

CGR4M0 Grade 12 Environmental and Resource Management  
**Our Interactions with the Environment – Part 4: Transboundary Air Pollution**

In the 1980s, the major environmental concern was acid rain. Sulphur dioxide and nitrogen oxides from coal and oil fired power plants, automobiles, ships and aircraft were transported in the atmosphere and mixed with the water vapour to create acid rain thousands of kilometres away from the source. In Europe, pollution from the industries of the United Kingdom passes over the North Sea in prevailing westerly winds and is deposited on Scandinavia. The environmental impact on the downwind countries is great; the acidification of water and soil, eutrophication of lakes, degradation of cultural structures, and forest dieback are major concerns. In 1979, the United Nations Economic Commission for Europe implemented the Convention on Long-Range Transboundary Pollution to better monitor and control the problem of pollution. A system of measurement and modeling was established by the Convention to quantify the data and to forecast the movement of the pollution, all in an attempt to reduce emissions. While the reduction of pollution such as sulphur dioxides has been successful, other pollutants such as photochemical oxidants and fine particulate matter remain problematic. In the developing nations of Asia, the problem of transboundary air pollution has also become a problem.



Follow this link to get the 2005 Ontario government report on air pollution:

<https://download.elearningontario.ca/repository/1180280000/CGR4MPU02A08/docs/Transboundary.pdf>

Now, using *only* pages 4 – 38, answer these questions. Put the answers in your own words to make it easier to study. Please be as thorough as possible without copying.

- 1) What air contaminants have been significantly reduced?
- 2) Which contaminants are still an issue?
- 3) To what degree do these exceed criteria levels?
- 4) What is the status of airborne acidic pollutants? Account for the changes.
- 5) Why is nitrogen oxide of growing concern?
- 6) What are the sources of toxic or hazardous air pollutants?
- 7) What evidence is used to conclude that mercury levels in Ontario are caused by mercury from local and U.S. sources?