although risk assessment techniques provide exposure estimates for certain chemicals that can be used in other disciplines, their use for environmental remediation not valid due to their inability to accommodate real-world situations of multiple chemical exposures and the synergistic and cumulative effects of such multiple exposures. It is also important to note that there is an ongoing debate concerning the appropriateness of various models to estimate dose-response relationships of low level chemical exposures.

In addition to acknowledging the above scientific limitations, considerations of equity and social justice should also contribute significantly to the decision making framework pertaining to the remediation and management of environmental concerns. We feel strongly that such a decision making framework should ensure that there is no disproportionate adverse environmental impact on women, people of colour, low income communities, and aboriginal peoples. For example, decisions based on risk assessment techniques are often proposed for severely contaminated sites requiring environmental remediation in urban centres such as Toronto and Vancouver. Often the sites are proposed for the development of social housing for low income peoples.



As the committee may know, there has been an ongoing debate in Ontario on the acceptability, use and limitations of risk assessment and management. The Ontario Ministry of the Environment and Energy (MOEE) has recently proposed additional cleanup approaches for environmental remediation, one of which is the use of site specific risk assessment. The response provided to the Ontario MOEE by various municipalities and local environmental organizations is consistent in that they perceive that risk assessment is not a valid tool to be used in decision making processes.

Given our clear position of opposition to the use of risk assessment techniques, should the technique continue to be used despite unanimous opposition from various environmental organizations, we recommend that The Canadian Environmental Protection Act be amended to include a clear protocol for public participation and input into all environmental policy decisions including those that consider the use of risk assessment procedures.

### **Pollution Prevention**

The Canadian Environmental Protection Act should certainly incorporate the "precautionary principle" as defined in the Rio Declaration as follows:

"Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation."

### **Precautionary Principle**

We strongly believe that all environmental decisions, including both pollution prevention and remediation should be guided by the Precautionary Principle. We further encourage the establishment of a reverse onus position for new substances as well as existing substances. Focusing primarily on pollution prevention as opposed to pollution control or remediation is ultimately more cost efficient and results in the least impact on human health and the environment. For example, the cost of approving a substance for use without appropriate testing and then attempting to mitigate the adverse impact on human health and the environment is significantly greater than the cost of upfront screening. Where it is



determined that a substance may pose a risk, the policy options for sunsetting or controlling it, as applicable, should be made primarily on the basis of environmental and human health risks, taking into account social and economic factors that pertain not only to the short term but also long term costs.

We recommend that mandatory pollution prevention be required by enforceable regulation with appropriate penalties upon non compliance.

We further recommend that the Canadian Environmental Protection Act be amended to include the Precautionary Principle, that is a framework of pollution prevention by ensuring that no substances are approved for use unless it is clearly determined that there is minimal impact on human health and the environment.

### **Recommendations**

- 1) It is imperative that women, and especially women of colour, aboriginal women, and working women, play a key role in environmental decision making, given that a large proportion of the burden of environmental degradation falls on these populations.
- 2) We believe that CEPA must guarantee the rights of all citizens, regardless of gender, race, or occupation to a healthy and sustainable environment on our lands, in our communities, and in our workplaces. We strongly recommend that the federal government recognize this right in the preamble of the CEPA.
- 3) In essence, environmental protection for aboriginal peoples in Canada must be developed by aboriginal peoples. Aboriginal women must be central to the negotiation of self-government and environmental protection for aboriginal lands.
- 4) With many hazardous substances, governments have established two standards for "acceptable contamination levels": a higher one for workers on the job, and a more stringent one for the community outside the workplace. There should be a single standard for everyone, based on health criteria alone. When levels of toxicity under CEPA are determined, they must consider potential workplace exposure.



5) Communities populated by aboriginal peoples, low income people, and people of colour must be given the opportunity to investigate local sources of toxic emissions under a "community right-to know".

6) We are calling on the Minister of the Environment to use the authority given under CEPA to request studies and analyses, conducted in partnership with communities, of the extent to which low income communities and communities of colour are disproportionately targeted for environmentally degrading industries and sites.

7) Expansion of the Act to allow the collecting and reporting of information from inventories such as the NPRI must be a part of this process

8) Research conducted under CEPA must also examine the specific impact of chemicals on women's health, and in particular on women in the workplace, on women of colour, and on aboriginal women.

9) Canada must apply the same standards to its exports as to its domestic usage, and must not use nations of the South as dumping grounds for hazardous materials we do not want here.

10) We would like to add that we believe that not only should compensation be available for workers who lose their jobs due to environmental change, but that workers must be given the opportunity play a leading role in transition planning for their communities.

11) NAC supports the recommendations made in section 3 of An Agenda for Reform with respect to instruments for public participation. For public participation to be effective for communities most affected such as women, Aboriginal peoples, people of colour, and workers, these communities must be given the resources to ensure meaningful participation. Therefore we are recommending that measures to do so be included in CEPA.

12) Polluters should be required to contribute to the costs of economic conversion, with the understanding that many of these initiatives are actually cheaper in the long run, and will thus benefit all of us.



13) The Commission has therefore called unequivocally for the virtual elimination of persistent toxic chemicals into the lakes, as well as the phase-out of chlorine as an industrial feedstock. We wholeheartedly endorse this approach as the only realistic way to address the problem of toxics in the Great Lakes (or any other ecosystem, for that matter).

14) The first priority in dealing with cancers induced by a combination of foreign and natural estrogens surely must be to reduce or eliminate synthetic endocrine disrupters in the environment, not to engineer changes to women's natural hormonal functioning.

15) We believe that more research into the content of fat is necessary, since it is well known that organochlorines such as dioxin and commonly used pesticides such as atrazine, for example, are lipophilic and these may trigger or promote cancers;

16) We refer you to the submission to this Committee by the Inuit Tapirisat of Canada, which elaborates on the impacts on Inuit peoples of pollution generated in industrial centres around the world and proposes regulatory responses.

17) We recommend that CEPA incorporate the weight of evidence approach to determining whether chemicals can be safely used and discharged into the environment.

18) We recommend mandatory pollution prevention by enforceable regulation, and appropriate penalties upon non-compliance.

19) We further recommend that the Canadian Environmental Protection Act be amended to include the Precautionary Principle, that is a framework of pollution prevention ensuring that no substances are approved for use unless it is clearly determined that there is minimal impact on human health and the environment. The onus of proof should be on party proposing the use of the substance proposed.

20) Finally, we fully support the recommendations contained in the document "An Agenda for Reform" on toxic substances and on new chemicals, particularly:



- that the definition of 'toxic' needs to be amended in CEPA to reflect the intrinsic characteristics of a toxic substance. Assessments of chemicals should be based on weight of evidence.

- there should be a legislated declaration of a national policy of Canada that the use, generation, and release of pollutants should be prevented. Further, there should be a commitment to virtually eliminate the use, generation, and discharge of persistent toxic chemicals by 2004 and to reduce the use, generation, and release of other toxic substances by 50% by the year 1999. An improved National Pollutant Release Inventory could be used to measure progress in this regard.

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