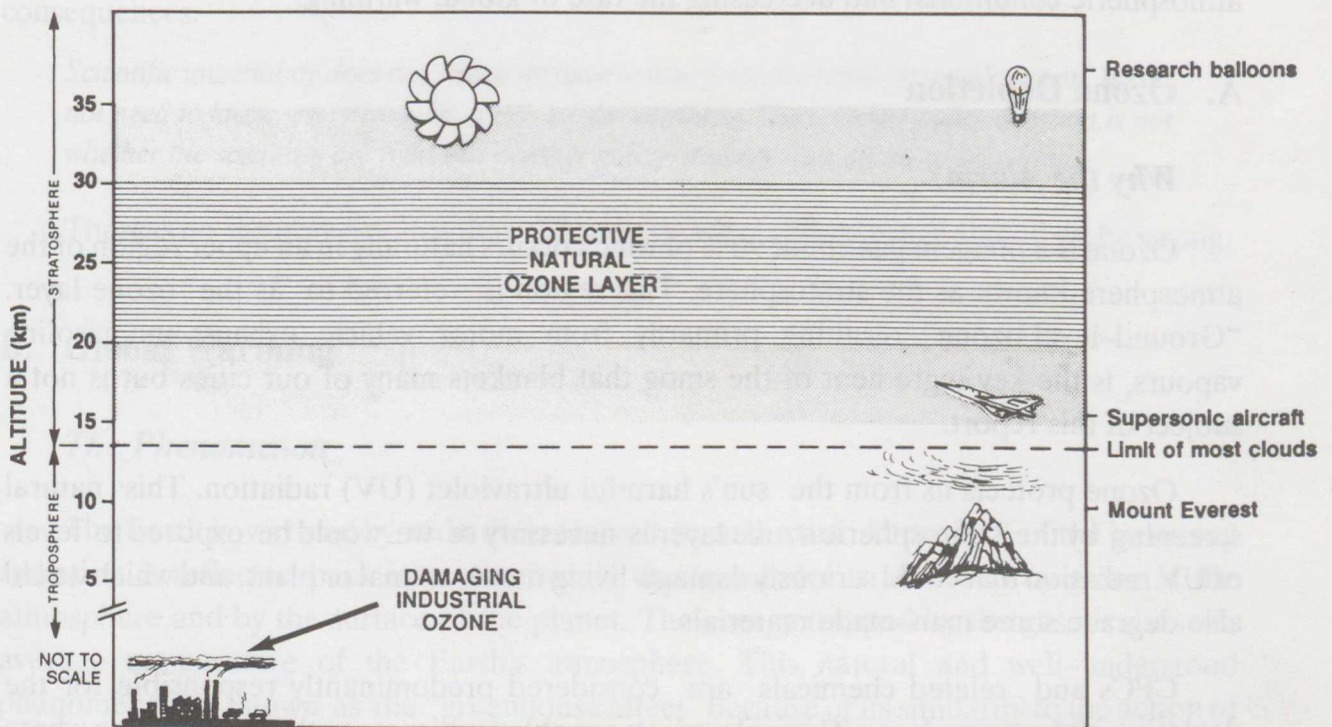


INTRODUCTION

Although life on Earth is shielded from damaging ultraviolet radiation by the ozone layer, we are threatening that layer's very existence. Since the 1930s, we have emitted millions of kilograms of chlorofluorocarbons (CFCs) and related chemicals that have slowly migrated to the upper atmosphere. There, through a series of chemical reactions, the ozone has progressively been depleted. This has resulted in a worldwide erosion of the protective layer and a pronounced seasonal reduction in ozone concentration over a large area of the southern polar region, known as the Antarctic "ozone hole". If all the CFCs throughout the world were to be released, the Earth's ozone layer would probably be destroyed.

Figure 1 : Ozone in the Atmosphere



In the upper atmosphere, a protective layer of ozone shields us from the sun's damaging rays, while at ground level this same gas is a serious air pollutant. (Most of the ozone in the upper atmosphere occurs between 15 and 35 km, with the heaviest concentration between 20 and 30 km.)

Source: Environment Canada, Atmospheric Environment Service, *The Ozone Layer*, Fact Sheet, Supply and Services Canada, 1987, p. 2.