

# LIST OF THESIS ABSTRACTS

in the framework of the project  
"Waste management in transition economies"



*carried out under the IMPULSE Program, funded by OeAD*



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**Kharkiv, Ukraine 2017 -2018**



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<b>Master Student</b>	<b>Name of Thesis</b>	<b>Supervisor (s)</b>	<b>Date of presentation</b>
Mariia Pavlova	Communication and Social Issues in the Integrated Solid Waste Management programs and projects for low-middle income countries	Prof. Feliks Stolberg, Kateryna Abashyna	January, 2017
Kateryna Abasova	Improvement of the waste management system in territorial communities on the example of Kharkiv region	Prof. Feliks Stolberg, Olena Chernikova	January, 2017
Mykhailo Petrenko	Optimization of the waste management system in the city of Kramatorsk, Donetsk region	Olena Chernikova	January, 2018
Olena Pysmenna	Environmental and economic aspects of municipal waste management system in rayon centers (case study of the city of Slovyansk, Donetsk region)	Olga Khandogina	January, 2018
Yaroslav Golizdra	Improvement of waste management system in local territorial communities (case study of the city of Merefa, Kharkiv region)	Olga Khandogina	January, 2018
Olga Steginienko	Environmental analysis of optimization of municipal solid waste transportation (case study of D. rayon, Kharkiv region)	Olga Khandogina	January, 2018
Nina Gorbatko	Comparative analysis of technological schemes of municipal waste separate collection (case study of the city of Slovyansk, Donetsk region)	Olga Khandogina	January, 2018

**Kateryna Abasova, Master Thesis**

**Sc. Advisors: Prof. F. Stolberg , O.Chernikova**

**Improvement of the waste management system in territorial communities on the example of K. region**

The purpose of the thesis is development and ecological & economic assessment of measures, aimed to improve the waste management system in the territorial communities of the K. region.

The object of the study is a system of solid waste management in the territorial communities of the D. district of the K. region on the example of the V., P. and S. village councils.

The subject of research - the separate collection and processing of resource-consuming components - rubber and plastic and the study of the possibilities of their further application.

Research methods: analysis of normative legal documents, collection and statistical processing of data, comparisons, etc.

*Key words:* waste management system, recycling technologies, waste processing technologies, territorial communities

**Mariia Pavlova, Master Thesis**

**Sc. Advisors: Prof. F. Stolberg , Katerina Abashina**

**Communication and Social Issues in the Integrated Solid Waste Management programs and projects for low-middle income countries**

The theme of the thesis is the topic issue since currently Ukraine is facing the urgent need to change the approach towards the municipal waste management. This need raised as the consequences of signing the Ukraine-European Union Association Agreement. Following this agreement Ukraine is obliged to take measures and to approximate its legislation to European norm and standards. Thus, environmental legislation and applied approaches need to be revised and updated respectively. To achieve this objective, Ukrainian authorities needs to find the way to improve the current situation in the municipal waste management sphere which is characterized by poor technical condition of the existing facilities, lack of financial provisions, weak legislative enforcement and regulations. Moreover, the situation is getting worse due to lack of knowledge related to proper municipal waste management both at the authorities' and population's level. Most international practice proved the importance of the social and communication factors involvement into the development of the strategies; international guidelines strongly recommend to consider and involve the communication tool at all levels of the strategy's development. The novelty of the thesis is due to the identification of the social and communication factors influencing each stage of the municipal waste management and recommendations provided for the low-middle income countries to properly incorporate these factors into the integrated municipal solid waste management system so that to improve the efficiency of the existing measures taken and to prepare the population for the newly introduced technologies using the social marketing tools, best international practices and adopting them to the situation with the limited financial provision. The overarching goal of the project is to determine what is the influence of the communication and social factors in the process of collection, transportation, treatment and landfilling of municipal wastes and those ratings. The research questions to be addressed are:

- 1) What is the key problems of municipal solid waste management (MSWM) on national and local level in the low-middle income countries with transition economies?
- 2) Who is key stakeholders, their roles and current activities?

- 3) What issues and barriers in MSWM for low-middle income countries?
- 4) How to eliminate or at least to minimize these barriers through the comprehensive public awareness campaign integrated into the MSWM programmes and projects?
- 5) How to decrease issues through implementation of IMSWM programs and projects?

The target of research is three countries with the similar historical background, economic and political development, social and living conditions and targets set, Ukraine, Moldova and Georgia. The theoretical foundation for the thesis is the international researches reports, materials of the international presentations, EU and international guidelines and recommendations as well as legislative regulations of the presented countries related to the municipal waste management sphere. The thesis comprises five chapters, introduction and conclusion. The first three chapters review the current situation in the MSWM sector in Ukraine, Moldova and Georgia. The fourth chapter reviews and analyses the indicators usually applied by the decision-makers to select the scenario for the integrated municipal solid waste management system, best practices of the social and communication issues incorporated in the strategies. The fifth chapter devoted to the recommendations for the countries with the transition economies to built-in the social and communication factors into the MSWM strategies to make it comprehensive and continuous, to avoid its fragmental nature and to improve the overall efficiency in the conditions of the limited financial provisions.

*Key words:* waste management system, BiPRO analysis, PEST analysis, low-middle income countries

### **Olga Steginienko, Master Thesis**

**Sc. Advisors: Prof. F. Stolberg, Olga Khandogina**

### **Environmental analysis of optimization of municipal solid waste transportation (case study of D. rayon, K.region)**

The purpose of the paper is to study ways of waste collection and transportation subsystem optimization at the regional level using geoinformation systems.

The following issues are described and analysed in the paper: state-of-the-art of MSW system in D. Rayon, causes of problem in the sphere, peculiarities of solid waste transportation systems, the modern commonly accepted in Ukraine approaches for waste collection and transportation systems planning and the methods of spatial analysis for modeling the routes of waste transportation. The calculation of the required amount of waste trucks for the local territorial community in the rayon was carried out. Modeling of the solid waste transportation routes was done using principles of network analysis.

*Key words:* waste management system, waste collection and transportation, territorial communities, geoinformation systems, network analysis