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COMPARING NUMERICAL TECHNIQUES IN ENVIRONMENTAL NOISE CONTROL

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ABSTRACT
Regulations suggest methods of calculating noise distributions which are sometimes interpreted in 0.1 db(A) accuracy for legal aspects, whereas varying numerical techniques, all according to the regulations, will produce larger differences.
When applying these principal regulations on complex situations in praxis the necessary interpretation of the regulation will lead to a further spreading of results.
In the calculation of large scale noise maps varying simplifications in modelling or in calculation are used. Some techniques are compared in their results and efficiency.
In order to derive actual planing suggestions from noise mapping results the interpretation of results may be supported by annoyance analysis. Different suggested strategies for annoyance analysis are compared.
Fixing emission quotas while planing industrial estates can be done according to several numerical techniques published so far. Some of them are compared in their results on the basis of systematic examples.
Note: for more information about this work, please contact the author.