



Mapping of noise pollution by different interpolation methods in recovery section of Ghandi telecommunication Cables Company

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Background: Noise pollution and workers' noise exposure are common in industrial factories in Iran. In order to reduce this noise pollution, evaluation and investigation of noise emission are both necessary. In this study, different noise mapping methods are used for determining the distribution of noise.

Materials and Methods: In the present study, for preparing a noise map in a hall of an industrial factory, sampling was carried out in 6×6 m grid. After data normalization the variogram was developed. For interpolation of mentioned parameter, kriging and Inverse Distance Weighting methods were used. The best model for interpolation was selected by cross validation and error evaluation methods, such as Route Mean Square Error (RMSE).

Results: The results showed that kriging method is better than other methods for prediction of noise property. The noise map was prepared, using the best interpolation method in Geographical Information System environment.

Conclusion: Workers in this industrial hall were exposed to noise which is mainly induced by noisy machines. Noise maps which were produced in this study showed the distribution of noise and, also revealed that workers suffer from serious noise pollution.

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