

It is an axiom of sound public health practice that protective and preventive control measures, to be rational and effective against environmental health hazards, must be based on adequate information on the sources and types of exposure of the causative agent involved and on the population groups affected. For such an assessment of the potential scope of an environmental health hazard of occupational and nonoccupational implications, it is necessary to determine the distribution pattern of the agent from the site of its original occurrence and production through the sites and types of its subsequent industrial and commercial uses to the homes of the ultimate consumers. It is, moreover, essential to ascertain the various types of products into which the causative agent might be incorporated and the purposes for which such products might be used. It is important furthermore to investigate the existence and degree of environmental pollution of the plant area as well as of the plant vicinity and the zones along the routes of transportation of such materials. When some or all of such data have become available, a sound factual basis is provided for a competent epidemiologic investigation of the workers employed in mines and factories producing, using and handling the causative agent, and of the members of various trades and occupations having primary and associated contact with it, as well as of members of the general population sustaining an incidental exposure to it. Past experiences have shown that only through such comprehensive and painstaking epidemiologic procedures are any worthwhile, factual data on the existence and scope of occupational and related environmental health hazards obtained. The continued insistence of some industrial parties that reliable decisions on such aspects can be based on what is called deceptively "sound clinical impression" often merely reflects an objectionable desire to escape from an unpleasant situation into a wishful dreamland in which profits are properly protected against just compensation claims.

A brief presentation of the sources and types of occupational and nonoccupational exposures to asbestos and of the various occupational and nonoccupational population groups having such contacts, therefore, may furnish a proper foundation for the subsequent discussions of the biologic functional and anatomic effects associated with and produced by the inhalation of asbestos dust. The immediate importance of such data is indicated by the fact that the world production of asbestos has increased from 500 tons in 1880, to 330,000 tons in 1925, to 446,000 metric tons in 1938, to over 2,000,000 tons in 1958, and that it is still rising (FIGURE 1). The main producing country is Canada, while the principal consuming country is the United States of America, which consequently should have the largest number of individuals exposed for occupational and nonoccupational reasons to an inhalation of asbestos dust from an increasing number of sources and from a growing number and variety of products.