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- that there is strong and growing evidence suggesting that forests in such regions are also at risk;
 - that acid rain, often in combination with other pollutants, is doing great damage to man-made structures, including the relentless obliteration of some priceless historical buildings and monuments;
 - that a variant of long-range pollution, photo-chemical oxidants, is damaging many agricultural crops and reducing yields;
 - that mobilization of toxic heavy metals is beginning to render some water supplies unfit for human consumption.

What are the alternative explanations? Well, we have heard that acid rain might be some kind of natural phenomenon that comes along every few hundred years. The trouble is that there is no supportive scientific evidence. Indeed, the geological record shows quite the reverse. We have been told that natural sources of acidity might be more important than we think and that these include volcanoes, swamps, sea spray and lightning bolts. We have also been told about super bowls in the sky, where pollutants mingle in some magical ways so that what comes down is not necessarily a direct function of what goes up. Again, this hypothesis has everything to commend it except a shred of scientific evidence.

I would say that the science of acid rain is as persuasive as it is frightening. Aside from defining for us the risks and establishing the causes, it has also now told us what we have to do. Studies in Europe and North America have demonstrated that for all the complications, the principal culprit is sulphur. When the amount of sulphur that falls on an acid sensitive ecosystem goes above about 18 lbs, per acre per year, sooner or later damage occurs. Below that threshold all but the most sensitive areas will be able to cope and will not be harmed. Clearly then, what we must do is reduce the deposition of sulphur in sensitive areas to that critical level. That in turn means reducing emissions of sulphur dioxide in eastern North America by about 50 per cent. And so we see that the proposal that Canada made to the United States for a joint 50 per cent reduction in emissions in sulphur dioxide was not a handy round figure pulled out of a hat. Rather it is a straightforward interpolation of scientific data. We remain ready to join with you in effecting such an emission reduction.

At the same time we are sensitive to the employment and cost implications of such a step in both countries. We are concerned that the emission reduction strategies be designed to minimize short-term socio-economic costs but we are anxious that the job begin as soon as possible. Even if we were to succeed in negotiating a bilateral agreement tomorrow, it would still be many years before the necessary legislative, regulatory and practical problems would be worked out and emission reductions affected. In the meantime more lakes would die, more forests would be damaged, and the long-term economic costs of continuing environmental degradation would multiply.

Perhaps I should be more specific and give some idea of the resources at risk in Canada as well as the costs of reducing emissions to non-damaging levels. Gross economic activity generated by sport fishing in eastern Canada in 1981 exceeded \$1.1 billion. Tourism revenues as a whole were \$10.4 billion and an important part of that amount, in Canada as in Minnesota, is a function of the general public's
