

and product. Moreover, it presumes that the demand for forest products is highly inelastic (i.e., insensitive to price changes). The procedure is less complex for the forestry sector than in the agriculture sector, because there is less government intervention. Also there are fewer known uses of mitigation measures or changes in tree planting patterns due to acidic deposition.

7.3.2.3 Ecosystem

Any valuation of the benefits of reducing acidic deposition should reflect the value of all changes in the terrestrial ecosystem, not just agricultural and forestry activities. Change in nutrient composition of soils is a major change which may not be immediately captured by changes in yields in the agriculture and forestry sectors. This change, as well as changes in terrestrial animal populations, would have some affect on activity, option and existence values. Although these are best measured by means of a survey, it is unlikely that individuals would be able to assign accurate options or values to the terrestrial ecosystem considering the dearth of dose-response information.

7.3.3 Water Supply

The conceptually correct procedure for valuing a reduction in the direct effects of acidic deposition on water supplies, is the reduction of treatment cost. These changes in treatment costs are a first approximation as long as they do not change other forms of producers activities, cause substitutions among factor inputs, or change prices of outputs.

Although the use of changes in treatment costs is recommended as a benefit measure, there may be problems in making an empirical estimate. The problem lies in correctly assigning a percentage of liming costs to the mitigation of acidic deposition effects. Even if there were no acidic deposition, industries and municipalities would probably continue their current treatment practices of balancing the pH of water. Consequently, we would provide at best only an upper bound on benefits by assigning all liming costs in areas of high atmospheric acidic deposition.

7.3.4 Effects on Buildings and Structures

The conceptually correct procedure for valuing the reduction in the effects of acidic deposition on commonly used materials, is the annual equivalence of the present value difference in life cycle costs of production processes. The difference is appropriate for reductions in deposition which extend the useful life of materials (including water supply systems), reduce maintenance or repair costs, or eliminate the need for higher initial costs for damage resistant materials.