REPAiR

REsource Management in Peri-urban AReas: Going Beyond Urban Metabolism

D3.8 Report – findings on socio-cultural, socio-economic and company related investigations

Version 2.1

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Acronyms and Abbreviations

AMA	Amsterdam Metropolitan Area
CE	Circular Economy
CSR	Corporate Social Responsibility
EC	European Commission
EIS	Eco-innovative Solution
EMAS	Eco-Management and Audit Scheme
EMS	Environmental Management System
ESS	European Social Survey
EU	European Union
EUROSTAT	The Statistical Office of the European Union
FA	Focus Area
FDI	Foreign Direct Investment
ISO	International Organisation for Standardization
ISTAT	Instituto Nazionale di Statistica (The Italian National Institute of Statistics
NAP	Naples Metropolitan Area
NUTS	Nomenclature des unités territoriales statistiques (Nomenclature of the Statistical Territorial Units)
OECD	Organisation for Economic Co-operation and Development
PSCA	Primer Socio-cultural Analysis
PULL	Peri-Urban Living Labs
PVQ	Portrait Value Questionnaire
SSCA	Secondary Socio-cultural Analysis
TeIR	Területfejlesztési és Területrendezési Információs Rendszer (Territorial Development and Spatial Planning Information System)
WCB	Waste-consciousness Behaviour
WP	Work Package

Table of Contents

Publishable Summary

Deliverable 3.8 of Work Package 3 concerns an analysis of the comparison of the six case study areas, from the point of view of socio-economic, socio-cultural and corporate environmental sensitivity, based on the Deliverables No.3.3-3.7 (Geldermans et al. 2018, Taelman et al. 2018, Czapiewsky et al. 2018, Arlati et al. 2018., Varjú et al. 2018). It comprises the results of two secondary data analyses, a corporate environmental related investigation and a primary survey, following the innovative methodology that was introduced and explained in Deliverable 3.2 (D3.2) (Grünhut et al., 2017).

The aim of this deliverable is to make comparison among the six countries without repeating the facts and findings written in the former deliverables and provide a framework for further analysis within the REPAiR project, especially for WP7..

As summarising the content of references cited in all deliverables, the examined cities and their metropolitan areas may differ from each other in aspects of location and role. For example, Amsterdam is the most significant economic nerve of the Netherlands, but also serves as an important economic centre for Europe. Strongly opposed to Pécs, a centre of one of the most underdeveloped Hungarian regions with negligible international relations, in a peripheral location. The cities of Łódź and Ghent are located in the central parts of their country, but whilst Łódź is rather a secondary centre within its country as well, being just in a transition to find its main role (culture.pl), Ghent is a major hub of the national and in the interpretation at European level as well. Naples, such as Pécs, represents a central role in a region (Campania) that has many struggles and represents the negative side of the nation's territorial differences (same as South-Transdanubia). Hamburg has gone through the path of being some kind of periphery as his development in a specific political environment (due to the Iron Curtain) was influenced by the intersection of political blocks (Merklein, 1966) and so prospering stopped for a while, however, unlike Pécs and Łódź, it has been developing much more dynamically ever since the 1990s again and has now prominent economic power (britannica.com).

As it is recognisable, two countries from the REPAiR case studies, Belgium and Germany, are in the top three positions in the sense of waste sensitivity (of households)'s index score. Italy's and Poland's scores are close to the European mean value, while the Netherlands' is somewhat below it. Hungary's is the lowest among the selected cases. In the latter country there are no significant differences at regional level, while the other case study areas show some inner territorial diversity. The Flemish region of Belgium has a higher mean value than the Brussels and the Walloon regions, which latter two have closely similar scores. In Germany the diversification of the regional mean values is quite high: the selected case region, Hamburg, has the lowest score compared to all others. In Poland the regional differences are also significant, yet three or four regions have closely similar scores, among them the particularly examined area of Łódź, while two are rather lagging behind. In Italy there is a clear rift between

the Northern regions and the Southern ones and the islands, while Central Italy has a mean value close to the national average. Last but not least, among the Dutch regions the Eastern and the Southern ones have higher mean values compared to the other two.

Analysing the corporate environmental awareness, it can be seen that Italy is a leading country followed by Hungary and Germany (with a major gap), then, after a moderate gap the order is: the Netherlands, Belgium and Poland, respectively.

The analysis in this deliverable revealed that the spatial location, the history of the countries and regions (the industrial transition around the systemic change), the trajectory and the changes of the economic structure had influence on their social and socio-cultural situations that influence the attitudes and behaviours towards the environment and waste problems. Local peculiarities are unavoidable.

The report finishes with a reflection on the results and makes an attempt to compare the attitudes and behaviour of different types (household sphere vs. company sphere) of actors.

1. Introduction

This report concerns an analysis of the socio-economic and socio-cultural situations of the six case study areas of the REPAiR project partly based on the Deliverables No.3.3-3.7 (Geldermans et al. 2018, Taelman et al. 2018, Czapiewsky et al. 2018, Arlati et al. 2018., Varjú et al. 2018), and additionally, following the innovative methodology that was introduced and explained in Deliverable 3.2 (D3.2) (Grünhut et al., 2017). The aim of this deliverable is to make comparison among the six countries using the former deliverables of (especially) process models but without repeating the facts and findings written in the former deliverable and provide a framework for further analysis within the REPAiR project, especially for WP7.

In Chapter 2, a comparative analysis of the socio-economic situation of the six case studies countries can be found. The descriptive analysis followed by the investigation of regions placing the six cases in the adaptive circle of Gunderson and Holling (2002) in order to get a picture about their economic resilience that can have an influence on the behaviour/attitude (as to environmental awareness).

The structure of Chapter 3 allows the readers to gain understanding in regard to the two secondary analyses about the waste sensitivity and environmental awareness of households/everyday people. The detailed representation and comparison (especially the two secondary analyses that is new and was not interpreted in former deliverables) followed by an investigation of primary survey among stakeholders of circular economy in the six case study areas. Stakeholders were revealed by the WP6 of REPAiR project and were asked to fill in a detailed questionnaire about the economic, organisational, social and other aspects of waste management and circularity.

The last chapter is a short comparison about the corporate environmentalism in the six case study areas formerly elaborated in the deliverables of process models of the cases.

Chapter 5 is dedicated to a reflection on the analyses summarising the environmental and waste related awareness of different types of actors (everyday people, stakeholders, companies).

2. Socio-economic analysis

2.1 Country level

A common feature of these involved countries is that they all have a significant fertile land treasure, and thus the foundation for sufficient agricultural use, demonstrated by the fact that they are all among the EU's 12 most dominant agricultural producers. This can be measured by agricultural output (Eurostat, 2017)[1]. In this range, among our focus countries Italy plays the most dominant role. Italy also stands out with their dedication for organic farming (Eurostat 2017, see also Deliverable 3.3). By their favourable geographical location and openness towards the sea, the Netherlands and Belgium are particular in the comparison, as countries destined to be Europe's economic nerves from the early ages, despite their small territorial size, both below 40,000 km^2 (Geldermans et al. 2018; Taelman et al. 2018 - Deliverable 3.3, 3.4, tradeconomics.com).

2.1.1 Economic history

Their favourable geographical situation has meant even more advantage to Belgium, the Netherlands and Germany, since the globalisation took place in history, trade became a central factor and trade nation economics have grown enormously, incomparably to other countries that were left behind. For the Netherlands the "Golden Age" meant an enormous capital accumulation that Central and Eastern European nations have never even approached. Even though this first wave of globalisation and its benefits were disrupted by the first world war, their trade expansion and network were built up efficiently again, on the remains of this tradition during the second wave of globalisation. Their merchant past, furthermore, implied other positive effects on their evolutionary paths, such as capital accumulation[2], and through trade, by being "engaged with the wider world" it has provided a "wide source of information" (Korhonen 2001, Hopkins 2008 quoted in Bristow 2010) they have developed a favourable base for innovativeness that has implications even today. For our case, another important distinguishing feature among these six countries is the east-west divide, and the different nature of the historically-politically related socio-economic development. After almost 30 years of the fall of the Soviet regime, Hungary and Poland are still considered transitional countries, despite the fact they differ somewhat from other former Soviet states, for example they "developed much more progressive systems of social protection than Bulgaria and Romania" (Vaughan-Whitehead, 2003, quoted in Drahocuopil, 2009, p.13.), and other positive factors. This author also characterises

[1]https://ec.europa.eu/agriculture/sites/agriculture/files/statistics/factsheets/pdf/eu_en.pdf
[2]https://ourworldindata.org/trade-and-globalization

Poland's and Hungary's situation from the consequences of regime change until nowadays as "their liberal dependent capitalism can be characterized not only by dependence on foreign investors in providing credit and organizing inter-firm relations, but also by labour weakness, dysfunctional education systems (..)" (p.6), projecting capitalist growth but also an increasing dependence on "exogeneous strategies, decisions, and foreign capital" (Drahocuopil, 2009). This subject, among others, will be investigated in further chapters.

