

Acoustical Indicators in Addition to the A-weighted SPL - Options and Strategies. Andre Fiebig
(HEAD acoustics GmbH, Ebertstr. 30a, 52134 Herzogenrath, Germany)

Environment noise assessment methods adequately reflecting the inescapable nature of environmental noise (and the inexorable increase of noise effects) have been examined extensively for several decades. From the increasing number of complaints, it is clear that noise is still one of the most exigent environmental problems. A-weighted sound pressure level indicators were typically determined for classifying environmental noise and predicting (un-)acceptable noise exposure. These indicators are well-established and deeply ingrained in noise policy. Unfortunately, the dB(A) does not always reflect the annoyance aspect of environmental noise. A few shortcomings were observed, for example that sometimes with certain sources, source combinations or sound properties the correlations are poor between the (A-weighted SPL) dose and the measured response (share of highly annoyed people). Supplements to the A-weighted SPL must be applied to consider these shortcomings and to improve the effectiveness of the respective indicator. It is very important to extend conventional indicators and metrics to overcome these difficulties in predicting human reactions to environmental noise. Consideration of further indicators besides the dB(A) for environmental noise assessment could be valuable. Acoustical metrics for environmental noise description and classification will be presented. Further metrics will be tested in case studies and discussed.

Suggested Special Session: Alternatives to A-Weighting

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Telephone number: +49(0)2407 577-116

email address: andre.fiebig@head-acoustics.de

Send notice to: Andre Fiebig.

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HEAD acoustics GmbH
Ebertstraße 30a
52134 Herzogenrath, Germany