

Sampling for Decision Making

Course objectives

The course is aimed at providing ground rules for obtaining data that can be used to aid decision making. The course will include fundamental methods used in sampling and monitoring but the emphasis will be on practical applications.

Course content

The course will start with an examination of the type of data that are required by decision makers, with emphasis on environmental issues. This will lead on to decision rules, consequences of incorrect decisions and what parameters should be estimated, and the definition of the population to be sampled.

Examples will be given that illustrate the relationship between precision, accuracy and bias.

An overview of sampling schemes will be given. This will cover simple random sampling, stratified random sampling, systematic sampling, cluster sampling, and other more complex schemes that are model orientated. Problems and benefits of composite sampling will be included.

Design of monitoring schemes will be discussed with emphasis on the frequencies of measurements that are required to detect trends and changes in environmental time series.

The course will be illustrated with practical examples from the presenters' experience. There will be group discussions of sampling problems. Attendees will be encouraged to bring problems to the course.

Who should attend

The course will be aimed primarily at environmental managers, environmental consultants. University teachers will benefit from the case studies that will be useful material for courses.

Presenters

Dr Ray Correll (Rho Environmetrics and CSIRO, Australia)

Dr Anders Nordgaard (Linköping university, Sweden)