Italy is quite particular again, with its own historical background. Despite the ancient and medieval heritage, the nation was not united as a country until 1861[3]. The fact that today there is a very sharp difference in the nature of North-South development – namely, the South lags behind North, in all socio-economic aspect – is very significant, rooted in the inadequacy of the over-rushed political decisions made around this time[4]. Before and between the world wars, fascist and socialist regimes followed each other during the periods of turbulent political times. One "heritage" of the fascist regime was those industrial holdings on the basis of which Italy started to build its industrial facilities, in a slow process moving it away from the agricultural character to industry dominated country that we know today[5] (Geldermans et al. 2018).

2.1.2 Demography

In the past years' tendency, Belgium, Germany and the Netherlands are typically facing population growth, which is in some cases down to both stable or growing fertility rate and neutral or positive migration tendencies recently. Poland and Hungary differ from this greatly as they are both facing population loss, due to outward migration and also an ever-decreasing trend in fertility. These two countries have other demographic trends in common; as in terms of their internal migration trends, the depopulation of their rural areas, and the fact they also experience the population ageing, although in this process Italy has the most dramatic case among not just these countries, but almost worldwide (see sources credited in all Deliverables). Polish and Hungarian government measures are determined to deal with the critical tendency as policy makers are trying to improve on with financial incentives – for young families for example (visegradinsight.eu) – the way Italy acted before, without achieving tactile results (thelocal.it). On the contrary, the Netherlands, Belgium and Germany are characterised with intense population growth, partly from the side of fertility (although, in Belgium fertility decreased somewhat in recent years, but the natural balance is still positive) and ever-growing positive inward migration. The latter is so intense that in Belgium and Germany, almost 10% of the total population has foreign background (Taelman et al. 2018 and Arlati et al. 2018). This strong multiculturalism means radically different social system from what is experienced in Hungary and Poland, and implies socio-cultural differences – which requires more effort in coordination and organisation for example, toward waste management (Czapiewski et al. 2018 and Varjú et al. 2018). This population growth means increase in the inhabitant density in which Netherlands leads with its 508 inhabitants/km^2, followed by Belgium (379.74/km^2), Germany with 236.1/km^2, Italy 201.57/km, whilst the most sparse are Poland (124.43/km^2) and

[3]http://www.sjsu.edu/faculty/watkins/italy1.htm
[4]http://www.sjsu.edu/faculty/watkins/italyreg.htm
[5]http://www.sjsu.edu/faculty/watkins/italy1.htm

Hungary (107.02) (statistictimes.com, 2018). In Poland, Italy and in Hungary the distribution of population density can also be characterised by significant unevenness, typically forming strong urban-rural dichotomy, resulting in intensive population decline affecting many segments that the settlements experience – employability, infrastructure, and life quality decadence in these sparse areas. This is most evident in South Italy, East-Poland and in the case of Hungary, rural opposed to urbanised places almost overall in the country (see credits used in Varjú et al. 2018, Czapiewski et al. 2018, and Geldermans et al. 2018, see also: Pénzes, 2013). Further distinguishing factors among these countries include the different states of urban sprawl they are characterised with. Whilst Germany, Belgium are strongly urbanised,[6] in Hungary and Poland, because of the regime change restructured the formerly overdominant role of big cities, and suburban lifestyle gained more popularity, as a consequence of population loss and strong need for settlements with central role in the sparse areas, urbanisation was needed in somewhat different characteristic (Szydłowska, Trócsányi and Pirisi, 2018). Meaning that, as Szydłowska, Trócsányi and Pirisi (2018) declare, "formal urbanisation has been dynamic since the political transformation, and resulted in the doubling of towns in Hungary, and becoming the only source and way of urbanisation. New towns in Poland are smaller, 'more historical' and more concentrated geographically to the less developed eastern and south-eastern regions" (p.16). These authors conclude that the Hungarian reclassification in urbanisation shows strong similarities with the Polish one, in nature and in causes behind it (Szydłowska, Trócsányi, and Pirisi, 2018). However, even some Polish and Italian regions can be included in the countries that are hotspots of peri-urbanisation, such as the strongly urbanised Germany, Netherlands and Belgium. [7]"In Italy, since there has been a redistribution of the population from the centre to the periphery of the metropolitan areas and from the larger to the medium-sized (...), This trend basically coincides with the general trend in the national economy, in which the industrial districts and the small- and medium-sized enterprise are the driving forces" (Bonifazi and Heins, 2001, p.7). Particularly uneven population density is commonly typical in Poland, Hungary, and Italy.

[6]https://www.statista.com/statistics/455825/urbanization-in-germany/
https://urbact.eu/belgium
[7]http://www.openspace.eca.ed.ac.uk/wp-content/uploads/2015/12/Peri_Urbanisation_in_Europe_printversion.pdf

2.1.3 Labour force

Narrowing only to the terms of raw unemployment statistics, the tendencies of our examined countries do not show a remarkable east-west difference. When the comparison is based on the average of all member states, which is 6.5% of total labour, we see the following: In Italy, this ratio is extremely high (10.5%), while in Germany this ratio is below half the average (3.2%). Poland (3.7%) Netherlands (3.6%) and Hungary (3.6%) show similarities, despite the strong difference between the economic strength of the Dutch welfare state and these two East-Middle European states. The economically much more advanced Belgium has a higher (5.6%) rate as well, out of the total labour force (Eurostat, 2017)[8], although the Belgian labour market is particularly young – partly because of the early retirement – and has a high level of tertiary education in terms of qualifications[9]. A closer look at the characteristics of the labour market is justified. In Italy, the presence of young people is very low among the employed, the Netherlands is quite the opposite in this regard; the labour market is characterised by a high proportion of young people. Polish labour market features the high rates of elder employed. Hungary is strongly characterised with relatively high poverty rate, low incomes, and the fact that the spending on higher education, that could boost the labour market, is very inadequate. Germany stands out with its high disposable incomes[10]. As mentioned before, statistics only do not provide valuable comparison, especially in the case of Poland and Hungary's unemployment rate, as Czapiewski et al. 2018 and Varjú et al. 2018 give references, the unemployment rate is only a "statistical mean", not reflecting the significantly different reality between the peripheral and the prosperous areas. Thus, this indicator hides the problem of serious "territorial disparity" that the Polish labour market faces[11]. In Hungary, as Varjú et al. (2018) conclude from cited literatures, relatively low unemployment does not reflect the proportion of public workers often living in deep poverty, a phenomenon the dominance of which directly reflects the lagging nature of the areas. Despite the fact that the unemployment rate in the Netherlands is close to what it is in Poland and in Hungary (EUROSTAT, 2019), it does not mean the material and quality of life parallel as well, as the Netherlands being a welfare state, the unemployment benefit system is more stable and provides way more positive prospects for the people[12,13]. However, in order to boost the labour participation, their government proposals are aiming to cut these benefits (Eleveld and van Vliet, 2013). Such as Poland (Czapiewski et al. 2018), Italy is characterised as well with strong unemployment disparities especially in intraregional meaning (unemployment rate between south and north territories has almost three times the difference – ISTAT, 2017)[14,15]. As mentioned before, Poland and

[8]https://ec.europa.eu/eurostat/web/lfs/visualisations
[9]Deliverable 3.4 Process model for Ghent
[10]https://ec.europa.eu/eurostat/documents/3888793/8730431/KS-TC-18-002-EN-N.pdf/0dc0b543-759c-4a02- 8b8d-17acfc7bea6d
[11]https://ec.europa.eu/eures/main.jsp?catId=2789&countryId=PL&acro=lmi&lang=en&regionId=PL0&nuts2Code=%20&nuts3Code=&regionName=National%20Level
[12]https://ec.europa.eu/eures/main.jsp?catId=2588&acro=lmi&lang=en&countryId=NL
[13]https://www.iamexpat.nl/expat-info/allowances-benefits-netherlands/unemployment-benefit
[14]http://www.ansa.it/english/newswire/english_service/2018/03/13/southern-unemployment-almost-triple-northern-istat-3_c6b65ae8-2725-470a-8b41-af25550a5650.html

