

discriminate different levels of patient response. One problem in scaling that must be solved is the way in which difference components on the measurement scale are to be weighted in the process of arriving at a total...

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The problems of urban climatology, and the related ones of air pollution and its effects on human health, are of enormous complexity. Nevertheless, some progress is being made towards solving them.

A problem that deserves serious consideration is that of increasing background pollution. Carbon dioxide concentrations in air have increased substantially during this century, and there is evidence of similar increases in the concentrations of other more serious pollutants, such as carbon monoxide and the oxides of nitrogen. Studies are needed to determine whether these concentrations may ultimately reach deleterious levels not only locally but regionally, or even on a global scale.

Another problem is the lack of detailed knowledge of the climatic factors capable of preventing the efficient dispersion of domestic and industrial pollutants. A greater understanding is also needed of the relationships between pollutant concentrations outside and inside buildings and of the local factors influencing pollution at various heights close to tall buildings. More studies are needed on the beneficial effects of open spaces, parks, and hedges and on the possible effects of air pollution on vegetation. Warning systems must be established to forecast conditions (such as prolonged and localized inversions) that are likely to lead to disasters in industrial areas or on certain roads. Predictive models would be very useful in these situations. More work is also required on the transport of pollutants that are normally present in low concentrations, such as pollen, bacteria, and asbestos dust.

Finally, there is an urgent need to define much more rigorously the physical properties of the urban surface, particularly its thermal and aerodynamic properties. Observation sites must be selected more systematically so as to ensure that the results obtained in different investigations are comparable. Analytical models based on field investigations and theoretical studies need to be developed for a variety of geographical locations, in order to study the influence of different climatic variables.