Community Noise

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The introduction to this book underscores the importance of the community noise problem in Europe. It is stated that almost 25% of the European population is exposed to an equivalent 24-hour A- weighted sound level of 65 dB. This level and the number of persons exposed indicates that community noise is a genuine public health problem.

The book begins with an overview of the properties of sound waves, a definition of sound pressure level, its measurement, and measures of loudness and loudness level. The various measures of environmental noise are described, and short descriptions of the properties of various noise sources are described, for example, road traffic noise and aircraft noise.

Next, a summary is given of the hearing mechanism and the auditory system, and the effects of noise on humans are described. This includes hearing loss in industrial situations and various other effects such as the effects of noise in the community, the effects of noise on mental health, and the effects of noise on task performance. Other sections deal with the economic costs of noise, and the various methods for the measurement of noise exposure.

A final chapter is devoted to guideline values. Guidelines are given for specific effects of noise, including interference with communications, noise induced hearing loss, sleep disturbance effects, annoyance effects, and many others.

This volume does not attempt to give a "stand alone" summary of the results of research in the field. Rather, it is a summary of research results and a carefully referenced guide to the effects of noise on humans and animals. It contains more than 750 references to the scientific literature. There are two short appendices, one devoted to control of noise and the other to definitions.