Hungary share common features in their recent past, due to the Soviet regime, which left traces in many aspects of socio-economic characteristics. For example, their education system is still undergoing a major transformation, in which Poland is relatively ahead of Hungary; their government measures are moving toward reforming the education system and investing not only in researchers, but collaboration between researchers and labour force, providing practical knowledge and innovative thinking that is accessible to all in the labour force, including private sector.[16] However, as described in Deliverable 3.7 (Varjú et al. 2018), in Hungary even labour force with tertiary education is often found "without the needed skills and unprepared to apply knowledge in novel and unfamiliar settings"[17], as a result of a rigid education system which feature the country has in common with Italy[18]. Although the proportion of people working in the primary sector is by far the lowest, there are tactile differences in the distribution of labour market by sector. By this, the lowest rate of labour participation in industry sector is in the Netherlands (15%) whilst in Poland and in Hungary labour working in industry represents more than double of this (32%) in both countries. Regarding to primary sector, Poland employees far the most people (10% of total labour force), compared to Hungary that is 5%, whilst even the strong agricultural exporter Italy represents only 4%. Both Hungary and Poland are strong industrial employers, secondary sector employs not less than 32 percent of those active on the labour market. The Netherlands has the highest share (83%) of human resources on the labour market employed in services, and the lowest rate in industry sector among the examined countries (OECD, 2018)[19]. Labour market among the countries are largely affected by the migration tendencies occurring in these countries, in which the Netherlands, Germany, Belgium tend to attract, whilst the skilled human resource in Hungary and Poland are influenced by the repulsive factors, which is partly – but not only – results in brain drain, although Poland is, at the same time, affected by an inflow from the contrary direction – mainly from Ukraine and Asia (D3.5 (Czapiewski et al. 2018) D3.7 (Varjú et al. 2018), see also: Világgazdaság: vg.hu). Also, territories experiencing large inflows of foreign workforce are clearly not solely brain drainers. That is what European Innovation Scoreboard (2018) suggests when indicates both for Germany and Italy the "human resources" as one of their "weakest assets". As D3.6 indicates, countries with more international, diversified population require different methods in addressing the society, regarding waste management strategies since all social habits and backgrounds from which this immigrant labour force comes are variant and diverse (see Deliverable 3.6 – Arlati et al. 2018).

2.1.4 Economy

Today's increasingly interdependent and vulnerable social economic system emphasises the creation of new knowledge, not only for competitiveness and performance but also for preparing and recovering. The accomplishment of this relies heavily on knowledge-based economies, in which the following "hierarchy" applies: the Netherlands is certified

[15]https://www.bertelsmann-stiftung.de/fileadmin/files/user_upload/EZ_Policy_Brief_SIM_Europe_IT_02_2016_ENG.pdf
[16]http://www.oecd.org/eco/surveys/Poland-2018-OECD-economic-survey-overview.pdf
[17] https://www.oecd.org/eco/surveys/Hungary-2016-OECD-economic-survey-flyer-EN-lang.pdf
[18]https://www.oecd.org/eco/surveys/italy-2017-OECD-economic-survey-overview.pdf
[19]https://www.oecd-ilibrary.org/employment/oecd-labour-force-statistics_23083387

as an "innovation leader", according to European Innovation Scoreboard (2018), whilst Belgium and Germany are still "strong innovators" as well (See also Deliverable 3.4 – Taelman et al. 2018). Moving away from the western states, Italy, Hungary and Poland are considered as "moderate innovators". As previously mentioned, the assumption that the development path of the former Soviet member states largely depends on foreign investors, we can measure this by the share of foreign controlled enterprises in value added. Most of all, it turns out to prove right the case for Hungary, as compared to EU-average (12.5) the index is more than twice of that (30.3). Based solely on this indicator, Poland is less in the interest of foreign investors, where this indicator is 14.5, somewhat similar to what Belgium (15.0) and the Netherlands (17.5) show. Also in the comparison of the net inflow of foreign direct investment Hungary leads: this value (19.8) is almost 5 times the EU average (3.6) whilst the Netherlands is quite similar (17.5) again. In the rest of the examined countries this index is less significant; Italy has 6.5, and Poland (3.5) is more to compare with Germany (1.2) and Belgium (1.0) (European Innovation Scoreboard, 2018). As FDI inflow has a dimension facilitating the access to technologies (Hunya, 2015), thus enabling the gain of wider source of information. On the other hand, it can also be an indicator of the fact that the given nation itself is not in hold of their own "superior technology and specialised knowledge" (Hunya, 2015, p.40). In addition, self-control (opposite of what in this case the high share of foreign controlled enterprises is) is also a component of resilience (Sandberg and Grant, 2017). As a consequence, as Korhonen (2001) and Hopkins (2008) put, for resilient areas it is crucial to connect with wider territorial dimensions, but not for the focus to gain economic dependence but to gain information and knowledge (quoted in Bristow, 2010). According to this frame, the Hungarian economy is the least (in the dynamic sense) resilient, and surprisingly, the Italian is the most. Moving back strongly to the competitive evaluation and static performance, compared by GDP per capita Germany, the Netherlands and Belgium are well above EU average whilst Italy somewhat, rather negligible below, unlike Hungary and Poland where it is not even close to the standard. What the Netherlands and in Belgium have in common is that the sales impacts are prominent economic weaknesses for the nation. Whilst for Italy and Hungary and even for Germany (although it is a strong innovator) their economic frailness lies (among others) primarily within their human capital aspects. Attractive research systems are not satisfactory in Germany and neither in Poland[20], but the lack of practical co-operation between existing research systems and sectors is also a barrier to innovation, as we see in Hungary (c.f. Deliverable 3.7 (Varjú et al. 2018).

2.1.5 Transportation

This paragraph is based on a ranking used by The World Economic Forum (quoted by European Commission 2018) assessing transport infrastructure and its efficiency. It shows a similar pattern in the different modes of transport. As it is, the Netherlands has far the best transportation system summarising the features in all different modes of transport. Generally said, seaport, airport and train transportation are the most efficient in the Netherlands, Belgium, and Germany, followed by Italy, and Poland and

[20]https://ec.europa.eu/growth/industry/innovation/facts-figures/scoreboards_en--> country profiles

Hungary performing the weakest in this order. The same order applies for road quality, with the one modification that Italy is slightly better than Belgium, regarding this. Considering available transport methods, Hungary is an exception among them, not in hold of any seaport services. Today, Europe's 3 most important ports are Rotterdam (the Netherlands), Antwerp (Belgium) and Hamburg in Germany (europeish.com). Altogether, it illustrates well about the construction, modernity and quality of transportation if we look at the accuracy of shipments. Closest to say they are "nearly always in schedule" are Germany, followed by Belgium, barely behind them are Holland and Italy. As in the other transport features as well, Poland and Hungary are most prone to be out of schedule (European Commission 2018). However, out of the different types of transport infrastructures, only the Hungarian rail network is among the worst 15 percent of European countries (European Commission 2018). In Italy, North and South dichotomy aggravates transportation efficiency as it is much less established in the South (see references in D.3.3 – Geldermans et al. 2018). The reason why Hungary significantly underperforms in the aspect party lies within its unfortunate radial systems, a situation that "projects are stuck into the existing structure and further strengthen the centralised Hungarian pattern of the connections"(Fleisher, 2005, p.19), a consequence of historical step after World War I that did not affect the other examined countries (see also Deliverables).

2.2 Regions and focus areas

As summarising the references cited in all deliverables, the examined cities and their metropolitan areas may differ from each other in aspects of location and role. For example, Amsterdam is the most significant economic nerve of the Netherlands, but also serves as an important economic centre of Europe. Strongly opposed to Pécs, a centre of one of the most underdeveloped Hungarian regions with negligible international relations, in a peripheral location. The cities of Łódź and Ghent are located in the central parts of their countries, but whilst Łódź is rather a secondary centre within its country as well, being just in a transition to find its main role (culture.pl), Ghent is a major hub of the national and in the interpretation at European level as well. Naples, such as Pécs, represents a central role in a region (Campania) that has many struggles and represents the negative side of the nation's territorial differences (same as South-Transdanubia). Hamburg has gone through the path of being some kind of periphery as his development in a specific political environment (due to the Iron Curtain) was influenced by the intersection of political blocks (Merklein, 1966) and so prospering stopped for a while, however, unlike Pécs and Łódź, it has been developing much more dynamically ever since the 1990s again and has now prominent economic power (britannica.com, See also all deliverables).

2.2.1 Demography

Focus Areas differ in a primary feature regarding to demographic trend. South Transdanubia has been struggling with population decline and settlement shrinking for decades (with a few suburban exceptions, as seen in Deliverable 3.7), applying even for Pécs. Meanwhile the city region of Amsterdam is strongly characterised by population

growth (Bontje et al., 2007). Same applies for Campania, Hamburg and Flemish regions. What is different is in the case of Łódź is that whilst population decline does affect the city, the target of this outward migration trends is increasingly inside the vicinity, the countryside gaining some importance in recent years (Kasabov, 2014, Deliverable 3.5 – Czapiewski et al. 2018). The capacity of some rural areas to show "positive social capital indicators" might be a potential indicator of rural resilience (Noya and Clerance, 2009, quoted in Steiner and Atterton, 2014), something that South Transdanubia clearly lacks of. One of the distinct characters of South Transdanubia is its small village character, whilst the others – except the Łódź region –, even if the rural character is present in a spatially changeable form, are more typically highly urbanised regions with increased population density (see all Deliverables in WP3).

