



Application of Tree Barriers as Mitigation Measures for Noise Pollution – Road “29 Nëntori”, Tirana, Albania

Entela Çobani*, Ledia Aleksi

Department of Environmental Engineering, Faculty of Civil Engineering, Polytechnic University of Tirana, Tirana, Albania

Received April 07, 2012; Accepted June 18, 2012

Abstract: Noise pollution is becoming a major problem in urban areas, in particular traffic noise. Tirana, the capital of Albania, is one of the most noise-polluted areas of the region. The use of trees and shrubs as mitigation measures of noise barriers results effective where the space permits. According to the different studies noise can be reduced by six decibels (dB) over a distance of 30 meters. In our paper we measured the noise levels in 29 Nëntori str, from the so-called “Dogana” area to “Kamza Over Bridge”, which is in the capital of Albania, Tirana, using the Sound meter model 407764, Extech type, certified ISO 9001-2000 (IEC651 type 2, ANSI S1.4). According to our records, the level of traffic pollution is high regarding noise pollution. We proposed the use of trees and shrubs barriers as ecological mitigation measures. The use of such barriers reduces the air pollution because of photosynthesis; reduces particles as results of leaves filtration; and has microclimate effects. The paper makes an analysis the different types of tree barriers we can use in these kinds of streets and the urban space there is needed. We have considered two types of tree barriers, namely: totally vegetated barriers or mixed structures barriers. The use of such mitigation measures as noise pollution control means has a positive impact in social and cultural as well as in urban aspects.

Key words: *decibel, tree barriers, noise reduction, mitigation measure.*

* Corresponding: E-Mail: entelacobani@yahoo.com;

This paper has been presented in 2nd ICE, June 1-6, 2012, Tirana, Albania