8.4.2 Canadian Forest Resources

The wood industry is an important component of the Canadian economy. Forest industries valued at $22 billion Cdn. annually constitute Canada's largest manufacturing industry as well as the largest single contributor to the positive side of our balance of payments (Sidor 1981). One in ten Canadian jobs depends on the forestry sector.

The importance of the forest industry in the eastern Canadian provinces to the wood industry is substantial. Approximately 35% of the country's total productive forest land lies within the boundaries of eastern Canada. Further, the eastern Canadian provinces accounted for about 64% ($3.5 billion Cdn.) of Canada's total value added in the forest industry (Sidor 1981). Total value of the annual forest growth of 150,241,000 m^3 is estimated to be $3.9 billion Cdn. This is based on an average wood value of $26.25 Cdn. per m^3 (1981).

Figure 8-3 illustrates the pattern of acidic deposition (kg SO_4^{2-} /ha.yr) and forest type. In eastern Canada higher levels of SO_4^{2-} are most often associated with deciduous forests and lower SO_4^{2-} levels with coniferous.

Table 8-12 lists the annual growth by forest type and deposition regime. Although only 4% (5,436 $m^3.10^3$) of the annual growth occurs in areas receiving more than 40 kg/ha.yr sulphate deposition this does represent 10% of the hardwood annual yield. Although deposition exceeding 40 kg/ha.yr sulphate affects the smallest area of forested land (2,048,000 ha), this is the area of highest mean annual increment (2.1 m^3/ha) affecting mixed and hardwood forests. The bulk of hardwood and mixed wood growth occurs in areas receiving 20 - 40 kg/ha.yr sulphate, representing 64% and 70% of annual growth by forest type, respectively.

The provincial summary (Table 8-13) illustrates the geographic variation in annual growth. While only 41% and 30% of the annual growth for Quebec and Ontario are receiving more than 20 kg/ha.yr of sulphate, 100% of the annual growth in the Maritime provinces are under the moderate deposition regime. Sixty-seven percent of Newfoundland's forest growth occurs under similar conditions receiving 20 - 40 kg/ha.yr of sulphate.

8.5 MAN-MADE STRUCTURES

Man-made materials can be grouped into three classes (i.e., metals, masonary and organic materials). Organic materials include paints, coatings, textiles and wood. Materials within each one of these classes behaves differently when exposed to air and water pollutants.