2.2.2 Labour Force

The regions of Campania, South Transdanubia, and Noord Holland are regions with less favourable conditions for labour market, regarding that their employment opportunities are below their country level. The Hamburg Metropolitan region is no exception, despite the fact that for the city state quite the opposite feature applies (see Eurostat 2018 and references in Deliverables). In this regard the Flanders EU-average performance is complemented by a somewhat higher unemployment rate in Ghent and a somewhat lower in Destelberghen, supplemented with the fact that for both settlements increasing employment rate applies (see regarding Taelman et al. 2018).

2.2.3 Economy

As Weeks et al. (2004) points out, "Observing system components allows for the identification of cyclic behaviours in systems—phase transitions and concepts of system dynamics" (p.2) – referring to the "adaptive circles" composed by Gunderson and Holling (2002) (Figure 1). Observing our cities' economic components and indicators, naming the nature of their current phase facilitates further discussion over them – "how to work with these cycles, to respond wisely and creatively to disruptions and change"[21] (Wahl, 2016).

[21] https://hackernoon.com/the-adaptive-cycle-panarchy-as-dynamic-maps-for-resilience-thinking-793fad49de5e

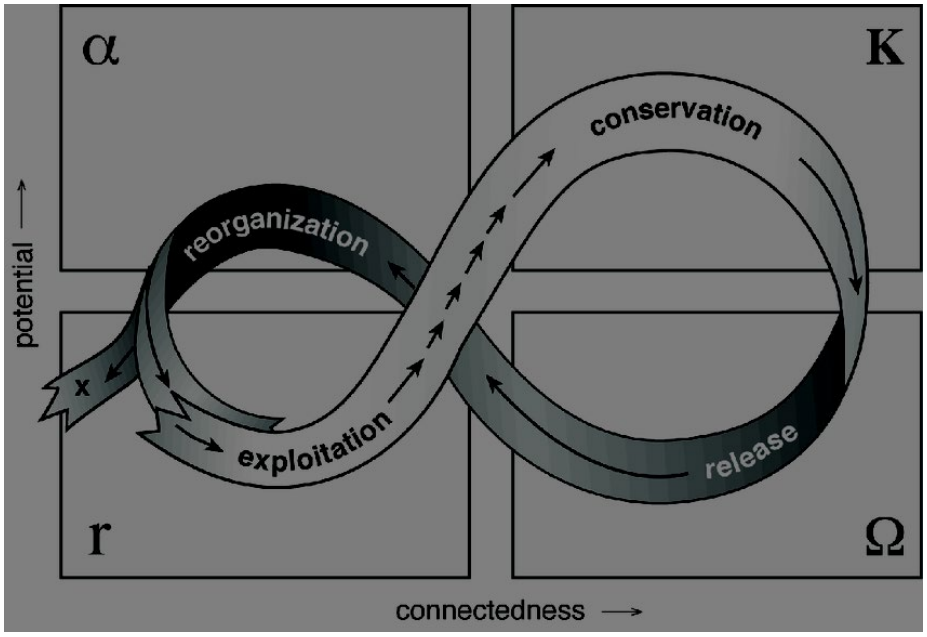

Figure 1: The adaptive circle.
Gunderson and Holling 2002

As discussed in D 3.7 (Varjú et al. 2018), the city of Pécs was long defined by its mining history, the decline of which has for a long time frozen the development of the city after the regime change. The consequences of closing the mines can be considered well as "release", the phrase of resolution, which has inspired the search for internal resources – reaching for "creative economy" and current motivations for finding new paths – and driven the city to the reorganisation phase. Currently, the city is still going through sectoral and organisational changes and yet has remaining destructive elements (Pirisi, ex verb), but this could be the most efficient phase with the right use of social and organisational initiatives to implement transformative innovations (Wahl, 2016). Small and medium-sized enterprises dominate around the Pécs area (Lux, 2013) who "*need to upgrade their management skills, their capacity to gather information and their technology base*" (OECD Policy Brief, p.1). Following the frame written by Wahl (2016), preparation and thoughtful devise are crucial this time, to evaluate the consequences of any new interventions introduced. Similar applies for the city of Łódź that is currently "*looking for new identity" (*culture.pl*)* due to historical past (comparable with Pécs; transforming from the after-effects of excessive Soviet industrialisation and the collapse of that). Some internal factors in the case of Łódź strengthen their potential for moving their system to the growth phase; the number of private companies and level of entrepreneurship is high (Deliverable 3.5 - Czapiewski et al. 2018); this indicates both the self-efficiently that is a criteria for resilient societies, and also it provides base for diversification and broad opportunities (Steiner and Atterton 2015). The economy of Naples, which heavily relies on manufacturing, has experienced a decline in recent years (urbact.com). Their tourism sector suffered the consequences of waste crisis as well (businessinsider.com). Although this is the release phase that means the collapse of rigid structures, the "*opportunity for reorganisation is high"* (Wahl, 2016); for example, the waste situation increased the consciousness of companies in the area (see Deliverable 3.3 – Geldermans et al. 2018). As discussed before, since the 1990's the city of Hamburg is on the journey exploiting its opportunities on remnants of the previously collapsed system. In this phase the city has found the path when "interactions and dynamics are mobilised (...)

Potentials are high". In order to avoid being overexploited, caution to avoid social exclusion and polarisation is needed[22] (Wahl 2016).

According to Wahl (2016), from exploitation to conversation it is usually a longer period of growth and accumulation. Ghent and Amsterdam are most likely in this journey. As for Ghent's economy, in the sixties a kind of release phase was needed, after that the city reorganised itself from being dependent on textile industry and restructured (Encyclopaedia Britannica). As seen in Deliverables, today diverse and resilient economic indicators are present, such as they engage in metal, cultural events, enhancing tourism sector. Same applies for Amsterdam. The only caution to take into consideration is that resilience requires continuity. "*Eventually, too much rigid structure, fixed connections and accumulation of resources in the system make it brittle and poised for release or collapse*" (Wahl, 2016). Brittleness in this study particularly refers to incapableness to move toward circular economy due to any rigidity. Countries in conversation phase need to enhance not to give way "*to their own internal contradictions or pressures" [23]* (Wahl, 2016; Deliverables 3.3-3.7).

2.2.4 Transportation

Thanks to their central location, the cities of Ghent and Łódź have a central role in the transport network of their countries. They have basically top conditions in any modes of transport providing the most efficient access all around between the city and the edge of the regions. Same character applies for Amsterdam, Hamburg and Naples. Though less typical for Łódź, but the rest of these cities are international transport hubs with cross-border function on the matter. Such role does not apply for Pécs and for its surroundings by far, located on the periphery with its incomplete transport infrastructure, not only lacking seaport and sufficient airport, but also the connection to the outskirts of the region. As a result, instead of being an intermodal hub, in the case of Pécs we can mainly talk about road transport, for which businesses are built around the region (Lux, 2013), with accessibility difficulties both for national and international targets. The motorway was built towards the capital a few years ago, but other improvements in efficiency have not yet followed (Lux, 2013). All cities, however, as employment centres, are themselves accessible to their agglomerations through well-established roads. Commuting influx is an everyday issue in the sense that it leads to overloaded roads everywhere in the focus areas. So far, only Ghent invested into the project that encourages bicycle traffic for its commuters (See Deliverable 3.3,3.4,3.5,3.6, 3.7).

[22] https://hackernoon.com/the-adaptive-cycle-panarchy-as-dynamic-maps-for-resilience-thinking-793fad49de5e

[23] https://hackernoon.com/the-adaptive-cycle-panarchy-as-dynamic-maps-for-resilience-thinking-793fad49de5e

3. Socio-cultural analysis

The Socio-cultural Analysis of 'Deliverable 3.8 – Social Report' embraces three pillars: the brief overview of Secondary Socio-cultural Analysis 1 (SSCA1) – already published in D3.2. (Grünhut el al. 2018) – summarises the examination about Waste-conscious Behaviour (WCB) in Europe, and particularly in the six REPAiR case study areas. SSCA1 refers to national and regional level features, data were obtained from the Flash Eurobarometer 388 survey. The inquiry highlights on the one hand that there are significant differences among the European countries respective to WCB scores, i.e. there are diverse social understandings and praxes concerning waste at national level in Europe, while on the other hand, respective to the case study areas, there are regional level differences as well with the exception of Hungary.

SSCA2 tries to examine these findings in a more in-depth way. It shifts the explained variable from more specified waste-related ideas and praxes to a more general feature, namely environmental awareness. This latter ideational substance is a rather abstract, more comprehensive individual understanding with clear epistemological relevance. While the waste-related ideas and praxes inquired in SSCA1, even though they were grasped through a combined indicator (WCB), may not be motivated just by pro-sustainability rational-emotional justifications, SSCA2's environmental awareness better refers to the individual agent's attachment and recognised existential embeddedness to its natural surroundings. This is important as SSCA2 aims to point out that this subjective ideational substance traces back to a specific ontological foundation, to a certain value-based individual stance. Therefore, environmental awareness as a subjective framework drives one's way of thinking and doing things in a more environmentally reflective fashion is underpinned by an individual value-preference, while this latter subjective value-set is framed by the macro socio-cultural and socio-moral context that the given agent belongs to. In line with this, SSCA2 strives to show that the epistemologically relevant environmental awareness of individual agents is diverse due to their different ontological level value-sets, while the latter subjective foundations are heterogeneous because of the cultural dissimilarities respective to the collective logics, semantics, and patterns respected and accepted in each society.

