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## Wasted money, wasted time? The sustainability of EU assistance to Hungary and Poland's waste management sector

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In the late 1990s, European experts feared a stalemate in the EU accession negotiations with Central and Eastern European (CEE) countries because of the expected high costs of their compliance with the EU's environmental legislation. This fear was not borne out, however, and it is now undoubted that EU assistance has enhanced environmental capacity-building and knowledge in these countries. Nevertheless, some reports have emphasised misallocations, planning failures and mismanagement of EU funds, characterised as the unsustainability of EU-funded environmental projects in a number of CEE countries. Why have some EU-funded projects been more sustainable than others? Which features have had an effect on their sustainability? The article investigates the relationship between European and domestic actors involved in EU-funded projects in municipal waste management in Hungary and Poland in the years 1998–2013. The main findings show that when decision-making participation was horizontal and cooperative between the EU and domestic actors, EU assistance to municipal waste projects was more successful and long-lasting in helping them comply with EU legislation.

Keywords: Environmental sustainability; Central and Eastern Europe; EU-funded projects; State and non-state actors; Municipal waste management

### Introduction

Sustainability is a widely discussed concept in international policy papers and scholarly works. Nevertheless, there is still no universally agreed definition of the term (Lipschutz 2009; Morelli 2011; Krämer 2015) and it is therefore difficult to build a comprehensive theory (Dillard et al. 2009). The most widely quoted definition of sustainability is contained in the Report of the World Commission on Environment and Development 'Our Common Future' of 1987, also known as the 'Brundtland Report' which, associating sustainability with sustainable development, urges a shift in the economy towards less environmentally burdensome activities and recommends tackling disparities among rich and poor countries by meeting 'the needs of the present without compromising the ability of future generations to meet their own needs' (Brundtland Report 1987).

In investigating the process of approximation of the less environmentally and economically developed Central and Eastern European (CEE) countries to the European Union's environmental legislation, this sustainability concept assumes particular pertinence. Prior to the fall of the Berlin Wall in 1989, the environmental state of the CEE countries was described as 'pollution havens' (Żylicz 2000: 5) and 'ecocide' (Pavlinek/Pickles 2000: 241), with highly polluted hot spots concentrated in the main industrialised areas (on this point see also Hicks 2001). Furthermore, when the CEE countries started EU accession negotiations in the late 1990s, their environmental law was

either non-existing or fragmented, and their environmental expertise, institutional settings and administrative capacities insufficient (Sciberras 2002; Carmin/VanDeveer 2005). Conversely, in the late 1990s the EU's environmental *acquis communautaire* consisted of three hundred pieces of laws that had to be transposed and implemented by the CEE countries as prerequisite to EU membership (European Parliament 1998).

Since the early 1990s countries such as Hungary and Poland have undertaken numerous transformations in response to their pressing environmental problems. Nevertheless, it was the process of their EU accession that triggered major changes towards environmental protection (OECD 2000; OECD 2003). Their approximation to EU environmental legislation was however costly. In the strategy communication 'Agenda 2000' of 1997, the European Commission recognised that environmentally 'effective compliance would necessitate [...] massive investments in the 10 applicant countries' (Agenda 2000 1997: 49). Moreover, in the early 2000s, the EU estimated that approximately 120 billion euro would be needed for all the CEE candidate countries to cover the costs of their compliance with the EU environmental *acquis communautaire* (Ott/Inglis 2002). To tackle this problem, from the late 1980s many CEE countries established their own national funding systems such as the Central Environmental Protection Fund in Hungary or the National Fund for Environmental Protection and Water Management in Poland. In addition, international actors such as the World Bank, the United Nations Development Program and the United Nations Environmental Program provided environmental aid to CEE countries targeting mainly the sectors of biodiversity, energy and climate change (for a list of projects, see the Global Environmental Facility websites for Hungary and Poland). However, the most environmentally diversified and non-national investments addressing environmental problems in CEE countries were from EU sources [1]. Between 1990 and 1998 the EU program 'Poland and Hungary Assistance for Restructuring their Economies' (hereafter, PHARE) allocated 570 million euro to finance projects on environment and energy, while the 'Instrument for Structural Policies for Pre-Accession' (hereafter, ISPA) was expected to provide 1058 million euro per year in the period 2000–06 (Ott/Inglis 2002). Furthermore, in the financial programming period 2007–13, the EU allocated 27.4 billion euro to CEE countries for environmental expenditures (Commission Working Paper 2016).

Numerous ex-post reports on the use of pre-accession funds (mainly PHARE and ISPA) as well as the Cohesion Fund (hereafter, CF) and the European Regional Development Fund (hereafter, ERDF) recognise the role played by EU investments in enhancing environmental compliance in the CEE countries (MWH Consortium 2007a; MWH Consortium 2007b; RGL Forensics 2011). Clearly showing the link between EU funding and conformity with EU environmental legislation, they emphasise how pre-accession funds, CF and ERDF substantially contributed to the transposition and implementation of the EU environmental *acquis communautaire* in the CEE candidate countries (MWH Consortium 2007b) and established new assets and infrastructures in many environmental sectors (RGL Forensics 2011). Nevertheless, these same reports reveal an existing variation in the sustainability of EU assistance among CEE countries. Studies on EU pre-accession funds particularly highlight the unsustainable nature of EU funds in both economic and environmental terms. One study points out that EU pre-accession funds were mainly spent in the water management sector for large projects which were in many cases been cost-effective only for big cities, as against, for example, tailored solutions for rural areas (Beckmann/Dissing 2004). Additionally, another research says that goals, practices and incentives contained in many EU funding programmes in CEE often contradicted the objectives of environmental quality and sustainable development (Carmin/VanDeveer 2004).

