

Evaluation of the Efficiency of the EU Support to Waste Management in Lithuania and Identification of Financing Priorities for 2014-2020

Summary

4 September 2014



Object, objective and tasks of evaluation

EU support has been provided to waste management in Lithuania since 2001, after the European Commission adopted decisions on the financing of the development of first regional waste management systems by the Instrument for Structural Policies for Pre-Accession (ISPA). By the end of 2013, ISPA and the Cohesion Fund financed 40 projects in Lithuania: seven projects by ISPA, three projects by the Cohesion Fund 2004-2006 and twenty-nine projects under measure 'Creation of a Waste Management System' of the Operational Programme for Promotion of Cohesion 2007-2013 (hereinafter – 'OPPC'). The total budget of these projects was LTL 1397.51 million, of which almost LTL 1014 million (73%) came from ISPA and the Cohesion Fund. In the 2014-2020 period, investments of the Cohesion Fund will target the expansion of the waste management system. It is highly important to plan and use these investments in a proper manner.

To ensure the efficient use of EU funds allocated to the waste sector, the Ministry of the Environment has launched a project 'Evaluation of the Efficiency of the EU Support to Waste Management in Lithuania and Identification of Financing Priorities for 2014-2020'. The evaluation was conducted by Public Institution Europos socialiniai, teisiniai ir ekonominiai projektai and ESTEP Vilnius UAB, acting under a joint activity agreement. The evaluation period continued from January to July 2014.

Evaluation tasks:

- 1) Evaluating the expediency and efficiency of the use of resources allocated by the EU Structural Funds 2007-2013 to the waste sector;
- 2) Evaluating trends in the waste sector and propose financing priorities for 2014-2020.

Object of evaluation:

- Measure 'Creation of a Waste Management System' of OPPC 2007-2013 priority 3 'Environment and Sustainable Development' and projects financed under this measure (29 projects in total) – for the purpose of analysis of relevance, administration efficiency, effectiveness, efficiency and impact.
- Projects focused on the creation of a waste management system, financed by ISPA and the Cohesion Fund in 2000-2006 (11 projects in total) – for the purpose of impact analysis.
- Support from the EU Structural Funds to the waste sector as planned by the Ministry of the Environment in 2014-2020 (the Draft Operational Programme for the EU Structural Funds' Investments in 2014-2020 provides for investment priority 5.2 'Investing in the waste sector to meet the requirements of the Union's environmental *acquis* and to address needs, identified by the Member States, for investment that goes beyond those requirements').

Evaluation activities:

1. Evaluation of the relevance of EU support for waste management in 2007-2013.
2. Evaluation of the efficiency of the administration of EU support for waste management in 2007-2013.
3. Evaluation of the effectiveness and efficiency of EU support for waste management in 2007-2013.
4. Evaluation of the impact of the use of EU support for the waste sector.
5. Analysis of the best practice of EU Member States.
6. Analysis of financing priorities in the waste sector in 2014-2020.
7. Analysis of methods of project planning and financing in the waste sector in 2014-2020.

Evaluation methods. The evaluation involved a number of qualitative and quantitative data collection and analysis methods, including desk research (analysis of strategic documents, legislation, monitoring information, waste statistics, etc.), round-table discussion by stakeholders, interview, survey of project implementers, intervention logic analysis and theory-based impact assessment, case studies, project unit cost analysis, project cost-benefit analysis, econometric modelling.

The lack of comprehensive, reliable, comparable and relevant data on the object of evaluation was the main challenge to and limitation of the evaluation. Data of waste statistics and data on waste management infrastructure, its condition, capacities, sources and sufficiency of financing, etc. were relevant for the evaluation. The availability and quality of these data during the evaluation was very limited.

EU SUPPORT FOR THE WASTE SECTOR IN 2007-2013

RELEVANCE OF EU SUPPORT FOR THE WASTE SECTOR

The evaluation of relevance included analysing how and to what extent the waste sector has been financed by different EU funds and other resources since 2001; whether OPPC 2007-2013 measure 'Creation of a Waste Management System' was relevant and compatible with other interventions.

Financing of the waste sector. Since 2001, investment projects in the waste sector have received over LTL 1,534 million¹. At least another LTL 3.4 million² has been allocated to 'soft' projects (raising awareness on waste management, training and cooperation promotion projects). The key sources of financing for both types of projects (investment and 'soft') are ISPA and the Cohesion Fund (LTL 1016.2 million or 66% of the total financing for the waste sector). Other sources of financing in the waste sector include the state budget (LTL 318.6 million), resources of project implementers (municipalities, regional waste management centres, other enterprises and organisations) (LTL 160 million), the European Regional Development Fund (LTL 42.1 million for investment projects of private companies) and grant schemes of the European Economic Area and Norwegian financial instruments (LTL 0.78 million for 'soft' public sector projects).