The third pillar, a Primer Socio-cultural Analysis (PSCA) then tries to detect this framing capacity of cultural references in the perceptions of relevant stakeholders from the field of waste/resource management. These agents are important for the inquiry not as individuals with subjective ideas about environmental issues, since presumably they have both adequate awareness and intentions to contribute to the waste/resource management sector's progressive and sustainable development. Therefore, it is much more interesting to examine the stakeholders as agenda-setters, opinion-leaders, veto-players, and experience-holders who may have different approaches about this desired prospect. Accordingly, PSCA assumes that cultural framings have an impact on stakeholders' perceptions not respective to the 'what to achieve' aspects, but more about the 'how to achieve' features.

3.1 Secondary Socio-cultural Analysis 1

SSCA1, as it was said above, examines individuals' waste-related ideas and praxes at national level among EU member states with particular interest towards regional differences in the REPAiR case study areas, Belgium, the Netherlands, Germany, Italy, Hungary, and Poland respectively. Data were obtained from the Flash Eurobarometer 388 (*Attitudes of Europeans towards Waste Management and Resource Efficiency*) published in 2014. Almost 26,600 respondents from diverse social and demographic groups were interviewed in the survey via telephone in their first language on behalf of the European Commission, DG Environment. The inquiry aimed "'to understand citizens' perceptions, attitudes and practices related to efficient use of resources, generation and management of waste, as well as elements of the so-called 'circular economy' (including second-hand products and alternatives to buying new products)" (Report of Flash Eurobarometer 388, 2014, p.5).

SSCA-1 proposes an 11-items-based composite index of 'Waste-conscious Behaviour' (WCB). It had a maximum value of 11 and a minimum of 0 as every 'yes' answer to a given item got a value of 1, while every 'no' got 0. Accordingly, the WCB index used individual responses which later aggregated at national level. The applied 11 items were the following:

Q5a Which of the following actions are you undertaking to reduce the amount of household waste that you generate?

(1) Q5a_2 You avoid buying 'over packaged' goods
(2) Q5a_4 You undertake home composting

Q6 Do you sort the following types of waste, at least occasionally?

(3) Q6_1 Paper / Cardboard / Beverage cartons
(4) Q6_2 Plastic bottles or other plastic materials
(5) Q6_3 Metal cans
(6) Q6_4 Glass
(7) Q6_5 Kitchen waste
(8) Q6_7 Household hazardous waste (paint, chemicals, batteries etc.)

Q11 Which of the following aspects do you consider most important when buying a durable product, like a washing machine or a fridge?

(9) Q11_3 The product is made from recycled materials
(10) Q11_4 The product can be recycled after you use it
(11) Q11_5 The product is environmentally-friendly

Position	*Member state*	*M. value*	*Position*	*Member state*	*M. value*
1	Austria	7.81	15	Czech Republic	6.80
2	**Belgium**	7.70	16	Denmark	6.75
3	**Germany**	7.65	17	Slovakia	6.71
4	Luxembourg	7.55	18	**the Netherlands**	6.32
5	Sweden	7.51	19	Greece	6.08
6	France	7.28	20	Estonia	6.05
7	Portugal	7.17	21	Malta	5.98
8	Spain	7.13	22	**Hungary**	5.90
9	Ireland	7.11	23	Croatia	5.55
10	Finland	7.03	24	Cyprus	5.22
11	United Kingdom	7.02	25	Lithuania	5.07
12	Slovenia	7.01	26	Latvia	5.01
13	**Italy**	6.98	27	Bulgaria	4.86
14	**Poland**	6.82	28	Romania	3.76

Table 1. WCB index mean values by EU member states (N=26,595)
Source: Authors' elaboration based on data from Flash Eurobarometer 388

Table 1. presents a rank of countries according to their aggregated WCB mean values. It is important to note that not all the differences are significant statistically. 11 is the possible highest score, 0 is the lowest. As it is recognisable, two countries from the REPAiR case studies, Belgium and Germany, are in the top three positions. Italy's and Poland's scores are close to the European mean value (6.89), while that of the Netherlands' (6.32) is somewhat below it. Hungary's 5.90 score is the lowest among the selected cases. In the latter country there are no significant differences at regional level, while the other case study areas show some inner territorial diversity. The Flemish region of Belgium has a higher mean value than the Brussels and the Walloon regions, which latter two have closely similar scores. In Germany the diversification of the regional mean values are quite high: the selected case region, Hamburg, has the lowest score compared to all others. In Poland the regional differences are also significant, yet three or four regions have closely similar scores, among them the particularly examined area of Łódź, while two are rather lagging behind. In Italy there is a clear rift between the Northern regions and the Southern ones and the islands, while Central Italy has a mean value close to the national average. Last but not least, among the Dutch regions the Eastern and the Southern ones have higher mean values compared to the other two (Figure 2).

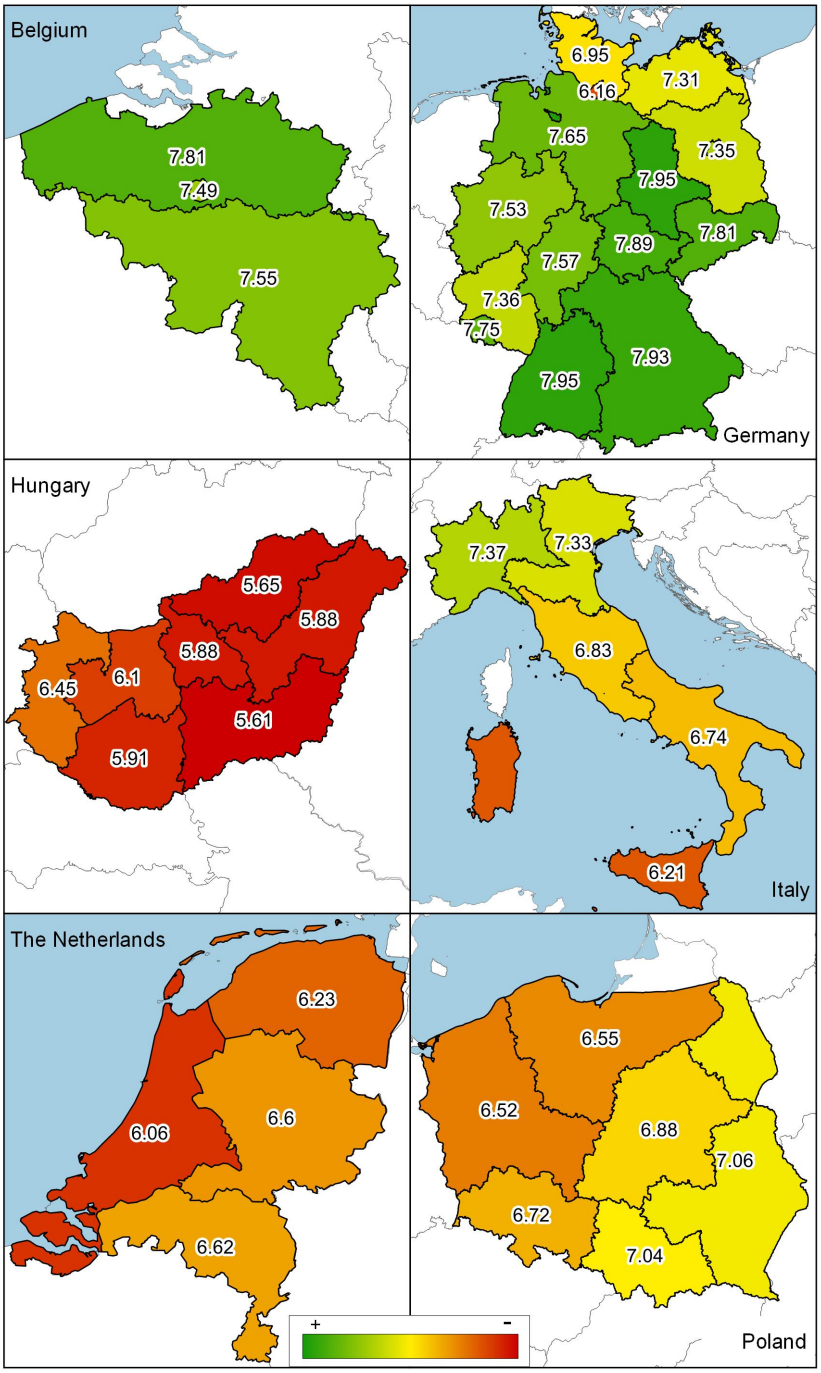

Figure 2: WCB scores in the regions of the respective countries
Source: Authors' own elaboration based on data obtained from Flash Eurobarometer 388

3.2 Secondary Socio-cultural Analysis 2

The second part of the secondary socio-cultural analysis (SSCA2) strives to identify a cognitive-normative ideational substance that could describe individual subjects' attachment to their natural surroundings. Yet, this time an indicator with more abstract meaning is required in order to make it sure that it really refers to existential embeddedness without any kind of particular inspiration and motivation. In line with this, SSCA2 proposes environmental awareness as an epistemologically relevant explained variable. In the following, the chapter discusses in details environmental awareness across European societies in general, and respective to the six case areas of REPAiR in particular. Beyond this comparative examination SSCA2 also sheds light on the culturally framed ontological foundations of environmental awareness. For this, it conceptually turns towards Shalom H. Schwartz's theory about Basic Human Values.