The contrasting evidence emerging from the EU ex-post reports in terms of implementation and sustainability of EU-funded environmental projects and the variation among CEE countries calls for a better investigation of the topic. What remains unclear from these reports and from previous research is an understanding of the conditions and features enhancing the sustainability of EU assistance to CEE countries in the environmental sector. Hence, this article addresses the following research questions: *Why have some EU-funded projects been more sustainable than others? Which features have had an effect on their sustainability?*

To grasp what the sustainability of EU assistance means, I refer to the 1987 'Brundtland Commission Report'. This report states that the achievement of sustainable development entails greater participation in decision-making where local contexts and communities should be taken into

account (Brundtland Report 1987). The OECD itself underscores how a shift towards prevention of environmental damage and sustainability requires the inclusion of stakeholders in governments' policy-making negotiations as well as joint agreements between ministries (Andersson 1999). Scholarly works further emphasise the participatory aspect of sustainable development and recognise it as an objective to be achieved by expanding participation and cooperation between public and private actors in environmental management (Meadowcroft 2000), as well as the requisite achievement of environmental protection goals (Meadowcroft 2000; Güney 2017). Such a participatory feature was also earlier addressed in EU funding guidelines, which called for the involvement of domestic actors in the design and implementation of EU-funded environmental projects (Beckmann/Dissing 2004). Similarly, researchers recognise that participation contributes to 'a higher degree of sustainable and innovative outcomes' (Heinelt 2002: 17), as well as enhances the acceptance and implementation of EU legislation (Bulkeley/Mol 2003; Kochskämper et al. 2018). Therefore, the sustainability of EU assistance entails participation in decision-making. Since the early 1990s, numerous 'new' actors such as business actors and non-governmental organisations and green movements have become relevant in the political arena of Hungary and Poland (Andersson 1999). However, their participation in environmental policy-making takes various forms. The sustainability of EU assistance in the then acceding CEE countries could have been linked to specific social structures and human resources in the preparatory stages of EU-funded projects (Beckmann/Dissing 2004), or to varying degrees of involvement of domestic state and non-state actors in the implementation and monitoring phases of EU legislation (Ex post evaluation 2015).

With a focus on the recipient countries' participation in EU assistance, this article investigates the participatory modes and involvement of domestic actors in EU-funded environmental projects carried out in the sector of municipal waste management and treatment [2] in two CEE countries, namely Hungary and Poland, in the period between 1998 and 2013 [3]. The article builds upon my doctoral research comparing Hungary and Poland in a 'most similar' research design. Both countries experienced a similar historical, political and economic background since the late 1980s and had a similar problematic environmental situation in waste management (REC 2001). Moreover, both applied to receive ISPA, PHARE and then CF and ERDF to address municipal waste management problems. Nevertheless, the two countries have differed in the sustainability of their EU-funded projects. The article particularly hypothesises that differences in the participation and involvement of domestic and EU actors in the decision-making and implementation of EU projects explain the variation in the sustainability of EU assistance. The EU-funded project data under consideration was collected through in-depth semi-structured interviews and archival research that took place during several fieldwork missions in Brussels, Hungary and Poland between June 2011 and May 2014 and then analysed in cross-country data analysis and process-tracing.

The article is structured as follows. The first section presents the theoretical frame and two contrasting hypotheses on EU-assistance participation modes, namely top-down vertical interactions and horizontal interactions. The second section reviews the number of municipal waste projects funded by the EU in Hungary and Poland in the period 1998–2013. The final section draws some conclusions from the comparison of the Hungarian and Polish cases.

### Theories on EU-assistance participation: external and domestic actors' interaction

External assistance to less-developed countries [4] is a well-developed field of research. Assistance being generally understood to have the goal of facilitating the transfer of and compliance with externally-defined rules, existing research has investigated it by looking at the interactions between external and domestic actors. On the one hand, the International Relations (hereafter IR), social constructivist, conditionality and Europeanisation approaches consider external assistance to be a vertical interaction between external and domestic actors, where the external actors alter the perception of the rational costs and benefits, or the beliefs and knowledge of the domestic actors (Schimmelfennig/Sedelmeier 2005; Haas 1992; Orenstein et al. 2008). On the other hand, political economy studies emphasise the role of horizontal partnerships in stimulating domestic state and non-

state actors to seek a ‘change [in] their standards and regulatory institutions as well as seek out new transnational partners’ (Bruszt/McDermott 2012: 745).

### *EU assistance as vertical interaction*

External assistance is considered in a number of theoretical approaches as a vertical interaction and a top-down participatory mode between external and domestic actors. Among these approaches, IR studies explore the circumstances under which international programs can be transferred from one place to another (Haas 1990; Rose 1991; Sabatier/Jenkins-Smith 1993; Levy 1994). They recognise a role for mechanisms of persuasion, with external actors addressing domestic actors, in achieving domestic ‘socially generated convictions and understandings’ and ‘consensual knowledge’ about externally-defined norms (Haas 1998: 32). Persuasion by external actors also affects discursive and behavioural practices at the domestic level (Wiener et al. 2004), so that ‘socially embedded’ external ideas influence how actors perceive and construct their interests (Cini 2006; Orenstein et al. 2008).

IR research also recognises a leading role played by knowledge transfer in the form of epistemic communities which, working as informal networks, facilitate international policy integration (Haas 1990; Rose 1991). In the study of integration towards less-developed countries, epistemic communities have had a core function in ‘articulating the cause-and-effect relationships of complex problems, helping states identify their interests, and identifying salient points of negotiation’ (Haas 1992: 2). Formed by multiple experts, epistemic communities also have the objective of ‘supply[ing] the policy-relevant information required by decision-makers to update their beliefs’ (Dunlap 2011: 15) and to redefine ‘decision-makers’ interests and identities’ (Dunlap 2011: 16; but on this point see also Checkel 2001). Furthermore, less-developed countries can draw on epistemic communities for instructive knowledge and action-oriented conclusions about a program in operation elsewhere (Rose 1991). This dimension of transferability of knowledge has been further analysed by Europeanisation researchers who identify the epistemic communities and the advocacy issue networks as norm entrepreneurs who, providing knowledge or appealing to collectively shared norms and identities, influenced domestic change (Börzel/Risse 2000; but see also Green Cowles et al. 2001; Héritier et al. 2001).

