

services, and the ways in which we dispose of all the leftovers of modern life. The effects of air pollution are diverse and often subtle. Polluted air contributes to human sickness, disability, and premature death; it soils and damages buildings and materials of all kinds; it injures and destroys farm crops and other vegetation; and it blights our cities and degrades the quality of our lives.

A problem such as air pollution, which has such far-reaching economic, social, and technological ramifications, must obviously be attacked along a broad front. The solution does not lie only in the enforcement of laws and regulations or only in the application of engineering techniques or economic formulas. Achieving effective control of air pollution will require a combination of these approaches and many others. Moreover, it will require the combined efforts of all levels of government and all segments of industry.

In the four years since the enactment of the Clean Air Act of 1963, the Nation has made progress in the fight against air pollution. Federal grants have helped to produce an unprecedented expansion of State and local governmental control programs. Federal abatement action has paved the way for State and local agencies to join the Federal Government in attacking interstate air pollution problems in several places, including the National Capital area. National standards have been adopted for the control of air pollution from new motor vehicles, thus extending to the entire Nation the initial benefits of technological progress in dealing with one of the most important aspects of the total problem of air pollution. Finally, the increasing emphasis placed on control action during the past four years has served not only to bring a few more sources of air pollution under control, but also, and more significantly, it has helped to stimulate a greatly intensified effort to develop new and improved control technology—an effort which has already begun to bear fruit, particularly with respect to motor vehicle pollution and sulfur pollution arising from fuel combustion.

But there are still many gaps remaining to be filled. Our scientific and technical knowledge in many areas is still incomplete. We need more complete information on the importance of the many pollutants whose adverse effects are not as readily apparent as are the effects of such common contaminants as the sulfur oxides, photochemical smog, and visible particulate matter. Economic data on the impact of air pollution and the costs of controlling it are still not as precise as we would like them to be. Needs for manpower must be better defined and plans made for meeting them. Above all, since air pollution is inherently a regional problem, we must make certain that we attack it on a regional basis.

The Air Quality Act of 1967 was developed in full awareness of how comprehensive an effort it will take to achieve truly effective control of air pollution in this country. This new legislation is a blueprint, which, if properly employed, will allow us to correct all the important deficiencies in our current control efforts—the gaps in our scientific and technical knowledge, as well as the inadequacies in our application of existing knowledge. The Air Quality Act sets up a research-and-control system which will be coordinated at the Federal level but will involve a high degree of participation by other levels of government and by all segments of industry. I will take just a few minutes to explain, without going into great detail, how the Air Quality Act will affect air pollution research and development activities in the months and years ahead and, more importantly, how these activities and control activities are interrelated and interdependent.

Air pollution, as I have already said, is inherently a regional problem, simply because the air, whether polluted or not, flows freely across the boundary lines that divide States and cities. This means, of course, that in most, perhaps all, places where air pollution is a problem, effective control action will require the coordinated efforts of numerous local governments and, in many instances, of two or more States. This is fully recognized in the Air Quality Act. One of the chief purposes of the Act is to insure that State governments, in cooperation with municipal and county governments, will develop and apply air quality standards on a regional basis in all parts of the country. Toward this end, the Department of Health, Education, and Welfare will designate air quality control regions, each of which will consist of a group of communities that share a common air pollution problem. Air quality control regions will be designated on the basis of such factors as meteorology and topography, jurisdictional boundaries, and the extent of urban-industrial concentrations.