3.2.1 Values as ontological foundations: Schwartz's concept about Basic Human Values

As it was said above, environmental awareness should be understood as a cognitive-normative ideational substance that drives one's way of thinking and doing things. Individual subjectivity is multi-layered. Praxis-related actions are framed by one's behaviour, while the latter is underpinned by individual intentions which are framed by ideas, i.e. epistemologically relevant subjective perceptions and interpretations. These ideational contents are also multi-layered in a sense that some substances are rather flexible, while others are more stable, which means that the de- and reconstruction of these ideas requests more or less demanding reflexive and critical efforts. SSCA2 stresses that environmental awareness is rather an ideational substance from the 'deeper' layers. Still, it is an epistemologically relevant feature of one's agency that has ontological foundations. These foundations are subjective routines that enable the self for its own narrative and performative constitution. This identity basics could be described as framing fundaments of one's stance originating back to values, which are both emotionally affective beliefs and rationally consistent justifications. Values have different meanings, some of them are in complementing, some in rather conflicting relation with each other. Irrespective to cultures, these meanings are constant, however the subjects' own sets of values, their own preferences are culturally framed. To put it in another way, values are abstract and general, but the subjective sets of values are always particular. This constellation makes us individually unique, yet also embedded into a socio-culturally and socio-morally structured context. Agency and structures, thus, continuously and actively shape each other.

There are many contemporary value theories in the literature, yet probably the most elaborated one that has been proposed so far is Shalom H. Schwartz's Basic Human Values concept (see: Schwartz 1992, 2001, 2005, 2006, 2012). It purposefully strives to synthesise, or at least consider and refer to other relevant approaches, while it is being continuously revised through empirical inputs as well.

Therefore, the Basic Human Values concept is a work in progress since the end of the 1980s, however it offers a well-established framework to design a suitable set-up both theoretically and methodologically, while it provides appliers with a very rich pool of studies to gain preliminary experiences. Schwartz most notably builds on theories from Allport (1961), Inglehart (1997), Kluckhohn (1951), Kohn (1969), Morris (1956) and Rokeach (1973) when he highlights that values are referring to three universal requirements: (1) about one's biological needs, (2) about coordination of social interactions, and (3) about survival needs related to welfare and well-being of different social groups. As it clearly seems, these requirements are embracing both individual and more extended collective needs, which suggests that subjects are individual selves existentially embedded into their social surroundings. The individual perspective and the collective understanding could be in competitive relation, though, that signals one's attachment to or rather detachment from others. A balanced stance respects both the autonomous individuality of the self and their existentially linked status towards others (and also towards the objective world and the natural environment, which latter could be subjectively recognised through the acknowledgement of others' perspectives on these realms).

Besides the requirements, Schwartz also identifies six universal features of values based on previous concepts. He underlines that (1) values are both rational justifications and emotional beliefs – as it was already emphasised above; (2) values motivate to accomplish desired goals (*what* to achieve); (3) but values are also standards and criteria with normative content (*how* to achieve objectives); (4) values are abstract in their nature, so they transcend particular situations and interactions; (5) one's individual set is a dynamically constructed preference, therefore values are ranked according to subjectively understood relative importance; and finally (6) individual agents' ideas and praxes are always underpinned by more than one value. Before describing the types of values, it is important to note again that the meaning of each value is independent from particular cultures, yet the individual set of values is not constituted in a fully autonomous way, since the significant references, patterns, logics and semantics of the given subject's cultural context have an impact on one's value-preferences. This is why Schwartz is proposing culture-independent Basic Human Values in his concept, but he suggests examining relevant sets of values in a comparative sense among various cultures. Accordingly, the main aim of the framework is to identify how different social groups have diverse sets of values in various socio-cultural and socio-moral contexts.

After some theoretical revisions – as a most notable change, Spirituality was deleted after it came clear through empirical tests that this value does not have a culture-free meaning –, Schwartz distinguishes 10 types of the Basic Human Values:

1. *Self-Direction*. It represents the desire of experiencing autonomy about one's own life, independence and innovativeness both about thoughts and actions. It is describable by the notions of choosing, creating, creativity, curiosity, and exploring.

2. *Stimulation*. It traces back to the desire of enjoying changes and new, untried paths in one's own life. It refers to the inspiring excitement of taking risks and pursuing novelties and challenges. It also represents the motivation of breaking with routines and habits.
3. *Hedonism*. It is identifiable as pleasure and sensuous gratification for oneself.
4. *Achievement*. It is understandable as the ambition for personal success through demonstrating competence according to social standards.
5. *Power*. Schwartz describes this value as the desire of well-acknowledged social status and prestige, as well as control or dominance over people and various resources.
6. *Security*. It is identifiable as a desired goal to achieve existential – both material and physical – safety, a harmony of personal relationships contributes to the self's emotional and mental balance, as well as, in a more extended sense, enjoying social stability and predictability.
7. *Conformity*. It is a motivation of being loyal, adjusted, and accommodated to social norms and expectations, and to restrain from actions, inclinations, and impulses likely to harm these collective references.
8. *Tradition*. It is understandable as respect, commitment, and acceptance of the customs, codes, taboos, social rules, collective knowledge, experiences, and narratives represented in the traditional logics and semantics in one's cultural surrounding.
9. *Benevolence*. It is about preserving and enhancing the welfare of those 'in-group' subjects with whom one is in frequent, close-knit, and/or more intimate personal contact.
10. *Universalism*. It inspires to respect the importance of others' welfare and well-being (solidarity and equality), to appreciate the peaceful and consensus-oriented reconciliation of social problems (peace and justice), to acknowledge the relevancy of deliberative pluralism (democracy), to be open towards otherness and diversity (tolerance), and to protect the natural environment.

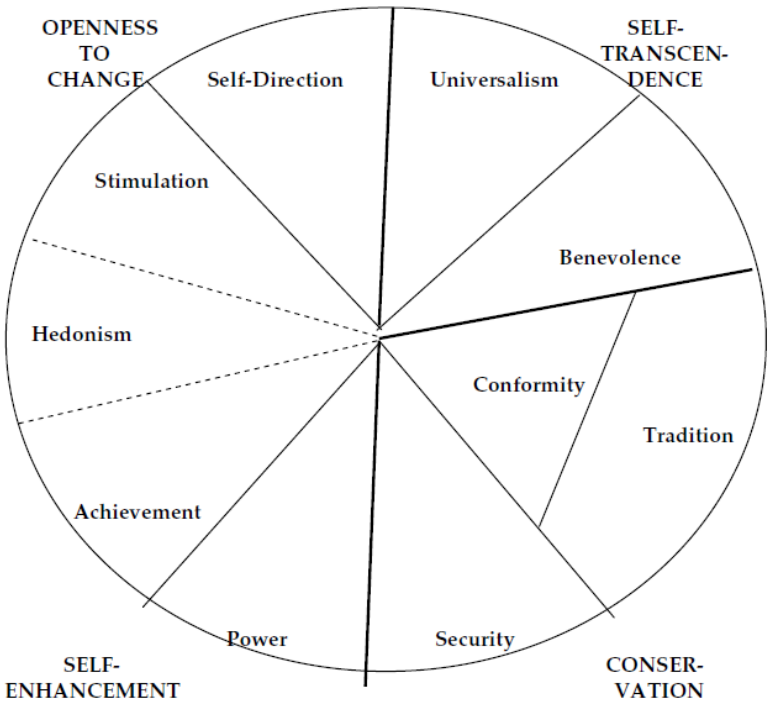

Figure 3: Schwartz model about Basic Human Values
Source: Schwartz 2001:270.

These 10 basic values are in a dynamic interrelation according to Schwartz. They can be grouped into two main categories: the first five have rather self-oriented, more individual-centred meanings (the subject in contrast to others as a unique agent), while the second half embraces values with rather collective connotations (the subject among others with respect to the references, patterns, interests, diversity etc. of these social groups). Notwithstanding, for Schwartz to differentiate the values into a four dimensions, two axes model is more crucial. These dimensions are Openness to change vs. Conservation on one axis, and Self-enhancement vs. Self-transcendence on the other axis. Openness to change embraces the values of Self-direction and Stimulation, while Conservation as an oppositional dimension comprises Security, Conformity, and Tradition. On the other axis Self-enhancement, based on Achievement and Power, stands against Self-transcendence, which is built on Universalism and Benevolence. As it may be already recognised, Hedonism is not clearly placed in this model, so respective to this single value its individual meaning is rather more important to note (Figure 3).

