ISSN(O): 2320-5407 | ISSN(P): 3107-4928

International Journal of Advanced Research

Publisher's Name: Jana Publication and Research LLP

www.journalijar.com

REVIEWER'S REPORT

Manuscript No.: IJAR-55890

Title: COMPARATIVE STUDY OF LD SOUND LEVELS FROM ROAD TRAFFIC NOISE IN COTONOU: IN SITU MEASUREMENT AND SIMULATION USING THE CNOSSOS-EU MODEL

Recommendation:

Accept as it is .....

Accept after minor revision.....

Accept after major revision .....

Do not accept (*Reasons below*) .....

Rating	Excel.	Good	Fair	Poor
Originality		x		
Techn. Quality			x	
Clarity			x	
Significance		x		

Reviewer Name: Dr. Hari Prashad Joshi

Date: 25th Jan, 2026

Detailed Reviewer's Report

This manuscript presents a valuable application of the CNOSSOS-EU noise model in the understudied urban context of Cotonou, Benin. The comparative approach between measured and simulated Ld levels addresses a relevant gap regarding model performance in West African cities. However, the manuscript requires major revision due to significant methodological and analytical shortcomings that currently undermine the validity and impact of the findings. The core issue is an insufficiently detailed methodology. The description of the CNOSSOS-EU implementation is critically vague. Equation (1) appears corrupted or incorrectly presented, and essential model inputs such as the specific coefficients used for road surface, propulsion, and rolling noise, the treatment of local geometry (e.g., barrier effects, building reflections), and the source data for Table 1 (vehicle categories) are omitted. Without this information, the study is not reproducible. Furthermore, the analysis is merely descriptive. A rigorous statistical evaluation (e.g., correlation analysis, RMSE, mean bias with significance testing) is absent, leaving the claim of a "parallel trend" unsubstantiated. The discussion must move beyond restating results to critically analyze the specific local factors (e.g., traffic mix, driving behavior, urban canyon effects) likely causing the systematic overestimation, and propose concrete calibration strategies. Finally, presentation issues, such as unexplained data anomalies in Table 2 (e.g., 0.00 dB values) and an incomplete results section (only 31 of 35 sites shown in Table 3), must be resolved. Addressing these fundamental concerns is essential for publication.