

RESEARCH NEEDS

Our understanding of the process of ozone depletion is incomplete. For example, ozone depletion in the Arctic is of particular interest to Canada but we do not know the extent of the depletion or whether the development of an Arctic "ozone hole" is likely. It appears that the atmospheric conditions conducive to the formation of the Antarctic ozone hole are not duplicated in the Arctic but the same conditions may not be necessary. Monitoring indicated an overall reduction of 8% in ozone concentration in the spring of 1989 in the Arctic with larger reductions in some layers of its stratosphere. However, similar depletion was not recorded in 1990. We do not know how to explain the irregularities and do not know for certain whether we are monitoring the appropriate geographic locations.

In the temperate latitudes, such as over southern Canada, we now experience a 2-4% overall annual reduction relative to ten years ago. Seasonally, the reduction is 7-8% for a four to five month period in the spring. Yet we are uncertain of the linkages between the polar regions and the temperate latitudes. Monitoring and research to date have been insufficient to answer these and related questions. Therefore:

- (19) We recommend that adequate funding be made available to the Atmospheric Environment Service of Environment Canada to conduct monitoring of and research into ozone depletion.**