Above it was already said that there is dynamic interrelation among the values. Now based on *Figure 3* this theoretical inner-mechanism is easier to understand, insofar as compared to the subject's most preferred value the relative importance of the rest, on both directions, i.e. starting with either left or right on the circle to the other end point, is continuously decreasing. This is how one's individual set of values is working as an ontological foundation framing epistemologically relevant ideas and action-related praxes through the lens of a subjective preference of values. In line with this, not one principal value, but always a combination of values defines one's ideational substances and practices. It is also important to note that certain values grouped into different dimensions, according to this circle-based

inner-mechanism, are closer to each other than other values. For instance, Self-direction is in the same dimension with Stimulation, yet closer to Universalism than Benevolence or Hedonism. This constellation has a theoretical function, inasmuch values next to each other in the circle always have some common meanings, or it is better to say that they are commonly referring to certain aspects. In light of this, Schwartz highlights that (1) Power and Achievement both emphasise social superiority and esteem; (2) Achievement and Hedonism both are concerned with self-indulgence; (3) Hedonism and Stimulation both entail a desire for affectively pleasant arousal; (4) Stimulation and Self-direction both involve intrinsic motivation for mastery and openness to change; (5) Self-direction and Universalism both express reliance on one's own judgment and comfort with the diversity of existence; (6) Universalism and Benevolence both are concerned with enhancement of others and transcendence of selfish interests; (7) Tradition and Conformity both stress self-restraint and submission; (8) Conformity and Security both emphasise protection of order and harmony in relations; and (9) Security and Power both stress avoiding or overcoming the threat of uncertainties by controlling relationships and resources (cf. Schwartz, 1992, p. 14–15).

Based on Schwartz's theoretical argument the chapter proposes the presumption that environmental awareness should be positively associated with the values of universalism and self-direction.

3.2.2 Environmental awareness and its ontological foundations: Empirical results

Data for the examination were obtained from the European Social Survey (ESS) 8 (2016)[24]. ESS is an open-source, academically driven cross-national survey that has been conducted across Europe since 2001. In every two years, face-to-face interviews are taken with newly selected, cross-sectional samples. The survey measures the attitudes, beliefs and behaviour patterns of diverse populations; respective to the 8th wave this means more than 40 thousand respondents from more than 20 countries, among them all the case areas of REPAiR.

Environmental awareness is addressed in this inquiry by the variable 'D24 *How worried are you about climate change?*' Respondents had five alternatives to describe their perceptions: 1 – Not at all worried; 2 – Not very worried; 3 – Somewhat worried; 4 – Very worried; 5 – Extremely worried. Based on the answers, SSCA2 distinguishes three categories as the followings:

Categories	Related answers

[24] https://www.europeansocialsurvey.org/data/download.html?r=8

Low environmental awareness	1 – Not at all worried
Moderate environmental awareness	2 – Not very worried 3 – Somewhat worried
High environmental awareness	4 – Very worried 5 – Extremely worried

Table 2: Categories of environmental awareness
Source: Authors' own elaboration

As a first step SSCA2 presents the mean values of environmental awareness according to countries, among them the REPAiR case areas.

Countries	How worried about climate change?	99% confidence interval of the difference of the Bonding variable		N	Std. Deviation
	Mean	Lower	Upper		
Israel	2.64	2.53	2.76	2303	1.055
Estonia	2.65	2.41	2.89	1961	0.951
Russian Federation	2.75	2.72	2.77	2007	0.968
Poland	**2.75**	**2.71**	**2.79**	**1611**	**0.858**
Czech Republic	2.77	2.68	2.86	2145	1.048
Lithuania	2.82	2.66	2.98	1898	0.913
Ireland	2.83	2.71	2.96	2724	0.924
Sweden	2.86	2.78	2.94	1539	0.870
United Kingdom	2.96	2.93	3.00	1917	0.944
Norway	3.00	2.90	3.10	1523	0.826
Netherlands	**3.01**	**2.95**	**3.07**	**1659**	**0.857**
Finland	3.05	2.95	3.15	1909	0.820
Hungary	**3.05**	**2.97**	**3.12**	**1566**	**0.853**
Austria	3.07	2.98	3.15	1945	0.902
Switzerland	3.12	3.04	3.21	1498	0.847
Iceland	3.13	2.62	3.64	868	0.937
Belgium	**3.17**	**3.09**	**3.24**	**1749**	**0.862**
Slovenia	3.17	3.00	3.34	1290	0.859
Italy	**3.21**	**3.18**	**3.24**	**2548**	**0.836**
France	3.21	3.18	3.24	2042	0.934
Germany	**3.36**	**3.34**	**3.39**	**2803**	**0.847**
Spain	3.42	3.38	3.46	1901	0.881
Portugal	3.48	3.40	3.56	1248	0.920
Total	3.06	2.92	3.12	42,654	0.939

Table 3. Environmental awareness in Europe (N=42,654)
Source: Authors' own elaboration based on data from ESS8

The general mean value of environmental awareness is 3.06. Portugal, Spain, and one of the REPAiR case studies, Germany have the highest mean values among the examined countries, 3.48, 3.42, and 3.36 respectively. From the other case areas, Italy and Belgium are above the general average, Hungary and the Netherlands are close to the total mean value, while Poland is somewhat below it. The next Figure (4) shows the country-related mean values in comparison to the general average.

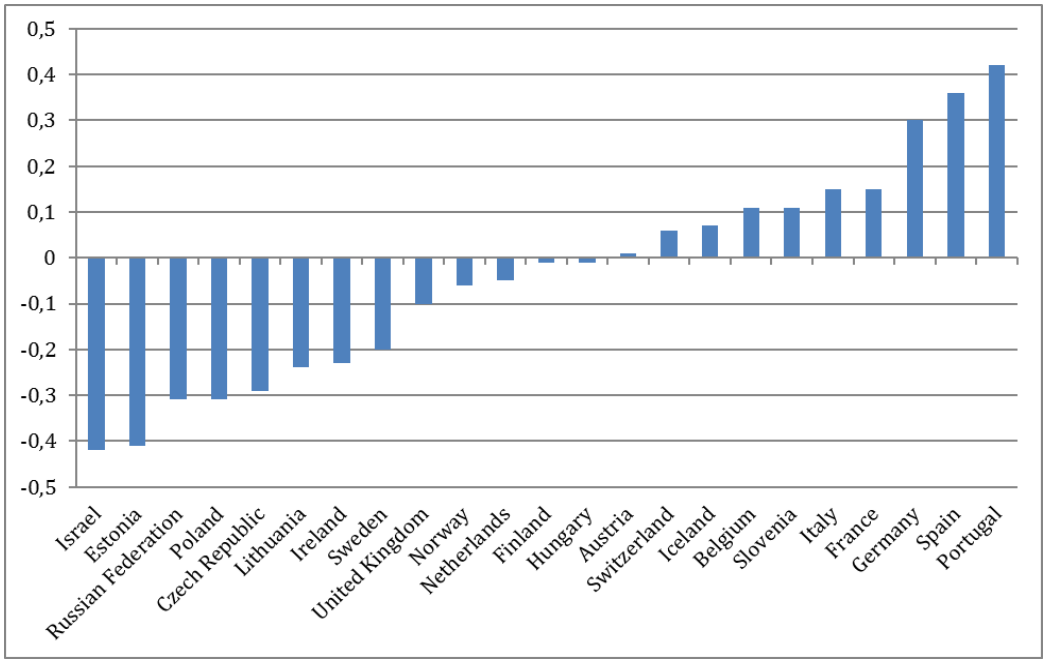

Figure 4. Environmental awareness in Europe in comparison to the general mean value (N=42654)
Source: Authors' own elaboration based on data from ESS8

The next table (4) presents the distribution of people with low, moderate, and high environmental awareness in each society.

