

Some Statistical Aspects of Environmental Standards

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Abstract

Environmental standards are set by government to protect health and property. In this talk we will first look at some different air quality standards. We will discuss where the design value of the standard came from, and how the government has decided to implement the protection. Hypothesis testing is one approach to implementing standards, but apparently not one frequently used among standard setters. Furthermore, most standards are evaluated by measurements at particular sites. We look at the issue of what exposure can happen away from the sites. Finally we discuss how uncertainty propagates through the system, and how one can go about treating this uncertainty properly to protect individuals within acceptable bounds of risk.