ERDF and national programme resources were used for financing primarily projects of private companies, related to the management (treatment, recycling) of industrial waste and waste from other economic activities, collection, sorting and recycling of packaging, electrical and electronic equipment waste and tires from municipal waste streams. The Cohesion Fund financed projects aimed at the development of municipal waste collection and (mechanical biological) treatment infrastructure.

Projects financed by ISPA and the Cohesion Fund. During the last two programming periods, ISPA and the Cohesion Fund financed 40 investment projects in the waste sector (11 projects in the 2000-2006 period and 29 projects in the 2007-2013 period). The total budget of these projects amounted to LTL 1397.5 million. 38 projects were focused on the creation and development of municipal waste collection and management infrastructure, and another two projects on the treatment of hazardous waste and development of infrastructure for hazardous waste management.

OPPC 2007-2013 measure 'Creation of a Waste Management System' (hereinafter – the 'Measure') financed the closure of old landfills, the construction of bulky waste collection sites, green waste composting sites and hazardous waste landfill, the creation of biodegradable waste management and secondary raw material collection infrastructure. The Measure was relevant and compatible with other interventions. However, with the development of separate collection infrastructure (separate collection of secondary raw materials, food/kitchen, and textile waste), the amounts and composition of mixed municipal waste may also change, affecting the operation of mechanical biological treatment (MBT) facilities and the financial viability of projects.

¹ This amount excludes resources of private companies, allocated to co-finance projects under PPWM and LEIF programmes, also PPWM funds for centralised procurement of containers for municipalities.

² This amount excludes resources allocated to raising awareness on waste management under measure 1.3 'Improvement of Environmental Quality and Prevention of Environmental Damage' of the Lithuanian Single Programming Document 2004-2006, projects of the Ministry of the Environment and the Environmental Protection Agency, financed under OPPC 2007-2013 measure 'Creation and Development of a System for Public Information on the Environment', funds earmarked for the dissemination of information on waste management.

Relevance of projects financed by the Cohesion Fund 2007-2013. Considering the situation in the area of waste management (large amounts of municipal waste disposed into landfills; disposal of unsorted, untreated waste; disposal of biodegradable waste) and the organisation of the system (regional municipal waste management systems are being created), most of the activities financed under the Measure and the provided applicants (regional waste management centres) are relevant. The relevance of projects aimed at the construction of MBT facilities raises some doubts, though. The National Strategic Waste Management Plan (NSWMP) provides for a duty for municipalities by 2010 to introduce mechanical biological treatment or separate collection and treatment of municipal biodegradable waste. However, a decision to build MBT facilities in all ten waste management regions was adopted without making a national-level analysis of the need for these facilities or the links with the existing and future waste management infrastructure (e.g. infrastructure of separate collection of second raw materials, food/kitchen waste) and without looking into other municipal waste management alternatives and the possible use of MBT process products (e.g. municipal waste fuel, technical compost) to divert waste treated by MBT facilities from landfills and implement waste management tasks.

MBT facilities were essential for implementing tasks set by the NSWMP in relation to the reduction of waste disposal into landfills, the reduction of municipal biodegradable waste disposal and waste treatment before disposal. With the implementation of these projects falling way behind the schedule (according to the NSWMP, they had to be finalised by the end of 2010), decreasing amounts of municipal waste disposed into landfills and developing infrastructure for separate collection of secondary raw materials, food/kitchen waste, the expected capacity of MBT facilities may be not fully used.

EFFICIENCY OF ADMINISTRATION OF EU SUPPORT FOR THE WASTE SECTOR

The evaluation of the efficiency of administration looked at the relevance of the chosen project selection method (state project planning), the sufficiency of project selection criteria, the quality of project financing conditions, applications and projects, strengths and weaknesses of planning and administration procedures in place for the EU Structural Funds' support to the waste sector.

State project planning has been reasonably chosen as the best project selection method in a view of provisions of the NSWMP, the need to ensure the continuity of activities launched in the previous programming period and the development of the regional waste management system, also having regard to the legal regulation of waste management, which may be used for making a transparent and well-grounded list of projects and potential applicants.

