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MOVING WASTE SECTOR TOWARDS CLIMATE NEUTRALITY. SCENARIO ANALYSIS

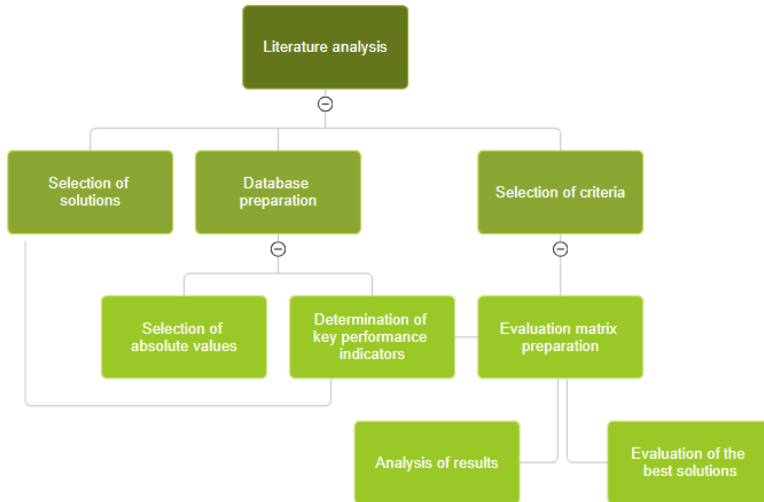
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Abstract – The upward economic growth, the development of the industrial, transport and agricultural sectors, and technological innovations contribute to the constant stimulation of the demand and supply of new products and services, inevitably contributing to the increase in the amount of waste. Mitigation of climate change is not a short-term goal; therefore, sustainable and reasonable practices in the waste management sector could contribute to positive changes in mitigating GHG emissions and climate change in general. However, it is not clear whether by implementing the current domestic waste management policy of Latvia and the action measures contained in it, it is objectively possible to achieve the strategic goals and desired results set at the European Union as well as at the national level, what is the impact of the set goals and the success of their implementation so far, and whether these political settings will not remain only at the level of ideas and wishes. In the scientific literature, several proposals developed as a result of research have been put forward for reducing the climate neutrality of the waste sector with the help of various technologies and technological innovations. At the same time, it is difficult to evaluate the proposals and solutions put forward in the research results in relation to an individual situation; for example, if a municipality in Latvia would like to implement it in order to evaluate their effectiveness, benefits and applicability. Difficulties are caused by the research results presented in the scientific literature, which are not expressed as indicators that would help to apply this solution to each individual case and its characteristic values. The purpose of the study is to evaluate the political goals set by Latvia in the household waste management sector in the context of the political goals set by the European Union for achieving climate neutrality and to provide an objective assessment of the achievement of the goals set by Latvia. In order to achieve the goals, an analysis of the scenarios of the household waste management sector established by Latvia's policy will be carried out, an evaluation of the actions implemented as a result of the policy and still planned will be carried out. Also, in order to achieve the goals of the study, indicators will be developed, with the help of which the effectiveness and applicability of the implementation of various technological innovations could be assessed. The development of indicators will be based on the information reflected in the scientific literature about the results of the implementation of technological innovations in the household waste management sector. As a result of the literature analysis, the absolute values of the selection of criteria for the implementation of technological innovations will be determined, as well as key performance indicators will be determined in such categories as technological solution, economic factor, impact (mitigation) on the environment, social factor. The scientific novelty of the research is based on the creation of a value database of the criteria for the implementation of technological innovations and the development of an evaluation matrix based on it, based on the collected indicators, which would help to assess the applicability and availability of the technological innovations introduced in the waste management sector in order to

promote the goals set in the political documents for achieving climate neutrality. As a result of the research, an assessment of the compliance of the climate neutrality goals set in the political planning documents will be carried out based on the indicators included in the developed matrix in order to achieve the best waste management solutions.



Methodology of evaluation matrix development and research structure based on it.

Keywords – Waste; waste management; climate changes; climate neutrality; impact on the environment; key performance indicators; evaluation matrix