External assistance has also been linked to ‘interest-driven accounts’ and framed within a ‘function of calculation’ (Dunlap 2011: 16). In international financial organisations, assistance benefits have been linked to conditionality, so that countries had to accomplish certain conditions to receive benefits (Grabbe 1999). Some Europeanisation researchers recognise, in the process of accession of the CEE countries, a conditionality set up by EU institutions and Member States, and claim that the EU not only established conditions for accession to be fulfilled before membership (i.e., the Copenhagen Criteria of 1993), but also developed specific incentives to achieve such conditions (Grabbe/Hughes 1998; Grabbe 1999; Grabbe 2002; Hughes et al. 2004; Kelley 2004; Schimmelfennig/Sedelmeier 2005; Carmin/VanDeveer 2005; Vachudova 2006). Among these scholars, Schimmelfennig and Sedelmeier (2005) particularly theorise that in the CEE’s accession process, compliance with EU rules was set as a condition to receive rewards such as EU membership, commercial agreements, as well as EU financial and knowledge-based assistance (Schimmelfennig/Sedelmeier 2005; Cini 2006). In the case of EU assistance, in particular, some researchers emphasise the vertical interaction between the EU Commission and the governments of the CEE countries who, acting as gatekeepers ‘remain[ed] reliant on the Commission for guidance’ (Bailey/De Propis 2004: 94) and resisted the decentralization and participation of subnational and non-state actors in the provision of EU funds (Bailey/De Propis 2002; Baun 2002).

Hence, whether we consider socialising or rewarding mechanisms, vertical modes of participation in external assistance appear to be similarly theorised by IR, social constructivist, conditionality and Europeanisation approaches. In fact, even if distinguished by the forms of learning and persuasion, or as concrete incentives for EU rule compliance, EU assistance appears to follow a similar direction: from the top – at the level of EU institutions – to the bottom – at the level of CEE countries with vertical interaction and participation of domestic actors. The hypothesis on *EU vertical assistance* is thus defined as follows:

**Hp. 1:** *The likelihood of sustainability of EU-funded projects increases with the number of financial, knowledge and capacity transfers from EU to CEE countries.*

On this hypothesis, sustainability of EU-funded projects is achieved when transfers are carried out from EU to the CEE countries and such EU vertical assistance entails top-down participation and unidirectional transfers from EU to domestic actors. In order to measure such transfers, Levitsky and Way (2005; 2006; 2007) particularly emphasise the importance of linkage and leverage relations between developed and developing countries (Levitsky/Way 2005; Levitsky/Way 2006; Way/Levitsky 2007). For them, leverage is the degree to which governments of developing countries are vulnerable to external democratising pressure from Western – i.e. more developed – countries, while linkage is the density and number of ties and cross-border flows between developing and Western countries. Transposing such insights to the analysis of EU assistance to CEE countries requires however a specification: both Hungary and Poland were subject to a similar leverage in the EU accession process, whereas the number of linkages could vary. Thus, in the municipal waste sector established in Hungary and Poland and financed by EU funds (PHARE, ISPA, CF and ERDF) in the period 1998–2013, the emphasis is on the linkages, that is, comparing the number of capability, capacity and knowledge transfers.

### *EU assistance as horizontal interaction*

External assistance has also been considered a horizontal participatory relationship between external and domestic actors. Criticising the study of vertical interactions between external and domestic actors that separated external and domestic decision-making arenas, political economy researchers stress the importance of horizontal cooperation between external and domestic actors (Bruszt/Holzacker 2009; Langbein 2015). For political economists, domestic actors are not ‘exogenous factors’ of rule transfer, but play an active role in the implementation of externally-defined rules by being involved in transnational networks (for example, see Andonova/Tuta 2013), or cooperating with international companies within the enlarged European market (for example, see Blomström/Kokko 1993). Moreover, Bruszt and Holzacker (2009) criticise the approaches focusing on vertical interactions because they tend to take for granted that external assistance automatically expresses the ‘long term interests of the recipients’ (Bruszt/Holzacker 2009: 7) and that external actors have the right to incentives and knowledge [5] while domestic actors are mere recipients of rule transfer (Bruszt/Holzacker 2009). Political economy research recognises that external assistance can help domestic actors overcome problems and information asymmetries and allow them to progress towards the desired outcome (Bruszt/Holzacker 2009; Bruszt/McDermott 2012; Bruszt/Langbein 2014).

Researchers have coined the concept of ‘Transnational Integration Regimes’ (hereafter TIRs) to describe ‘institutionalised arrangements involving public and private actors from two or more countries in creating and governing the rules of economic interactions in specific regions’ (Bruszt/McDermott 2012: 743). In particular, TIRs use the modes of monitoring and assistance that involve the bilateral or multiple channels of decision-making participation of national and local authorities, businesses and NGOs (Bruszt/McDermott 2012). However, Bruszt and McDermott (2012) emphasise that when channels are multiple, the possibility is less that single gatekeepers control the resources and information. The hypothesis on *EU horizontal assistance* is thus defined as follows:

**Hp. 2:** *The likelihood of sustainability of EU-funded projects increases with the establishment of a wide cooperation and multiple alliances between EU and domestic state and non-state actors.*

On this hypothesis, sustainability of EU-funded projects is achieved when alliances and cooperation are established between the EU and the CEE countries, and EU horizontal assistance entails wide decision-making participation and multilateral interactions between EU and domestic state and non-state actors. In this regard, studies that focus on the quality of assistance in fostering compliance with external rules define such quality as the capacity of external actors to generate

alliances (or ties) with domestic actors (Stark et al. 2006; Stark/Vedres 2006; Bruszt/Vedres, 2013). The important aspect to assess in EU horizontal assistance is thus the breadth of involvement and participation of domestic state and non-state actors in the financial, capacity-building and knowledge-based EU assistance projects. Thus, emphasis should be given to the multilateral participation of Hungarian and Polish state and non-state actors on the municipal waste dimensions (e.g. municipal and private waste-collecting firms, NGOs, local and regional authorities) in the EU-funded projects carried out in these two countries over the period 1998-2013.

