

## Chapter 5

### SOURCE-RECEPTOR RELATIONSHIPS

#### Introduction

Several long-range transport models are currently available for predicting sulfur deposition and for developing source-receptor relationships; these were described in Chapter 3. No models are currently available for predicting either acidity or nitrate deposition.

Eastern North America can be divided up in a variety of ways for purposes of source-receptor modeling as described in Chapter 4. In the United States many modelers have used a basic 80 km grid with the cells aggregated into 63 geographical areas. The ASTRAP and ENAMAP models have been run using the original ARMS 60 areas to produce a 60 by 60 transfer matrix. Of particular interest in the present context is the impact of individual or combined source areas on the ten areas designated as sensitive receptor areas. At a later date when other potential effects (e.g. on agriculture or buildings) are being considered, different sets of receptor areas may be considered.

The Canadian approach has been to aggregate into 11 large source regions, 8 U.S. and 3 Canadian, and 9 receptor areas. Most of the receptor areas selected are the same as those used by the U.S.