Inter-municipal cooperation among small municipalities

In a nutshell

Summary overview
It is best practice for small and medium municipalities to adopt inter-municipal cooperation that allows the implementation of measures that would be too costly for them to implement alone and can result in the improved environmental performance of the waste management system. Municipalities can join together to operate or contract out some waste management services, with the aim of delivering economies of scale and building critical mass. Inter-municipal cooperation makes it possible for the municipalities involved to: • share administrative overheads, • reduce unit costs and improve service quality through economies of scale, • attract investment funds reserved for projects of a specified minimum size (e.g. EU structural funds and other investment mechanisms) and • enhance economic performance through coordinated planning while allowing better environmental protection.

Waste management area							
Cross-cutting	MSW - strategy	MSW - prevention	**MSW - collection**	MSW - EPR	MSW - treatment	CDW	HCW

Applicability
There are no specific barriers for the application of inter-municipal cooperation in waste management. However, benefits from the economy of scale are only evident for small and medium municipalities.

Specific environmental performance indicators
In addition to the common environmental performance indicators (presented in the best practice on Common Environmental performance indicators), the most appropriate indicator to assess the successful implementation of this best practice is: • implementation of inter-municipal cooperation with other municipalities (y/n).

Description

Inter-municipal cooperation (IMC) is defined as the collaboration of several municipalities with the aim of providing a joint public service (Halmer and Hauenschild, 2014). This is not a new instrument, but just an approach taken by municipalities

for decades to improve the economic performance of municipal services. It has been proven that IMC takes advantage of proven economies of scale in waste management for small municipalities, as illustrated by Bel and Fageda (2010) when studying the waste management costs of 65 municipalities from the Spanish region of Galicia. The advantages of IMC lie in the reduction of avoidable duplication of work and the creation of synergies. IMC improves resource efficiency and leads to improved services and less costs associated with public services conventionally with a high cost intensity, such as waste management.

The empirical evidence shows that, for small municipalities, the collaboration with other municipalities reduces the total cost of management. For larger populations, the effect of economies of scale is negligible or even opposite to that observed for small municipalities (Bel and Mur, 2009). The same authors found an interesting and somewhat unexpected effect of inter-municipal cooperation in small municipalities: under certain conditions, a high collection frequency does not increase the waste management cost. This is directly opposite to any other empirical observation but the authors identified this effect as coming from the same concept of economy of scale, as for example the same truck serves several municipalities. On the management side, inter-municipal cooperation is not necessarily a money-saving process, but, according to the Council of Europe (COE et al., 2010), the good practice application makes it possible for involved municipalities to:

- share administrative overheads,
- reduce unit costs and improve service quality through economies of scale,
- attract investment funds reserved for projects of a specified minimum size (e.g. EU structural funds and other investment mechanisms) and
- enhance economic performance through coordinated planning while allowing better environmental protection.

The crucial point for this best practice is: What is the definition of 'a best practice in inter-municipal cooperation' for waste management and what is the real impact of such a measure? First, it should be clear that inter-municipal cooperation is an economic instrument implemented with the aim of saving costs, sharing risks and reducing cost intensity; technically, it does not improve the service (e.g. many cooperation agreements are based on the existence of a shared landfill). Certain requirements have to be met for best practice cooperation (COE et al., 2010):

- the building of central waste disposal or treatment plants;
- the development of joint policies for solid waste management; and
- the establishment of recycling to achieve better environmental protection.

Municipalities collaborating in the management of waste are relatively well established in Europe. A survey among the town halls of France’s large cities revealed that 63 % of them transferred waste management to a consortium of towns (Djemaci, 2009). So, inter-municipal cooperation is not a best environmental management practice that leads directly to a better environmental performance, but it is an approach that allows the implementation of best practices only achievable by organisations of certain size or that would be too costly for small municipalities to implement alone. The United Nations Development Programme emphasises that only the local scale is small enough to handle day-to-day communication with citizens and large enough to support the specialisation of functions; this can be achieved by sufficiently large municipalities or through the development of inter-municipal cooperation agreements (LDG, 2006).

According to the Council of Europe et al. (2010), there are at least 15 basic elements of a well-performing inter-municipal cooperation scheme (see Table 1).

Table 1. Basic structure of inter-municipal cooperation (IMC) (CoE et al. 2010)

PHASE	STEPS
I. INITIATING IMC (explore possibilities for cooperation with partners, examine risks/advantages of IMC, launch formal negotiations)	1. Identify needs and opportunities
	2. Identify potential partners and possible areas of cooperation
	3. Analyse the legal and economic environment
	4. Decide on entering into IMC and set up the negotiating platform
	5. Build awareness and support

II. ESTABLISHING IMC (build foundations of IMC and reach agreement with partners on IMC structures and operation)	6. Identify IMC scope
	7. Choose the legal form
	8. Determine the financial arrangements
	9. Define the institutional arrangements
	10. Finalise Agreement/Statute
III. IMPLEMENTING AND EVALUATING IMC (mechanisms to ensure effective IMC operation)	11. Establish management and representative structures
	12. Develop cooperation mechanisms
	13. Ensure continuous monitoring and self-assessment
	14. Ensure continuous and effective communication
	15. Conduct regular evaluation
Source: COE et al.(2010)	

Environmental benefits

The environmental benefits of inter-municipal cooperation in waste management services correspond to the benefits of the best practice that the arrangement between municipalities makes it possible to apply. The borderline of the applicability of a best practice to small municipalities is never clear, but some examples of the performance of cooperation are shown in Table 2.