Even though project selection criteria were not clearly defined, it caused no difficulties when preparing or evaluating applications for projects focused on the creation of a waste management system. Activities of these projects were already known from the previous programming period. Familiarity with the supported activities and the available experience have led to a higher quality of applications. The quality of biodegradable waste projects was negatively affected by the late approval of project financing conditions and a list of state projects, short deadlines for submission of applications and feasibility studies, problems with public procurement for the selection of external consultants, poorly defined and unclear requirements for projects, limited knowledge and experience in the creation of biodegradable waste infrastructure, the absence of a clear strategy for the creation of biodegradable waste treatment capacities at the national level. To ensure more effective use of EU funds in the area of biodegradable waste management, it was important to analyse the needs of biodegradable waste treatment infrastructure at the national level, to identify the best sites for facilities, optimal capacities, technologies, and to draft, based on this analysis, biodegradable waste project financing conditions.

EFFECTIVENESS AND EFFICIENCY OF EU SUPPORT FOR THE WASTE SECTOR

The evaluation of the effectiveness of support included analysing the progress of the Measure implementation (comparing target and actual physical and financial indicators of the Measure) and the potential impact of the results of the Measure implementation on the implementation of waste management objectives and tasks. The evaluation of efficiency involved a project unit cost analysis and assessment of the financial viability of projects and their impact on fees paid by inhabitants for waste management.

Progress of the implementation of the Measure. The implementation of projects focused on the creation of waste management system (hereinafter – ‘WMS projects’) is going smoothly. 89% of the financing allocated has been paid, 10 projects have been finalised, the achievement level of output indicators is in line with the financial progress of project implementation: 271 landfills were closed by 2014 (another 70 are to be closed), 31 bulky waste collection sites and 27 green waste composting sites were constructed (another 22 and 14 are to be constructed, respectively). The progress and results of the Measure implementation depend more on the implementation of projects aimed at the development of municipal biodegradable waste management infrastructure (hereinafter – ‘BW projects’) as they are allocated around 2/3 of the total funds of the Measure. BW projects were launched much later than WMS projects (the first project financing contracts were signed only in December 2010). Just 17% of the total financing has been paid to BW projects, and the construction of MBT facilities have been commenced only in Alytus and Kaunas Regions. There is a high risk that these projects will not be implemented in time and they will not use the resources allocated by the Cohesion Fund.

Implementation of waste management objectives and tasks. Projects financed under the Measure (in particular BW projects) are important for the implementation of the objectives set by the NSWMP in relation to the reduction of amounts of municipal biodegradable waste and mixed municipal waste disposed into landfills and mandatory waste treatment before disposal. Even though the construction of MBT facilities has just begun, the result indicator of reducing the disposal of municipal biodegradable waste is moving forward: in 2013 273.3 thousand tonnes of municipal biodegradable waste were disposed (while the maximum allowed limit set by the NSWMP is 362.6 thousand tonnes). According to evaluation reports on amounts of municipal biodegradable waste disposed into regional landfills, the amounts of mixed municipal waste disposed into landfills was cut by 20% between 2012 and 2013. The greatest reductions were recorded in the Klaipėda Region, where the disposal of mixed municipal waste was reduced by 2/3 from 2013 to 2012 (this result is primarily determined by a waste incineration plant launched in the Klaipėda Region in 2013). Such data on reductions in the amount of municipal waste disposed raise some doubts due to deficiencies in the methodology for evaluation amounts of municipal biodegradable waste disposed into regional landfills and possibly improperly accounted municipal waste in sorting lines. As there are no reliable data on waste accounting, it is not possible to assess whether the planned capacities of MBT facilities are optimal. The total projected capacity of the MBT facilities being built is around 1 million tonnes. It should be sufficient for the treatment of all municipal waste disposed into regional landfills (currently, waste sorting lines operating in regional landfills treat only around 1/5 of the total waste disposed into landfills.).

IMPACT OF EU SUPPORT FOR THE WASTE SECTOR

The impact assessment involved qualitative and quantitative assessment. The quantitative impact assessment included the evaluation of direct and indirect impacts of EU support (investment projects financed by ISPA and the Cohesion Fund in the waste sector) on the environmental quality and socio-economic situation (macro-econometric modelling).

