

# POLLUTION AND MANAGEMENT OF POLISH NATIONAL PARKS

by

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Poland has 14 national parks and several hundred nature reserves which occupy less than 1% of the area of the whole country. The national parks preserve the most typical and undisturbed ecosystems from the Baltic coast through the lowlands and uplands to the mountains. Traditional management in nature protection tried to reestablish the climax. During the last two decades a new approach has been introduced in national parks to protect the species and ecosystem diversity. This requires several practical measures such as the clearing of bushes, fertilization of meadows, etc.

National Parks in Poland cover fairly small areas, from 1. 6000 ha to 20. 000 ha. They are affected by air and water pollution and also tourism. Extensive biomonitoring studies of heavy metals were made in all the national parks in 1976 and again in 1986. Two moss species (*Pleurozium schreberi* and *Hylocomium splendens*) were used to estimate the accumulation of seven or eight heavy metals (Cd, Co, Cr, Ni, Pb, Cu, Zn, Fe). Significant differences were found between particular parks. The lowest concentrations of these metals were recorded in the mosses from the national parks in northern and eastern Poland (e. g. Białowieża), the highest concentrations were found in the southern part of our country (e. g. Ojców, Babia Góra). Significant differences in the content of heavy metals were also observed between the green and brown (younger and older) parts of mosses, between moss species, and also between years of sampling. During the 1980s a decrease in heavy metal accumulation in mosses was documented. This is probably due to a slight reduction in both long-distance and local emissions of air pollution, especially dusts.

Management in national parks has to include some practical measures to allay the effects of air pollution till such a time when the emission of gases and dusts can be controlled.

## References

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