## EU assistance to Hungary and Poland in the municipal waste sector

The European Union and other international organisations define ‘municipal waste’ as all kinds of waste produced by households or other sources (e.g., commerce, offices, public institutions), the composition of which is similar to that produced by households and is generally collected by or on behalf of municipalities and local authorities (EEA Report 2013; OECD website). Since the 1970s, the EU has mainly regulated municipal waste by the ‘Waste Framework Directive’ which, revised and amended numerous times, sets out core objectives and responsibilities as well as requirements for the correct management and treatment of this type of waste [6]. The latest, 2008 Waste Framework Directive specifies a waste hierarchy that sets an order of priority in waste treatment options, ranking them from the most to the least environmentally sound, namely from prevention (avoiding the production of waste) to disposal in landfill sites (without any waste recovery operation). While urging Member States to refrain from the disposal of municipal waste in landfill sites, it also requires them to protect the environment and human health by the safe disposal of it, including the recultivation of old and obsolete disposal sites. Moreover, it requests Member States to draw up waste management and waste prevention plans to organise waste management systems at the national, regional and local levels, with waste collection and disposal in proximity to its source of generation.

In order to achieve the sustainable management and treatment of municipal waste, managerial strategies and available treatment technologies are crucial (Pires et al. 2011). In 2001 the European Commission recognised the requirement of construction and modernisation of municipal waste treatment facilities and disposal sites in the CEE countries as one of the costliest sectors in which to achieve conformity (Commission Communication 2001). To make compliance easier for the CEE candidate countries, from the mid-1990s EU institutions designed financial instruments such as PHARE and ISPA, followed after 2004 by CF and ERDF, to provide expertise and infrastructure for the management of municipal waste. In particular, the availability of EU funding gave priority to activities encouraging separate collection, recycling and composting of municipal waste, and required CEE countries to territorially organise waste collection and treatment within national, regional and local plans that are self-sufficient and in proximity to the source of waste generation (European Commission/Bipro 2016).

The EU did not set out specific models for the management of municipal waste but simply required the adequacy of ‘administrative systems on national, regional, and local levels, as well as adequate infrastructure for safe collection, sorting, transport, recycling, materials and energy recovery, and disposal of all types of waste’ in the CEE countries (EU Commission 1997). However, reports highlight disparities between more efficient Western and less efficient Eastern member states (CMS 2013). On the one hand, studies of Western waste models point to the great variety of options available in the EU member states, often tied to national ‘policies, institutional settings, financial mechanisms, technology selection, and stakeholder participation’ (Pires et al. 2011: 1037) and with varying results in effectiveness (Pires et al. 2011). On the other hand, studies on the waste management practices of CEE countries during state-socialist times claim that inefficiency increased in these countries together with the economic and environmental reforms of the late 1980s and early 90s, which ‘destroyed’ pre-existing (and efficient) waste reuse and recycling systems (Gille 2000; Gille 2004). Whether we look at CEE countries or the Western EU member states, the issues of efficiency and effectiveness of waste management is a hotly debated topic. Importantly, with the transition to market economy, new products and goods were put on CEE markets that required Western expertise and technology in order to be correctly waste-managed. Thus undoubtedly,

Western competence in infrastructure-building as well as the promotion of solutions and activities related to municipal waste management helped CEE countries achieve compliance with the EU waste legislation (World Bank 2011; CMS 2013).

### ***Hungary: EU assistance as horizontal and cooperative***

From 1989 Hungary was a beneficiary of the first EU funds provided in the form of PHARE and ISPA pre-accession aid programs and then, after 2004, in the form of CF and ERDF. In particular, between 1990 and 2006 PHARE contributions amounted to 1478.9 million euro (European Commission 2015: 25) which, between 1998 and 2006, financed eleven twinning projects to exchange knowledge as well as strengthen the practice of environmental law enforcement in Hungary. Additionally, between 2000 and 2006 ISPA contributed to the financing of twelve projects in municipal waste: the construction and re-construction of big landfill sites or the upgrading of old ones, as well as for the development of separate waste collection facilities and composting in Hungary. Furthermore, in the financial period 2007–2013, Hungary launched two ‘Operational Programmes on Environment and Energy’ funded by CF and ERDF, which had until then financed only a few projects related to municipal waste treatment and landfill recultivation, while the majority of the waste-related projects had been financed by the Hungarian National Development Agency and the National Environmental Managing Authority [7].

