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Atmospheric Deposition and Forest Nutrient Cycling

A Synthesis of the Integrated Forest Study

Over the past decade there has been considerable interest in the effects of atmospheric deposition on forest ecosystems. This volume summarizes the results of the Integrated Forest Study (IFS), one of the most comprehensive research programs conducted. It involved intensive measurements of deposition and nutrient cycling at seventeen diverse forested sites in the United States, Canada, and Norway. The IFS is unique as an applied research project in its complete, ecosystem-level evaluation of nutrient budgets, including significant inputs, outputs, and internal fluxes. It is also noteworthy as a more basic investigation of ecosystem nutrient cycling because of its incorporation of state-of-the-art methods, such as quantifying dry and cloud water deposition. Most significantly, the IFS data was used to test several general hypotheses regarding atmospheric deposition and its effects. The data sets also allow for far-reaching conclusions because all sites were monitored over the same period using comparable instruments and standardized protocols.