Indirect impacts of projects financed by ISPA and the Cohesion Fund on the environmental quality and socio-economic situation are revealed by the following effects³:

- 1) *Effect of separated secondary raw materials in MBT facilities and containers for separate collection* (a possibility of reducing imports of primary raw materials);
- 2) *Effect of waste composting and compost use* (a possibility of replacing mineral fertilisers and receiving income from the sales of compost);
- 3) *Effect of additional land* (land vacated after the closure and cleaning of old landfills may be used for other purposes; reducing amounts of disposed waste lead to a slower growth of the area of landfills);
- 4) *Effect of GHG emission reduction* (the collection of biogas from landfills, the reduction of disposal of biodegradable waste and the generation of biogas from biological waste treatment cut green gas house emissions, in particular methane);
- 5) *Fossil fuel import displacement effect* (the use of waste for energy production reduces imports of fossil fuel; energy may be produced from landfill biogas, biogas generated during the anaerobic digestion process and municipal waste fuel).

Economic benefits of EU investment into the waste sector. LTL 869.5 million invested in the waste sector between 2005 and 2013 (of which LTL 788.4 million was used for construction) additionally created a total value added of LTL 1290.4 million in the nominal value (the effectiveness ratio of the impact of EU support exceeded 1.4). The greatest effect on the effectiveness ratio was made by primary and secondary effects of EU support in the construction sector as construction claimed a significant part of the project costs. From 2005 to 2020, the aggregated effect of the *direct impact* of EU support on the national GDP will be over LTL 1.9 billion and the estimate of the effectiveness ratio will stand at 1.5. With the EU support of LTL 1276.8 million, the aggregated effect of *direct and indirect impact* of support on GDP from 2005 to 2020 will be over LTL 2.6 billion, while the estimate of the effectiveness ratio will stand at 2. Projects financed by ISPA and the Cohesion Fund in the waste sector have long-term economic benefits. It is especially evident through the indirect impact of support (the use of secondary raw materials and the use of fuel produced/obtained from waste for energy production, reducing imports of fossil fuel).

Social effects of EU investment into the waste sector. Between 2005 and 2013, around 630 jobs in full-time equivalent (i.e. jobs expressed in full-time workers) were created or preserved. Due to the nature of investment (most of the support was allocated to construction), the *direct impact of EU support* on employment was short-term and already in 2017-2018 will be hardly felt. Positive *long-term impacts on employment* are determined by indirect effects (in particular, reduced import of fossil fuel and the use of secondary raw materials), which will help preserve or create over 400 jobs after 2018. Economic and social impacts of EU support on the waste sector were measured by making certain assumptions, changes in which may affect results of the impact assessment. The main assumption is that all MBT facilities will be built and launched from 2016.

The qualitative impact assessment involved analysing how and to what extent projects financed by ISPA, the Cohesion Fund and national programmes (Product and Packaging Waste Management (PPWM) Programme, Lithuanian Environmental Investment Fund (LEIF) programme) contributed to objectives of the national waste management policy and waste management tasks set by the NSWMP.

Support by ISPA and the Cohesion Fund has made a significant contribution to the modernisation of waste disposal infrastructure (11 regional landfills for non-hazardous waste constructed, 808 old landfills and waste dumps cleaned and closed), the creation of collection infrastructure for certain types of waste (construction of bulky waste collection sites and container sites, purchase of containers for secondary raw materials), the development of municipal biodegradable waste management infrastructure (green waste composting sites, individual composting containers, MBT facilities),

³ Due to difficulties in expressing these indirect effects of EU support in monetary terms and/or possible small scope of these effects, only the import displacement effects of secondary raw materials and fossil fuel was taken into account in impact evaluation.

hazardous waste management (warehouses for hazardous waste and old pesticides from bankrupt enterprises) and the development of hazardous waste management infrastructure (an incineration plant and landfill for hazardous waste).

Funds of national programmes were used for treatment of hazardous waste (old pesticides), financing projects of private enterprises and public bodies (e.g. hospitals), focused on the collection, treatment, sorting and recycling of different types of waste (hazardous, biodegradable, medical, packaging, vehicle, construction, etc.). The PPWM programme was the main source of financing when purchasing containers for separate collection of secondary raw materials in municipalities. This programme financed the development of collection, treatment and recycling capacities for specific municipal waste (packaging, electrical and electronic equipment waste). The LEIF programme financed projects of economic entities, aimed at prevention, treatment and recycling of secondary raw materials, medical, construction and industrial waste. Due to scarce data, the impact of projects financed by PPWM and LEIF programmes on the implementation of tasks related to waste treatment and other use was not measured, but such measurement would be useful when planning investments of the EU Structural Funds in 2014-2020.

