

THE ENVIRONMENT



The lakes in Minnesota's Boundary Waters Canoe Area are under increasing stress from acid rain.

The flow of trade, the harvesting of fish and the sale of electric power are essentially positive. Some products shared by the two countries are essentially negative. In this section we consider problems caused by air and water pollution.

ACID RAIN— A TRANSBOUNDARY PROBLEM

Two airborne pollutants—sulphur dioxide (SO₂) and nitrogen oxides (NO_x) do great damage to lakes, forests and the world's economy.

In North America the greatest damage has been done in the northeastern U.S. and the central provinces of Canada.

The pollutants, which come almost entirely from industrial smokestacks and the exhausts of motor vehicles, cause the phenomenon which is commonly called acid rain, though it may come down as rain, snow or in dry particles.

In 1978 Canada and the United States formed the Bilateral Research and Consultative Group on Acid Rain. Since then scientists from both countries have come to common conclusions.

Acid rain has destroyed aquatic life in tens of thousands of lakes and endangered it in hundreds of thousands of others. There is strong evidence that it damages forests and arable land and may be related to high incidences of respiratory illnesses. There has been severe damage to tourism, sports fishing and other industries.

The polluted air can travel thousands of miles before coming to earth.

The principal sources have been identified. Most of the SO₂ pollution that originates in the U.S. is caused by emissions from coal-fired electric utilities in the Midwest. Most of the pollution that originates in Canada comes from non-ferrous smelters in Ontario and Quebec.

Both the U.S. and Canada have committed themselves to Principle 21 of the United Nations Conference on the Human Environment in Stockholm in 1972, which says that each country must ensure that activities within its jurisdiction do not cause damage to the environment of another country.

In 1985 two special envoys appointed by President Reagan and Prime Minister Mulroney reached the unqualified conclusion that acid rain is a serious, transboundary problem which, by its nature,

requires a vigorous transboundary solution.

The President and the Prime Minister endorsed the envoys' report. There are, however, clear economic, scientific and political reasons why each country must devise its own solutions.

In the U.S., the federal government has the controlling responsibility for providing all its citizens with clean air. In Canada this responsibility lies primarily with the provincial governments.

In the U.S., most of the pollutants originate in one group of states—the Midwest—and do the most damage in others—New York and New England. In Canada, Ontario and Quebec are both the principal sources and the principal victims.

In the U.S. hundreds of separate coal-burning utilities in several states produce significant sources of SO₂. In Canada the sources, including smelters as well as utilities, are relatively few and concentrated in the two central provinces.

Both the U.S. and Canada passed clean air legislation in the 1970s, which had significant impact. A recent study on be-