Jian Kang, Brigitte Schulte-Fortkamp (Ed.): "Soundscape and the Built Environment", CRC Press, 2016, ISBN: 978-1-4822-2631-7

The book "Soundscape and the Built Environment" is a new book edited by Jian Kang and Brigitte Schulte-Fortkamp and published by CRC Press of the Taylor & Francis Group in 2016. The book contains 10 chapters with 310 pages. It deals with soundscape as a new and constantly growing multidisciplinary research field, especially in the past decade. The content of the book is based on the findings of a recently completed European scientific project, the COST Action TD0804 on Soundscape of European Cities and Landscapes (2009 - 2013). It is written by 26 different authors, all of them recognized and well-known specialists in their respective fields.

In general, the book is aimed at professionals, researchers and students interested in the field of soundscape. No in-depth knowledge on the topic is required, but elementary knowledge of acoustics will help the readers follow the presented content. The complexity of the written text varies from a basic level to advanced discussions. Each chapter is followed by an extensive list of references, and there is a common index of terms at the end of the book.

As an introduction to the scientific discipline of soundscape, Chapter 1 gives an overview on the term “soundscape” and its relation to the term “acoustic environment”. It discusses the linguistic differences of the translations of the term “soundscape” to different languages, which often lead to somewhat different interpretations of the broadness of this discipline. The role of context in soundscape research is covered as well.

Chapter 2 is a step up from the purely linguistic meaning of soundscape, as it deals with the analysis of how people perceive sounds and auditory scenes, how sounds get their meaning and how they contribute to the quality judgement of an environment. The role of attention in this process is also highlighted. A more holistic model of soundscape is discussed. The chapter ends with a critical text on measuring soundscape and soundscape design.

In Chapter 3 soundscape is approached from the angle related to human health. The effects of environmental noise on people are analysed through quantifiable health effects. The required models for stress relieve from noise and restoration associated with soundscape are presented. The important topic of economic perspective of soundscape concludes this chapter.

Chapter 4 is all about the perception of soundscape. The way the human mind functions when perceiving soundscape and acoustical environments is analysed. The influence of societal needs on the process of modelling the perception is discussed. The relevance of soundscape research for social harmony in living environments is shown.

Chapter 5 uses a different approach to analyse the perceived soundscape by presenting a number of large-scale studies oriented to health and the quality of life. The relevance of these studies for the entire field is indisputable. Special attention is given to scaling and dimensioning of these studies when doing research on soundscape, as well as the need for their integration.

Chapter 6 is focused on measurements and analysis of acoustic environments and soundscapes, in particular using binaural technology and psychoacoustic quantities. The requirements on measurement equipment, conditions and specifications are described. The psychoacoustic parameters successfully used in soundscape analysis and classification are presented. At the end, the limitations on soundscape evaluation based solely on measurements are discussed.

Chapter 7 is a logical sequel to the previous one, as it deals with the possibility of soundscape mapping. Sound field mapping is introduced and briefly explained, and this concept is further

extended towards the mapping of the human perception of sound, soundscape, psychoacoustics and mind mapping. The chapter is concluded with the description of mapping of noticed sounds and its possible practical use.

Chapter 8 deals with planning and soundscape design within the discipline of urban design. This topic is related to outdoor soundscape research and the standard noise control techniques. An interesting part of this chapter discusses the soundscape design guidelines and methods that should be used to move from the design phase to the practical implementation phase.

The next chapter presents soundscape from the perspective of cultural heritage. Again, the importance of multisensory evaluation in soundscape research is discussed. The setting of soundscape trademarks is explained and confirmed through several real-life examples. This chapter finishes with an overview of tools for the soundscape safeguard.

The concluding chapter of the book is probably the most thrilling one, as it presents soundscape on real-life examples. To do that, twelve cases of soundscape design already implemented on actual locations are analysed. These case studies are immensely important in providing proof about the usefulness of soundscape in urban sound planning. At the end, future perspectives of soundscape in urban planning are given.

Just by glancing through the content of the book, it becomes obvious that multiple scientific disciplines deal with soundscape from quite different points of view. This can be seen in the scientific approach of the authors of different chapters, which also reflects the differences in their individual professions, their research methodologies and completely different hypotheses related to soundscape research. Such a concept of the book does not enforce simple reading from the first to the last page, nor was this the intent. The multidisciplinary approach of all contributing specialists is very important to broaden the understanding on how sound in the surrounding environment can be interpreted, what its influence on the listener is, and how it can be used to improve the sustainable quality of life. Each of the approaches to soundscape research and evaluation described in this book is too broad to be completely covered with this book. However, rich reference lists that follow each chapter provide a good starting point for delving more deeply into the matter. This book is a must-have; a high-quality and complete review reference text on soundscape approached from the most important research fields and scientific disciplines.

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