

Right now, as I speak in terms of thousands of Canadian lakes — and quite a few American ones — a process is taking place which, if we, Canada and the United States, do not respond to as we should, is an inevitable as tomorrow's sunrise. You know what it is. It is the lowering of pH, the increasing of acidity. The process is simple. We know the rain is ten to 40 times as acid as it should be. We know these lakes, because of their geological setting, are poorly buffered, that it is only a matter of time — and for many not much time — until they take on the acidity of the rain. We also know that they don't have to get that acidic — only a pH of 5 — to lose their ability to sustain normal aquatic life, including fish, and thereby a major tourist and sport and commercial fishing industry. Already in Ontario alone — where the sensitive regions are much less extensive than in Quebec, or proportionately, our Atlantic provinces — there are 140 lakes which prove the truth of what I am saying. Atlantic salmon streams are also affected. I could take you today to many dead lakes — dead because of what man, not nature, has done. In the United States the number of already dead lakes is greater and in both countries the list is growing.

Many of these lakes contain increasing amounts of toxic heavy metals. Indeed I am told that these metals are what kills the fish in many instances. Those metals are there because the increased acidity in the rain immobilizes them — leaches them out of the soil and into the water. People talk about liming the lakes to restore the pH balance or prevent acidification. In some places in particular circumstances this may well be useful as a temporary expedient. But will it restore the lake to its original chemistry? Our experiments so far suggest not, and restocking of fish in some limed lakes has not worked. That sounds to me like irreversible damage, a terrible heritage for our children.

What of the soil drenched in acid rain or affected by dry deposition which some feel may be more damaging? Their chemistry is changing as surely as I am standing here looking at you. The only real arguments remaining among the scientific community are about the effects of these changes and most of these disputes are over the degree and speed of adverse effect on vegetation growth. Vegetation growth — it's such a neutral sounding expression. In Canada it means forests which sustain our largest single industry. That industry already faces the challenge of the newly expanding commercial forests of the southern United States. Are we to face as well the man-made further disadvantage of acid rain?

In Europe, the Organization for Economic Co-operation and Development (OECD) expressed the view in a recent report that the worst effects of acid rain were not likely to be on lakes and forests but on building surfaces and human health. We know less about both of these than we do about lakes but I scarcely find the OECD comments comforting. The deterioration of building surfaces would be gradual rather than sudden and therefore not necessarily noticeable, much less dramatic, except perhaps for valuable statuary. Yet I am told that if some of the early studies are valid the hidden cost to the Canadian and United States' economies of more frequent building repairs could be enormous.

What should I say about human health? My colleague, Monique Bégin, the Minister of National Health and Welfare, is concerned enough and has begun a major expenditure