Table 2. Application of best practices by inter-municipal cooperation examples and their environmental benefit

County	Member State	Applied best practice	Environmental benefit	Comments	Reference
Grand Besançon	France	PAYT system	Immediate reduction of the residual waste by 1 % the year following the implementation of a volume-based PAYT scheme. In 2012, after weight-based PAYT implementation, the residual waste was reported to have been reduced by 10 %.	The IMC allowed the application of a different approach between the main town (Besançon) and the surrounding small towns.	Djemaci, 2009 Sybert, 2015
Harju	Estonia	Waste sorting of biological and paper waste	Enhanced collection efficiency of recyclable materials. Increased collection by 2.5 times compared to the current situation.	This is an estimation of performance after a proposed route for IMC implementation.	Põldnurk, 2015

Side effects

No environmental cross-media effect is foreseen. However, the implementation of such a scheme requires a strong regulatory framework for its governance (see Bolgherini, 2011, for further details), to avoid the overlapping of responsibilities or a distortion of the primary objectives of the scheme (e.g. the IMC can improve efficiency and reduce management costs, but the fee or taxes paid may even increase given the introduction of new, less pollutant, waste treatments).

Applicability

There are no specific barriers for the application of inter-municipal cooperation in waste management. However, benefits from the economy of scale are only evident for small and medium municipalities.

Economics

In rural areas, there is an increased probability of administrative and logistical inefficiencies affecting the waste management service. High waste transportation costs, multiplicity of tasks, different pricing and lower control over the collection service are only some of the symptoms of such a problem (Põldnurk, 2015).

Three main factors affect the performance of inter-municipal cooperation: size of population, volume of service and dispersion of population (Bel and Warner, 2015). The effect of these variables can be translated into:

- **economies of scale**: they exist when the cost per tonne of managed waste decreases as the total volume increases (e.g. for the same truck, the higher the volume transported, the lower the cost per tonne of waste);
- **economies of density**: they exist when the fixed cost per tonne is spread across a large number of users (e.g. the water distribution network);
- **economies of scope**: they exist when the cost per unit of a certain service is reduced when other services operated by the same management structure increase.

Economy of scope affects the administrative burden of the service. It has been proven that the economy of density does not affect waste management costs, while economies of scale only affect the small municipalities when arranging inter-municipal cooperation agreements for the waste management service.

The influence of IMC alone on the economic performance of a waste management service is not easy to determine, as its implementation usually includes new treatments or sorting systems. Bel and Mur (2009) performed a statistical analysis and determined the “pure” influence of the existence of IMC in small municipalities: 16 % cost reduction in municipalities under 5 000 inhabitants, while the difference was not statistically significant for municipalities above that size. Djemaci (2009) attributed a cost reduction of EUR 5.25 per capita per year to the application of IMC in the area of Grand Besançon, although the fee system had to be changed to a PAYT system. In the Estonian region of Harju, the establishment of IMC would save around EUR 28 per inhabitant per year (including a raise in the residual waste fee) in an optimistic scenario and EUR 10 per inhabitant per year in a more realistic projection (Põldnurk, 2015). In Germany, the cities of Dreieich and Neu-Isenburg reduced their garbage fees in January 2015 by 10 % as a result of inter-municipal cooperation. This was possible because the expenditures on material resources decreased due to IMC. For example, the 120-litre residual waste bin is priced at EUR 20.20 instead of EUR 22.60 per month with fortnightly emptying. This means a saving of EUR 28.80 per year. In a four-person household, this is a saving of EUR 7.20 per capita per year (Werwitzke, 2013).

Driving forces for implementation

The existence of vast experience in municipal cooperation in Europe has shown the feasibility and efficiency of cooperation schemes. However, the legal and regulatory framework needs to be well defined, which is usually done at regional level. The higher efficiency, the removal or reduction of tasks' multiplicity and the inherent cost savings of IMC implementation in small municipalities are also important drivers. In addition, new challenging recycling and material recovery goals from the waste management would demand techniques and technologies that require higher capital investment and would be unaffordable for a single, small municipality.

Reference organisations

Grand Besançon is considered to be a good example of the application of best practices. The IMC in place allowed the extension of best practices to small towns and villages in the area. For more details, see http://sybert.fr/presentation.html.

In addition, the establishment of new IMC schemes has been and will continue to be key in the achievement of new waste policy targets and it is the focus of new initiatives and research around Europe. A reference organisation on the development of IMCs is the Council of Europe and the United Nations Development Programme.

Literature

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