**Table 1: List of case studies among the EU-funded municipal waste projects in Hungary**

Reference Case No.	EU Project reference	Duration	Type of EU funding	Project Name
1	HU0004-02	2001-2003	PHARE	Comprehensive waste management information system for planning regional waste management policy
2	2000/HU/16 /P/PE/005	2000-2010	ISPA	Szeged Regional Waste Management Project
3	2000/HU/16 /P/PE/002	2000-2012	ISPA	Establishing a selective waste collection, utilisation and community waste management system in Hajdu-Bihar county

Source: Author’s elaboration

Ex-post evaluations of the EU-funded projects in Hungary in the period 1998–2013 recognise the horizontal relationship between EU and domestic actors as having been essential to the sustainability of EU assistance. In 2000, the EU approved a project funded by PHARE to establish a comprehensive ‘Waste Information System’ (Case 1 in Table 1) for the collection of statistical data on municipal waste (interviews 3 and 4) in cooperation with the ‘Public Waste Agency of Flanders’ (hereafter, OVAM). In addition, the project addressed the definition of the ‘Hungarian National Waste Management Plan’. However, by the time of starting the PHARE project, the Hungarian parliament had already drafted the National Waste Management Plan (interviews 3 and 5). Therefore, the Hungarian government shifted the project’s focus towards the development of regional waste management plans (interview 3). Within this project, Flemish experts drafted a manual ‘to support and coordinate the regional waste plans in consultation with the Hungarian Regional Environmental Inspectorates’ and organised training sessions in Budapest or in the regional inspectorates in which the Hungarian team was introduced to methods of data processing used in Flanders (OVAM website; interview 3). Furthermore, Hungarian officers went for study tours to Flanders and participated in meetings aimed at the exchange of best practices (OVAM website).

In evaluating the OVAM project, representatives of Hungarian NGOs and environmental experts emphasise its positive impact on compliance with the EU municipal waste legislation in Hungary. In particular, they all agree the project was essential not only for the development of the waste statistics but also for the actual implementation of the regional waste management plans in Hungary (interview 3, 5, 6 and 7). Moreover, in the ex-post report by OVAM, the core motivation for the success of the project was attributed to the cooperative relationship established between Flemish and Hungarian experts in which an initial distance later became a good understanding, with the result that the project integrated well into the reality of the Hungarian Ministry of Environment and Water (OVAM website). The fruitful exchanges of information, experience and know-how was also positively evaluated by the Hungarian counterparts, who requested OVAM to expand the project scope to several other waste issues (OVAM website).

The evaluations of ISPA projects in Hungary similarly highlight the existence of EU and domestic actors' horizontal relationships. The Hungarians had started to prepare ISPA projects in 1998 despite the fact that 'the regulations pertaining to the subsidy were not yet finalized' at the European level (Szabó 2007). However, the first Hungarian projects submitted to the European Commission for approval contained conceptions which were already outdated by the time of implementation (interviews 8 and 9). This problem was related to the poor level of expertise at the local level, as in the case of the 'Szeged Regional Waste Management Programme' (Case 2 in Table 1). The project was drafted many times because it contained technical weaknesses in the establishment of a safe regional waste management system (Szabó 2007). However, to avoid the possibility of losing the EU funds, in March 2000 experts from the Belgian company Carl-Bro worked with the Szeged authorities and experts to prepare and finalise the project documentation which afterwards was approved (Szabó 2007).

In the absence of cooperation between domestic actors, problems arose in the regionalisation of municipal waste treatment, with consequences which impaired the implementation of ISPA projects. With the adoption of the National Waste Management Plan in December 2002, Hungary promoted the development of regional disposal systems [8]. However weak regional planning created over-capacity problems because the construction of new disposal sites funded by ISPA were not followed by policies to close down obsolete local and illegal dump sites (Dax et al. 2001), so that municipalities continued to use their old dump sites instead of the new regional EU-funded ones (Dax et al. 2001), as in the case of the Hajdu-Bihar region (Case 3 in Table 1). In this region, the city of Debrecen in consortium with the private waste companies A.S.A. and AVE and together with the cities of Hajduboszormeny and Berettyoujfalu, applied and received funding from ISPA for the construction of three sub-regional waste disposal sites. In the same region, however, the city of Nádudvar had earlier received state subsidies and constructed its own disposal site which, according to Dax et al. (2001), was 'wasted money' considering that this city could have been easily served by the new ISPA-funded sites.

The horizontal relationships and cooperation between EU and domestic actors also had a positive impact on the projects supported by the EU after the accession of Hungary on 1 May 2004. In 2004–06, the majority of projects continued to be financed by ISPA: the modernisation of existing disposal sites as well as recultivation of old and obsolete disposal sites (interviews 8, 10 and 11). In the financial period 2007–13 only five projects were co-financed by the European Commission; these were composting and sorting plants, regional waste management projects as well as recultivation (interviews 9 and 10). Moreover, a 2016 ex-post report on this financing period points out that 20% of the total funding available was allocated to environmental projects, of which 2 billion euro went to waste management, water supply and wastewater treatment investments (Commission Working Paper 2016). Despite the low number of EU-funded waste-related projects, the 2016 report emphasises that 'the share of recycled municipal waste increased by more than 10%' (Commission Working Paper 2016: 18). Furthermore, it highlights that ERDF and CF contributed substantially to the closure of non-compliant disposal sites in Hungary (Commission Working Paper 2016). Moreover, Hungarian officials and experts attribute the success of carrying out and implementing these EU-funded projects to the horizontal interactions established between domestic and EU experts (interviews 11 and 13).



***Poland: EU assistance as vertical transfer***

Like Hungary, Poland was a beneficiary of EU assistance from PHARE, ISPA and then CF and ERDF. In the period 1990–2006, PHARE contributions amounted to 3994.1 million euro (European Commission 2015: 25), through which between 1998 and 2003 were financed four administrative twinnings to improve knowledge in Poland of the requirements of the European environmental directives, as well as six capacity-building projects for the modernisation of waste treatment facilities (MWH Consortium 2007b). Furthermore, in 2000–06 ISPA financed forty-three investment projects and two technical assistance projects in the environmental sector, of which eight concerned the modernisation and construction of municipal waste sorting and treatment plants (interview 14). Additionally, in the financial period 2007–13 the ‘Operational Programme Infrastructure and Environment’ provided 1026.9 million euro (mostly from CF) to waste management projects, of which sixteen were aimed at reducing the amount of municipal waste disposal and at recultivating degraded disposal areas (interview 14).

