MINISTRY OF REGIONAL DEVELOPMENT

National Coordination Authority

Executive Summary

Ex-post evaluation of the 2007-2013 program period in the area of waste management and energy savings

Waste management

November 2018

SPF GROUP S.R.O. STRATEGIES PROJECTS FINANCING

eace Evaluation Advisory Central Europe

EUROPEAN UNION
Cohesion Fund
Operational Programme Technical Assistance

MINISTRY OF REGIONAL DEVELOPMENT CZ

Executive Summary

The Report presents an evaluation of the benefits related to the cohesion policy focused on waste management in the 2007 to 2013 programming period. This policy has been implemented through the Operational Programme Environment.

The main factors influencing waste management in the Czech Republic include the setting of the legislative environment along with socio-economic conditions, which include GDP development, consumption behaviour and environmental awareness of citizens, pricing policy in the area of primary and secondary sources, or economic instruments applied in the waste management system, and, last but not least, the availability of waste treatment technologies.

The Programme´s specific objectives for Priority Axis 4 "Improvement of waste management and rehabilitation of old ecological burdens" were mainly based on the national Waste Management Plan and in the area of support "Improvement of Waste Management", they were aimed at enhancing waste reduction, increasing waste recovery and minimising negative impacts of waste management.

An evaluation of the impacts of the performed interventions focused on specific types of projects aimed at improving waste management quality and reducing waste production. Due to the overall focus of the evaluation and of the individual evaluation questions, the projects related to the municipal waste collection system, its sorting and its utilisation have been evaluated within the evaluation. Testing has been done on a group of 3,772 projects.

Within the evaluation, it was necessary to state an inappropriate setting of one objective of the interventions, namely to reduce the specific waste production regardless of the level of economic growth. The evaluation has shown that (1) the amount of interventions was not big enough to be able to reverse the natural development in waste production depending on the economic growth and (2) this objective of interventions was set inappropriately also in factual terms. The interventions have not generally resulted in a reduced waste production. It was necessary to divide and specify the objectives of the interventions according to individual kinds of waste as the interventions, due to logic of their setting, were heading towards reducing the production of mixed municipal waste (MMW), but also towards increasing the production of biodegradable municipal waste (BDMW) and separated waste components. These effects should be considered positive in the context of waste management.

Waste production statistics for municipalities supported from the subsidy programme as well as for municipalities which were not supported showed positive development in the production of individual kinds of waste. Subsequent testing of the subsidy´s impact on waste production, carried out by means of the counterfactual method and calculations of the alternative correlation coefficients, showed that, for all kinds of waste, participation in the subsidy programme is a statistically significant factor for a change in production of the particular waste, and that a part of the change in production of the individual waste types is attributable to the subsidy programme. The highest level of dependence between participation in the programme and a production change was recorded in the production of biodegradable municipal waste, namely in the direction presumed by the hypothesis - participation in the programme was accompanied by an increased production of this kind of waste. The change rate is expressed by the point-biserial correlation coefficient, which was calculated at 0.154 for BDMW production. With a reservation1, the result can be interpreted that the production change can be attributed partly to the subsidy granted, but it is not a provable net effect of the programme. The

[1] The biserial correlation coefficient expresses only the relationship between the change of production and participation in the programme. The correlation level cannot be interpreted freely as the programme´s net effect.

resulting value of the correlation coefficient can also be interpreted in another way - that if any municipality obtains a subsidy, the resulting change in BDMW production in this municipality will be "on average" by 15% higher than if this municipality produced BDMW without any project.

The influence of the intervention was subsequently documented using specific examples and 11 case studies. The beneficiaries themselves evaluated positively especially those projects which focused on biodegradable municipal waste. According to the respondents, the positively evaluated projects would not have been implemented without the subsidy at all, or they would have reached much smaller capacities without the subsidy. Municipalities consider the projects implemented as not only the primary cause of the BDMW production increase but also the cause of the landfilled MMW decrease. Case studies have also revealed other aspects of interventions such as the impact on economic indicators of waste management, the occurrence of illegal dumps, or bringing about further investment in waste management systems, including collection, sorting and treatment of waste.

After some time after the end of the programme´s implementation, municipalities currently perceive new needs in relation to development of the legislative environment (especially reduced landfilling) and needs concerning building of facilities which would enable municipalities to operate efficiently and expand their processing capacities or further recovery of waste.

The evaluation, inter alia, pointed out higher effectiveness and efficiency of the projects implemented in the category of the biggest municipalities over 50,000 inhabitants. In the case of mixed municipal waste (MMW), an analysis of production changes in the individual categories of municipalities (by size) showed that interventions in the category of the largest municipalities over 50,000 inhabitants had the most significant impact on the desirable decrease in MMW production. In the categories of the smallest municipalities below 500 inhabitants and medium-sized municipalities below 5,000 inhabitants, the interventions have even had the opposite effect in the municipalities supported - in these municipalities MWW production declined less than that in unsupported municipalities. An analysis of the programme´s gross effectiveness, which was calculated as the price per one tonne of waste production change, has also shown the greatest effectiveness of projects in big municipalities over 50,000 inhabitants. Despite this finding, the evaluator considers suspension of interventions for small municipalities to be inappropriate. This follows not only from case studies, but also from objectives of the Waste Management Plan, which have been set for the whole territory of the Czech Republic.

The analysis performed has been influenced significantly by imperfections in records of the individual waste components, both in particular years and in particular municipalities, and in time series. The waste data records themselves are also influenced by a number of external factors that need to be taken into account when interpreting the results, such as the extent to which separated waste containers are filled, removal of waste by a citizen outside the municipal system or the influence of production from business activities.

The evaluation has shown the link between the results achieved and the objective of reducing specific waste production, although the possibility of influencing this objective through the intervention provided was limited. Evaluation of the programme´s other two objectives was not the subject of this evaluation. However, for example, the objective "maximising recovery of waste as a substitute for primary natural resources" can be achieved through types of measures not primarily supported under the operational programme. These include e.g. measures aimed at initiating and promoting changes in production processes which result in low-waste and waste-free technologies, and in the case of waste generation, in a higher share of their utilisation, while emphasis should be put on minimising the volume and weight of products while maintaining their functional properties.

In their conclusions, the evaluators reflect the findings and results of the evaluation and formulate recommendations for planning and interventions setting. They also propose steps for related improvements in monitoring, data records and verification of reported waste production and management data:

- to continue supporting waste management with such setting of the interventions objectives for them to correspond unequivocally to the identified needs and demand, on the basis of an evaluation of expected impacts of development in the legislative environment and with adequate respect for the objectives of the Waste Management Plan (not to use it as a declarative list of objectives)
- when setting the interventions, to consistently apply the method based on the theory of change and to correctly define causalities in the model based on the theory of change. This must be preceded by an adequate analysis of the absorption capacity (i.e. of the needs).
- to consider the effectiveness and success of the interventions in smaller municipalities.
- to stabilize the legislative and methodological environment, to unify the waste production data reporting systems for the Ministry of Environment and Czech Statistical Office, to carry out a thorough revision of data in waste records and to continue training the staff responsible for the waste management agenda.