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ON SUSTAINABLE DEVELOPMENT  
OF ENERGY, WATER AND  
ENVIRONMENT SYSTEMS

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Novi Sad  
2018



June 30 -  
July 04, 2018,  
Novi Sad,  
Serbia

**BOOK OF ABSTRACTS**

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INTERNATIONAL CENTRE FOR SUSTAINABLE DEVELOPMENT  
OF ENERGY, WATER AND ENVIRONMENT SYSTEMS



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**Publisher** Faculty of Mechanical Engineering and Naval Architecture, Zagreb

**ISSN 1847-7186 (book of abstracts)**  
**ISSN 1847-7178 (digital proceedings)**

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## SDEWES.SEE2018.0130

# Genesis of the Unsustainability in the Public Transportation System in Kragujevac, Serbia

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## Abstract

The City of Kragujevac, with its 180 thousand inhabitants, is the fourth-largest city in Serbia. Stretched along the valley of the Lepenica River, and surrounded by the slopes of three mountain ranges, it could be a calm city with easy-going traffic adapted to the needs of its inhabitants. Nevertheless, this is not the case.

Kragujevac's public transport system is not diversified; it consists only of buses and taxi vehicles. The buses (54 of them) are either diesel or CNG-powered. The taxicabs are mainly LPG-powered and the number of legal vehicles exceeded 800 in 2017, while the number of illegal cabs was estimated to be at least 300. The sum of these vehicles indicates that there are approximately 6 cabs per 1000 inhabitants, twice as many as London or almost three times as many as Rome. Knowing that Serbia is among the least developed European countries (the 39th place on GDP per capita list out of 45), it is surprising that there is enough work for all the cabs. Nonetheless, they make the total length of 11 million kilometres per year or almost four times the length of trips made by the buses. In addition to the above, there is a strong presence of private cars in the city centre, which additionally hinders the situation and constantly burdens both dynamic and static traffic.

There are minimal efforts visible to counteract this trend. The total length of cycling lanes is 2 km, public bicycles are not available, cycling is "at your own risk" and pedestrian transport is subordinate to all other means of transport.

This paper is the result of the 2017 – 2020 Energy Efficiency Programme developed for the City of Kragujevac. Because of its impact on all energy indicators of the public transportation system, the Programme raises illegal taxicabs as a sustainability issue. After indicating to the genesis of legal and illegal taxicab operation, this Programme explains how the phenomenon of illegal taxicab threatens to jeopardize the functioning of the public transport system, lowers the quality of life and raises energy consumption in the transport sector. The programme also presents the impact of this situation on different aspects (social, economic and environmental), as well as the probable unfolding scenarios and possibilities to avoid the worst-case scenario. This paper will argue that a neglected and underdeveloped public transport system combined with under-regulated transport market clearly leads towards an undesirable scenario.

At the end, possibilities for improvement of the existing state will be reviewed.