**Table 2: List of case studies among the EU-funded municipal waste projects in Poland**

Reference Case No.	EU Project reference	Duration	Type of EU funding	Project Name
1	PL01.05.07	1998-2000*	PHARE	Strengthening the local environmental administration
2	PL2002/000-580-05-04	2002-2004	PHARE	Control of waste shipments
3	2000/PL/16/P/PE/018	2000-2004*	ISPA	Wrocław solid waste treatment (phase 1)
4	2002/PL/16/P/PE/030	2002-2004*	ISPA	Kalisz waste treatment plant

\* This is the expected implementation duration reported in the official fiches for these projects. Nevertheless, ex-post evaluations on these projects pointed out that the starting date and closing date of these projects were delayed.

Source: Author’s elaboration.

Ex-post evaluations of EU-funded projects in Poland in 1998–2013 outline mixed results in terms of the sustainability of EU assistance. On the one hand, the PHARE twinning on ‘Strengthening the Local Environmental Administration’ (Case 1 in Table 2) was carried out despite limited participation by, and without establishment of horizontal interactions between, EU and domestic actors. The project focused on the preparation of waste management plans at local levels including a training course for staff from municipalities, rural counties and regional administrations, as well as the organisation of seminars and workshops to define local waste management plans, and to prepare a waste management manual. According to European reports, however, while the project had been properly designed, it failed to achieve its objectives (EC 2004; EMS 2004) because local authorities were not sufficiently involved in the PHARE project management for an ‘ownership-feeling’ to result (EC 2004). As a consequence, there was a lack of ‘chemistry’ between the European and local partners (interview 2), ‘inadequate cooperation’ in the phases of programming, planning and implementation, and an insufficient exchange of information between the partners (EMS 2004).

On the other hand, the PHARE twinning on the ‘Control of Waste Shipment’ (Case 2 in Table 2) was ‘successful in achieving and sustaining its goals’ (interview 15) because of the wide participation and horizontal interactions established between the EU and domestic actors. The project aimed at training German and Dutch cross-border authorities in controlling and monitoring the transboundary shipment of waste. Moreover, the project offered informative meetings open to representatives of firms and business associations to improve their knowledge of the EU’s requirements (interview 15).

Ex-post evaluations of Polish PHARE projects particularly highlight that the EU expertise has been extremely beneficial to achieving the objectives of the twinning projects, but that a lack of partnership and cooperation between EU and domestic actors in many cases delayed the implementation of EU-funded projects (EMS 2004).

In 2000, ISPA financed eight projects aimed at establishing a regional network of municipal waste treatment facilities in Poland. However, among these projects only three were correctly carried out and on time, while the rest had problems and started only from the mid-2000s, after Poland's EU accession (MRR Report 2007). A common problem was the lack of cooperation between EU and domestic actors in the planning phase of the EU-funded projects. This was the case in the construction of a new solid waste treatment facility in Wrocław (Case 3 in Table 2), where first planning documents revealed the selection of the wrong location and excessively high costs of implementation (interview 16). To overcome these problems a German consultancy collaborated with the Polish actors and, reviewing together the financial assets of the project, found a more sustainable solution by changing its location and reducing its costs (interview 16). Another common problem was the lack of participation and horizontal interactions between EU and domestic actors in the implementation and management phases. In the construction of the Kalisz Waste Treatment Plant (Case 4 in Table 2), though the project had been correctly and timely prepared, a lack of cooperation between regional and national authorities, societal and economic partners delayed its implementation through lateness in the selection of managers and acquisition of building permits (interviews 2 and 17; EMS 2004; MRR Report 2007).

A lack of horizontal interactions and cooperation between EU and domestic actors also had a negative impact on the projects supported in Poland by CF and ERDF. In the period 2007–13, the number of EU-funded projects on waste management increased from eight to forty-six and their core objective concerned the establishment of regional municipal waste planning and management. Hence, within the 'National Operational Programme' on 'Infrastructure and Environment', the EU financed many projects for the creation of 'Regional Municipal Waste Treatment Installations' (in Polish, *Regionalne Instalacje Przetwarzania Odpadów Komunalnych*, hereafter RIPOKs). These RIPOKs were indicated as the core infrastructure for the management of municipal waste at the regional level which, together with recovery, recycling and reuse of municipal waste also had to take care of the modernisation, closure and recultivation of old landfill disposal sites (interviews 14 and 18). Due to a lack of cooperation between domestic actors, however, many RIPOKs have co-existed with private landfill sites, creating an overcapacity of treatment facilities in a same region (interview 19). As a consequence, many RIPOKs lacked a sufficient volume of waste to cover their costs and operate efficiently, as happened in the Małopolskie, Warmińsko-Mazurskie and Kujawsko-Pomorskie regions (interview 19). Where RIPOKs were not constructed, municipalities set up alternative sorting and recycling plants with the aid of EU funds (interview 20). Despite the EU funding, these remained small, which not allow them to become regional treatment infrastructures (interview 20). Moreover, the cheap landfill disposal of waste discouraged many private investors from funding these alternative facilities which in many cases struggled to remain in business (interviews 19 and 20).

In the financing period 2007–13 the increase of EU money available for Poland in the environmental area was substantial. The EU invested in Poland the third largest share of funding available for the CEE countries in the environment sector (12%) and 1.3 billion euro were specifically allocated to the Polish waste management sector (Commission Working Paper 2016). Nevertheless, interviewees highlight that while most of the projects substantially approached the EU requirements on separate collection and sorting, the majority of municipal waste was still disposed in landfills in 2013 (interview 18). Furthermore, despite the creation of RIPOKs in many Polish regions, the regional planning for collection and treatment of municipal waste remained weakly implemented. The lack of cooperation between EU and domestic actors and a wide number of privately owned and EU-funded facilities within single regions (interview 21) meant that municipalities were not sufficiently able to stream waste to the new facilities and thus were discouraged from applying for the EU funds (interviews 21, 22 and 23).

