Noise Mapping in the EU: Models and Procedures
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The chapters in this book are written by a variety of experts from various companies, institutions, and agencies from countries all over Europe. As a result, *Noise Mapping in the EU* provides an insight into the technical methodologies as well as legal framework for noise mapping in the European Union. The first chapter leads with fundamentals of acoustics that are relevant to the presented topics. The remaining chapters are divided into five parts:

1. Noise evaluation and mapping (8 chapters)
2. Noise mapping and geographic information systems
3. Noise mapping in Europe
4. Communication and action plans
5. Future perspectives.

The book continues with the framework of the Noise Directive 2002/49/EC (also referred to as the Environmental Noise Directive (END)), its requirements for the members states of the EU, and issues encountered by various states, thus creating a segue for the more technical chapters to follow.

Methods on collecting noise data for traffic, railway, air and industrial noise, approaches for conducting noise surveys, and typical instrumentations used during long term monitoring are explained along with the calculation of uncertainties during measurements.

Four primary categories for noise sources (Road Traffic, Railway, Industrial, and Airport noise) each have a dedicated chapter. Along with the interim noise prediction standards as proposed by the END, the chapters delve into other widely used standards as well and their respective methodologies.

A good practice guide to assist states in the EU with noise mapping according to the END is summarized as it was written by the European Commission's Working Group "Assessment of Exposure to Noise" (WG-AEN) and a hot topic now on the uncertainty of noise emission and propagation in noise simulation software is discussed. Different types of uncertainties and modeled objects that can introduce uncertainties are among the matters addressed within this topic across two chapters.

The part on noise mapping and geographic information systems describes proper GIS data acquisition for noise mapping, and preparedness of the information prior to mapping, along with examples of noise management to plan, manage, report, provide information, police and abate noise using noise mapping and GIS. Additionally described are the methods used to estimate the number of residents assigned to specific façade receivers as well as the location of receiver points at façades of buildings.

The final chapters of the book begin with an overview of the data collected from the member states involved with the END. These data are a result of the first round of mapping required by the END. It explains the shortcomings of the data provided by member states and histograms of available data.

Differences of calculation methods used in noise assessments and studies in comparison for various methods are addressed along with the development of the Common Noise Assessment Methods in Europe (CNOSSOS-EU) — a process to implement common methods to be used by the member states.

The book wraps up with chapters on how noise maps should be explained to the general public in a qualitative manner without getting too technical, what adequate information should be provided to policy makers as a result of noise mapping and concludes with more of a tangential alternative on using soundscapes for noise mitigation in urban landscapes.

This book provides helpful references for users involved in modeling noise for industry, airports, roads and railways alike. Topics are supplemented by formulae and a dedicated colored section for referenced images. Although the title of the book may suggest its value will hold only for EU mapping, I believe all professionals involved in noise prediction and noise mapping field will benefit from the contents of this book.

Recommended.

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