EU SUPPORT FOR THE WASTE SECTOR IN 2014-2020

The analysis of foreign practice (Estonian and Polish) has revealed that the implementation of waste management tasks requires not only investments into waste management infrastructure, but also administrative and economic measures. The application of proper administrative and economic measures is a precondition and a key to success of investments into waste management infrastructure. The ex ante conditionality applied to investments of the EU Structural Funds 2014-2020 is promoting economically and environmentally sustainable investments in the waste sector particularly through the development of waste management plans consistent with Directive 2008/98/EC, and with the waste hierarchy. With regard to this precondition, the European Commission has prepared specific recommendations for Lithuania to ensure waste management is in line with the waste hierarchy. Most of these recommendations are related to the application of different administrative and economic measures (introduction and increase of a landfill fee, introduction of waste incineration and MBT fees, application of differentiated fees for waste management, etc.). The European Commission has also recommended developing separate collection infrastructure to which the Ministry of Environment will allocate a significant part of the EU Structural Funds in 2014-2020.

Measures to be financed by the Ministry of the Environment using the EU Structural Funds 2014-2020 (development of municipal waste collection and initial sorting infrastructure and raising awareness; creation and modernisation of capacities for the preparation of waste for recycling, reuse or otherwise use; management, monitoring and planning of the waste management system) meet basic needs of the waste sector and are adequate for the main strategic objective of reducing the disposal of waste into landfills. However, the evaluation has found that municipal needs for investments into the development municipal waste collection and initial sorting infrastructure are almost 10 times bigger than provided for by the National Waste Management Plan for 2014-2020, and therefore it is proposed to redistribute funds among the measures planned to finance by the Ministry of the Environment.

EVALUATION RECOMMENDATIONS:

1. **Revising result indicator** 'reduction of amounts of municipal biodegradable waste disposed into landfills, compared to 2000' **and its description** in order to ensure its proper monitoring and interpretation: setting a proper baseline value (in 2000, it stood at 765,550 tonnes of municipal biodegradable waste), changing the unit of measurement, revising the calculation methodology (for more see Section 2.2.5 and Table 18 of the Report).
2. Supplementing the requirements for providing information on the implementation of waste sector-related requirements and tasks set by regional waste management plans, the National Strategic Waste Management Plan and other legislation, and creating a **waste management**

- infrastructure database* for storing and continuously updating data on municipal waste management infrastructure, its state and needs for investment. This will ensure the proper management of the waste management system and investment planning.
3. ***Evaluating the latest adopted investment amounts for all BW projects, the structure of their financing and sources of loan repayment*** to make sure that net income of these projects are accurate and the projects themselves are financially viable. ***Financial calculations in the cost-benefit analysis should be updated, provided that financial assumptions and results of projects have changed compared to the assumptions and results provided in feasibility studies.*** The update should evaluate the validity of the structure of financing, sources of loan repayment and financial viability of projects (for more see Section 5.3 of the Report).
 4. Ensuring adequate financing for the development of separate collection infrastructure requires:
 - 4.1. ***redistributing resources*** of the EU Structural Funds 2014-2020 planned for the waste sector ***among measures***, increasing financing for the development of municipal waste collection and initial sorting infrastructure;
 - 4.2. ***evaluating the compliance of the planned support scheme to the state aid guidelines***⁴ with regard to the risk that support from the EU Structural Funds will not be provided for purchasing waste containers for separate collection;
 - 4.3. ***exploiting possibilities of producers and importers' organisations to finance*** the renovation and development of packaging waste separate collection system;
 - 4.4. ***analysing possibilities to increase a fee or any other charges for municipal waste management***, increasing (including) a constituent of this fee for the development of separate collection systems and, if possible, to increase the fee or any other charges in municipalities;
 - 4.5. assessing the possibilities of ***receiving part of funds for the co-funding of projects from municipal utilities.***
 5. ***Analysing experience in and results of the implementation of projects financed by national programmes*** (PPWM and LEIF) in the waste sector, ***ensuring the involvement*** of stakeholders and ***potential applicants*** in the drafting of project financing conditions and applying other measures in order to ensure the proper preparation for the investments of the EU Structural Funds 2014-2020 into the waste sector (for more see recommendation 5 provided in the Report).
 6. Establishing financial and legal mechanisms to encourage municipalities to create an effective municipal waste management system, ensuring the implementation of municipal waste management tasks set to municipalities; adopting decisions on the use of products created by MBT facilities.
 7. Initiating legal amendments to eliminate the possibility of implementing packaging waste management tasks through the treatment of bought-in packaging waste or collecting packaging waste in supplementary systems, paying inhabitants for them.
 8. Initiating consultations with municipalities, producers and importers' organisations on alternative sources for co-financing of projects.

⁴ Communication No 2014/C 200/01 from the Commission. Guidelines on State aid for environmental protection and energy 2014-2020.