## Conclusions

The article tackles the question of the sustainability of EU assistance in Hungary and Poland, former candidate countries and now EU Member States, in their process of approximation and implementation of costly EU environmental legislation. Recognising participation as one of the essential and most pressing issues in sustainability, it investigates the type of relationship established between EU and domestic actors as well as the participatory nature of EU assistance in the period between 1998 and 2013. In measuring the sustainability of external – the EU's – assistance to Hungary and Poland, the article considers two contrasting hypothesis on the participatory modes of providing assistance in EU-funded projects: EU vertical assistance and EU horizontal assistance. The former builds on IR, social constructivist, Europeanisation and conditionality research and hypothesises vertical participation and top-down interactions between EU and domestic actors. On this hypothesis, domestic actors are considered recipients of EU funds and the mere number of knowledge- and capacity-building transfers from the EU to Hungary and Poland determines the success or failure of the EU-funded projects. The latter hypothesis builds on political economy research, and says that horizontal interactions between EU and domestic state and non-state actors, in cooperation between external and domestic actors, determines the success or failure of the EU-funded project.

Whereas data show that EU assistance provided substantial knowledge, financial flows and capacity-building in municipal waste management and treatment in Hungary and Poland, the impact of EU funding varied greatly between these two countries: ISPA contributed to improving the municipal waste sector of Hungary by 32% while the municipal waste sector of Poland was improved by only 4.5% (RGL Forensics 2011: A57 and RGL Forensics 2011: A96). Furthermore, differences between Hungary and Poland also exist in the sustainability of EU assistance. Despite the high number of projects financed in Poland between 2007 and 2013, a 2012 Commission's internal document cited by an interviewee points out problems in the sustainability of the Polish EU-funded projects: not only was there an overall delayed implementation and management of the approved projects, but also Poland still needed to invest in municipal waste separate collection and treatment in order to comply with EU waste requirements (interview 1). By contrast, an ex-post evaluation of the 2007–13 period by the European Commission reports that Hungary improved by more than 10% its recycling rates in 2007–12 and its landfill disposal sites were all conformant to EU legislation (Ex post revised interim report 2015).

By investigating EU-funded projects in Hungary and Poland, the article demonstrates that rather than the quantity of ties and vertical transfers from EU to domestic actors, it is the quality of assistance and the horizontal relationships established between EU and domestic actors that matters most for the sustainability of EU assistance. While Poland had more projects funded by EU contributions in comparison to Hungary, the sustainability of Polish EU-funded projects was less. EU projects planned and managed with a lack of cooperation between local authorities, non-state actors and EU experts, failed or were delayed in their objectives, as in the cases of the PHARE twinning on local waste management plans or the ISPA projects in Wrocław and Kalisz. By contrast, when there was a horizontal and wide participation of the Polish state and non-state actors in the activities promoted by the EU experts, EU projects were successful, as in the case of the twinning on transboundary waste shipment. Similarly, in 2007–13, the lack of regional coordination between municipalities and private investors in the management and treatment of municipal waste created an overcapacity of facilities, which discouraged municipalities from applying for EU funds for modernising old and obsolete disposal sites or constructing new conformant waste sorting and recycling infrastructures (interviews 21, 22 and 23).

Conversely, despite the smaller number of EU-funded projects and knowledge-based initiatives carried out in Hungary, their participatory features assured the sustainability of EU assistance and substantially contributed to Hungary's compliance with the EU waste requirements. The wider participatory nature of Hungarian EU-funded projects is particularly visible in the twinning project financed by PHARE on the 'Waste Management Information System' implemented in cooperation with experts from Flanders and successful in its immediate outcome (defining regional waste management plans), and in establishing a methodology for regional and local planning and

organisation of waste management. Problems have however riddled some Hungarian projects financed by ISPA as well as CF and ERDF, when coordination and cooperation was lacking between domestic actors and EU experts, as in the case of the Hajdu-Bihar region (State Audit Report 2004; Dax et al. 2001; interview 8), or in the planning of the ‘Szeged Regional Waste Management Program’ (Szabo 2007; interview 10).

Focusing on the quality of external assistance rather than its quantity, this article sheds new light on the participatory nature of sustainable development by investigating the problem of variation in the impact and sustainability of EU assistance in the CEE region. The empirical analysis of Hungary and Poland emphasises the primary role of horizontal cooperation between EU experts and domestic state and non-state actors. Moreover, in terms of theory, the article shows how political economy studies may offer a more valid explanation for the variation in the sustainable allocation of EU funds, and further contribute to the scholarly debate on external assistance to less-developed and – in this case – less environmentally compliant EU Member States. The article may also provide useful insights into the successful planning and management of EU-funded projects in other EU Member States as well as in candidate countries of the Western Balkans. Naturally, to improve the generalisability of its empirical findings, further studies of other sectors and cases should be carried out. The question whether the authoritarian tendencies that have plagued both Hungary and Poland in recent times will have an impact on the sustainability of the programs realized with the help of EU assistance also needs to be further researched.

