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SS: Sound Quality, Sound Design & Soundscape

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Title: Relationship between environmental noise, sound quality, soundscape

The term “Environmental Noise” is well known for many years. Its characteristic is often described by parameters like A-weighted SPL, L_{den} , L_{day} , $L_{evening}$, L_{night} . These parameters can be measured and calculated. In the field of “Sound Quality” psychoacoustic parameters are additionally used like loudness, sharpness, roughness and others, which can be measured but not calculated for a complex sound field. On an international level a standard is available only for the loudness of stationary sounds so far.

The “relatively” young term “soundscape” will be standardized in ISO 12913-1. Moreover, as it considers human perception including cognitive aspects, context and interaction it goes beyond physics and psychoacoustics. It involves a concept, where environmental noise is not reduced to an averaged quantity evoking only unpleasantness feelings estimated by statistical probabilities, but understanding noise as a valuable resource, which can be purposefully utilized.

In spite of recent progresses in the standardization process lots of misinterpretations occur in practical use, where the terms are heavily mixed up. Environmental noise and soundscape are no synonyms, for example low noise level does not directly mean a good sound quality. The paper will clarify options and limitation of both terms.

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