

For this last application, the contributions to the depositions or ambient concentrations at a series of receptor areas of interest from a series of specified source regions can be displayed conveniently in matrix form. This format of presentation is called a "transfer matrix" because each element of the matrix expresses, quantitatively, the physical relationship between a specified receptor area and a specified source area for the species and variable of interest. One can thus relate source to receptor, or "transfer" the effect of a change at source to the receptor. The matrix elements can be made independent of source strength, but they are functions of the chemical species, the variable chosen, and the averaging time used.

A transfer matrix is a convenient format in which to display changes in concentration or deposition patterns, corresponding to various emission reduction scenarios. Details of the use of the transfer matrix are given in Chapter 4. The impacts of emission reduction scenarios depend upon the formulation of the matrix, and the matrix in turn is only valid within the limitations of the LRT model used in its construction.

Present Limitations of LRT Models

Our incomplete understanding of the physical and chemical process involved in long-range transport as well as limitations on computing resources prevent us from constructing a "perfect"