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## Notes:

- [1] The article limits the analysis to environmental assistance from EU sources. The reasons behind this choice are twofold. On the one hand, information gathered through interviews with Hungarian and Polish officials in charge of environmental funds, as well as international reports indicate EU funds as the main source of external assistance for environmental protection in CEE countries in comparison to other international sources (on this point, see World Bank 2011). On the other hand, international environmental aid from World Bank, UNEP and UNDP financed only specific environmental sectors, but not municipal waste management and treatment. Furthermore, the European Investment Bank and the EEA-Norway funds contributed to co-financing EU-funded projects.
- [2] The rationale behind the selection of the municipal waste management sector lay in the broad information available as well as ex-post evaluations of the waste management EU-funded projects. This choice was further justified by the fact that, in a Communication of 2001, the European Commission considered municipal waste management one of the environmental sectors with the most ‘investment-heavy directives’ which required EU financial means and investments in the CEE candidate countries (Commission Communication 2001: 6).
- [3] The rationale behind the selection of the years 1998– 2013 as period of analysis is mostly practical: in 1998, the first PHARE projects specifically focusing on waste management were approved in Hungary and Poland, whereas 2013 is the last year of the financial period 2007–2013 for which ex-post evaluation data is available.
- [4] International organisations such as the United Nations do not establish conventions for the designation of ‘developed’ and ‘developing’ countries or areas. Countries are eligible to enter or leave the ‘less-developed’ category by meeting three objective criteria: income, human assets and economic vulnerability.
- [5] The presence of information asymmetries among external and domestic actors has already been emphasised by researchers focusing on the principal-agent relationship (for a detailed review, see Tallberg 2003). For them, principals delegate issues to agents who, in the presence of conflicting interests, can decide to pursue their own agendas by shirking (Tallberg 2003), or pursue other issues than those delegated to them by the principals (Sabel/Zeitling 2010; on discretion, see also Lipsky 2010; Pressman/Wildavsky 1973).
- [6] The first ‘Waste Framework Directive’ (WFD) adopted in 1975 (No. 75/442/EEC) contained relevant provisions for the correct management and treatment of garbage. In its first revised version (No. 91/156/EEC) the WFD advised Member States ‘to encourage the recycling of waste and re-use of waste’, as well as the prevention and the reduction of waste production, the recovery of waste by means of recycling and reuse, and cooperation among Member States ‘to establish an integrated and adequate network of disposal installations, taking account of the best available technology not involving excessive costs’ (Art 5). The two most recent versions of the WFD (No. 2006/12/EC and No. 2008/98/EC) follow this same approach. In particular, Directive No. 2006/12/EC reaffirms the requirements for the correct management of waste and for its safe disposal in order not to harm the environment and human health. It



also encourages the application of the waste hierarchy and requires that ‘the costs of disposing of waste must be borne by the holder of waste, by previous holders or by the producers of the product from which the waste came’ (Art. 15).

[7] In the financial period 2007–13, the European Commission co-financed only projects with a total cost over 50 million euro, and since projects related to municipal waste generally cost amounts below this threshold, they were thus financed by the national authorities (interviews 10, 11 and 12).

[8] In particular, the ‘National Waste Management Plan’ of 2002 set a limit on the number of existing landfills to one-hundred in Hungary and, within each region, to a maximum of six complex waste gathering and treatment systems linked to incinerators to be constructed in the vicinity of large cities.

## Annex: Reference to interviews

Reference No.	Name	Institution and Position	Place and date of interview
1	Andrew Murphy	DG Environment, European Commission; former desk officer for Cyprus.	Brussels, 20.03.2013
2	Pascal Boijmans	Head of Unit, Competence Centre Administrative Capacity, DG REGIO, European Commission.	Brussels, 17.07.2013
3	Csaba Marko	Former Deputy Head of the Waste Management Department of the Ministry of Environment.	Budapest, 21.05.2013
4	Peter Ocsenas	Policy Officer at COWI Hungary.	Budapest, 23.05.2012
5	Hilda Farkas	Former Head of the Waste Management Department of the Ministry of Environment.	Budapest, 6.07.2011 and 23.05.2012
6	Sylvia Graczka	Head of the environmental NGO HUMUSZ.	Budapest, 24.05.2012
7	Csaba Kiss	Environmental Attorney and EU law expert at the Environmental Law Association of Hungary.	Budapest, 24.04.2013
8	Carsten Rasmussen	Chief of Unit in DG REGIO, European Commission; former Desk Officer for Hungary.	Brussels, 17.07.2013
9	Peter Heil	Director and Head of Consultancy Services at ConsAlt.	Budapest, 09.05.2013
10	Gabor Miklosi	Policy officer for Hungary, DG REGIO, European Commission.	Brussels, 10.04.2013
11	Noemi Dalnoky	Head of Unit of the Managing Authority for Environmental Programmes, National Development Agency.	Budapest, 23.05.2013
12	Matyas Maksi	Policy Officer for Hungary, DG REGIO, European Commission.	Brussels, 17.09.2013
13	Judit Pump	PhD, expert on environmental legislation and waste issues in Hungary.	Budapest, 29.04.2013 and 22.05.2013
14	Julia Majewska	Head of Unit of the Department of European Funds in the Ministry of Environment.	Warsaw, 30.10.2013

15	Magda Gosk	Head of Waste Shipment Unit, Chief Inspectorate of Environmental Protection	Warsaw, 11.10.2012
16	Brendan Smyth	Principal Administrator Financial Engineering, DG REGIO, European Commission; former responsible for ISPA projects.	Brussels, 22.07.2013
17	Joanna Czajewska	Head of Unit for Coordination of Implementation, Department for Coordination of Infrastructural Programmes, Ministry of Regional Development.	Warsaw, 31.10.2012
18	Robert Markiewicz	Vice-director of the Department of Land Protection at the Polish National Fund for Environmental Protection and Water Management.	Warsaw, 17.10.2013
19	Michal Korcozowicz	Head of REBA, battery recovery organisation	Warsaw, 06.11.2013 and 30.04.2014
20	Marcin Jurasz	Director of the Department for special wastes, REMONDIS.	Warsaw, 18.11.2013
21	Edyta Stankiewicz	Project Economist at JASPERS and European Investment Bank, Warsaw Office.	Warsaw, 10.10.2013
22	Tomasz Żylicz	Dean of the Department of Economic Sciences at the University of Warsaw; founder of the Warsaw Ecological Economics Center.	Warsaw, 12.11.2012
23	Wojciech Deska	Head of Warsaw Office, European Investment Bank.	Warsaw, 10.10.2013