Country	How worried about climate change?			
	LOW AWARENESS	MODERATE AWARENESS	HIGH AWARENESS	Total
Israel	17.2%	62.3%	20.5%	100%
Estonia	12.0%	72.2%	15.7%	100%
Russian Federation	11.4%	71.2%	17.3%	100%
Poland	**8.7%**	**75.4%**	**15.9%**	**100%**
Czech Republic	10.3%	66.2%	23.5%	100%
Lithuania	8.2%	72.1%	19.6%	100%
Ireland	8.5%	71.4%	20.1%	100%
Sweden	3.8%	75.2%	20.9%	100%
United Kingdom	6.1%	68.7%	25.2%	100%
Norway	3.8%	71.3%	24.9%	100%
Netherlands	**3.6%**	**73.2%**	**23.1%**	**100%**
Finland	2.9%	72.1%	25.1%	100%
Hungary	**4.5%**	**68.3%**	**27.1%**	**100%**
Austria	5.4%	65.3%	29.3%	100%
Switzerland	2.0%	66.8%	31.2%	100%
Iceland	3.8%	61.5%	34.6%	100%
Belgium	**2.3%**	**66.1%**	**31.6%**	**100%**
Slovenia	4.6%	63.2%	32.2%	100%
Italy	**1.9%**	**67.4%**	**30.8%**	**100%**
France	3.4%	62.3%	34,3%	100%
Germany	**1.9%**	**54.0%**	**44.2%**	**100%**
Spain	3.7%	46.7%	49.7%	100%
Portugal	2.4%	45.6%	51.9%	100%
Total	5.6%	64.6%	29.8%	100%

Table 4. People with low, moderate, and high environmental awareness according to countries (N=42654)
Notes: Pearson Chi-Square p<0,001; Cramer's V: 0,2
Source: Authors' own elaboration based on data from ESS8

As it is presented above in Table 4, 5.6% has low environmental awareness, 64.6% has moderate awareness, and 29.8% has high awareness. Regarding to the case areas, both in Germany and Italy only 1.9% has low awareness; Belgium's 2.3%, the Netherlands' 3.6%, and Hungary's 4.5% values are also under the general mean value. Poland's 8.7% value of low environmental awareness, however, is much above the total average. Respective to the category of moderate awareness, it is worth to note that only Germany's 54% value is below the general mean value. And about high awareness, three out of the six case areas, Germany, Italy, and Belgium respectively have better percentage shares than the total average, while Hungary's 27.1% value is also close to it. In the Netherlands 23.1% has high environmental awareness, and in Poland only 15.9%.

In the following SSCA2 invokes certain socio-demographic variables in order to give a more comprehensive picture about environmental awareness in the six case

areas. It is crucial to note that the next charts are using the general mean value of the six cases (3.09) as a zero reference.

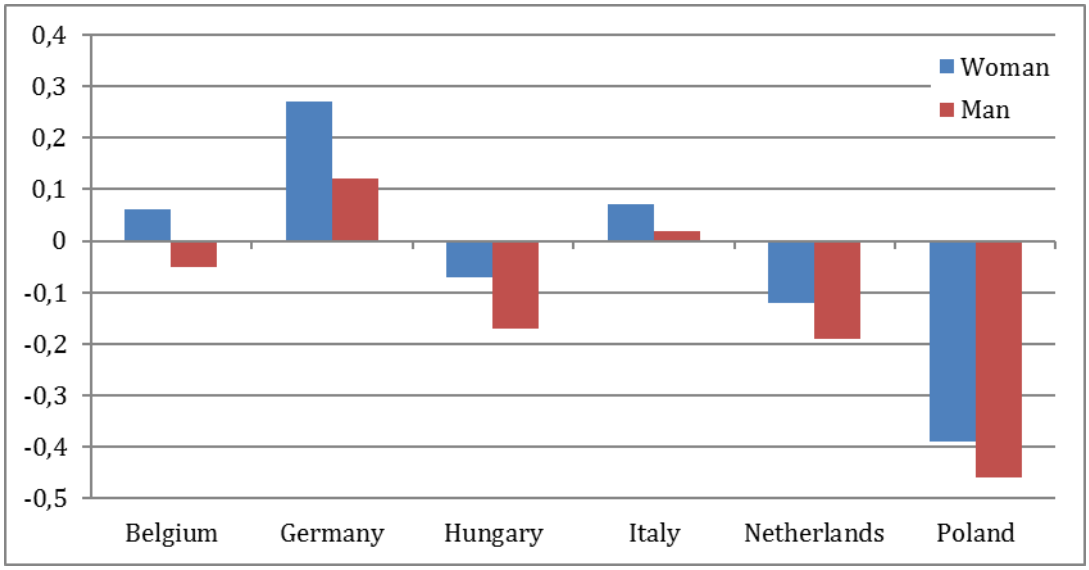

Figure 5. Environmental awareness in the six case areas according to sex (N=11936)
Source: Authors' own elaboration based on data from ESS8

Figure 5. presents that environmental awareness is higher among women in all case studies. The difference is particularly relevant in Germany.

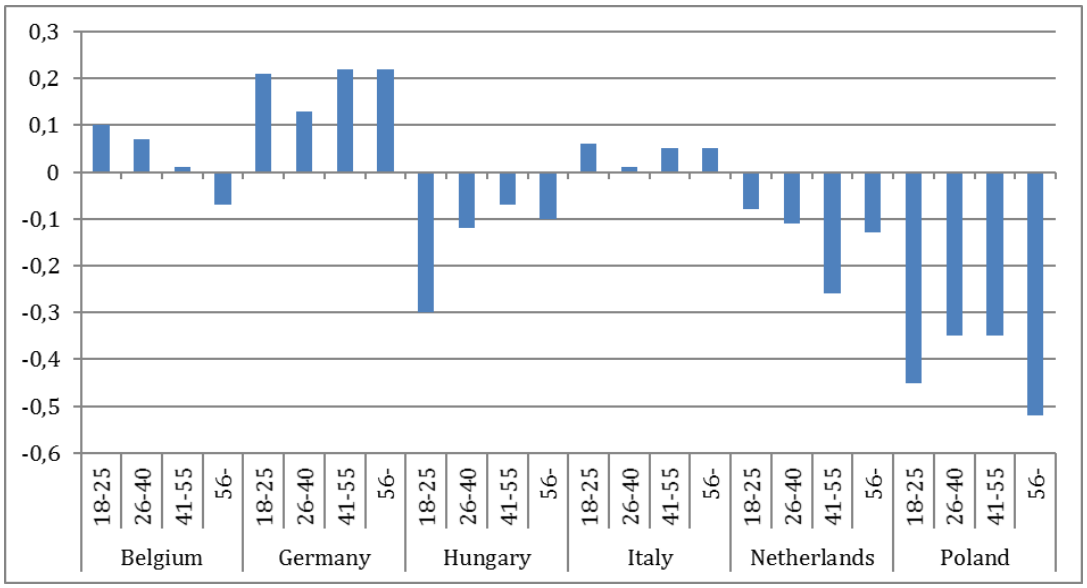

Figure 6. Environmental awareness in the six case areas according to age (N=11936)
Source: Authors' own elaboration based on data from ESS8

In Belgium environmental awareness is continuously decreasing with the age. In Germany only one age group, people between 26 and 40 have significantly lower

environmental awareness. The Hungarian case is almost the opposite of the Belgian one, i.e. environmental awareness is increasing with age up until to the age of 56 – and then it starts to decrease. Italy has a similar profile to Germany. In the Netherlands also one age group, that of the 41–55s has much lower environmental awareness. In Poland people between 26 and 55 have higher environmental awareness.

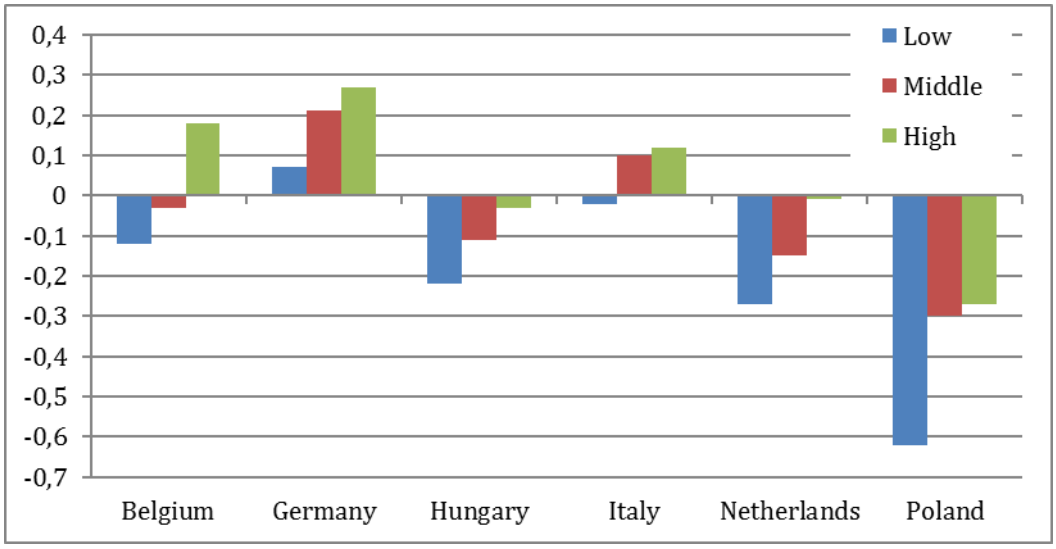

Figure 7. Environmental awareness in the six case areas according to education (N=11936)
Source: Authors' own elaboration based on data from ESS8

In all case areas education is positively associated with environmental awareness, i.e. the higher education the subject has, the higher her/his environmental awareness is.

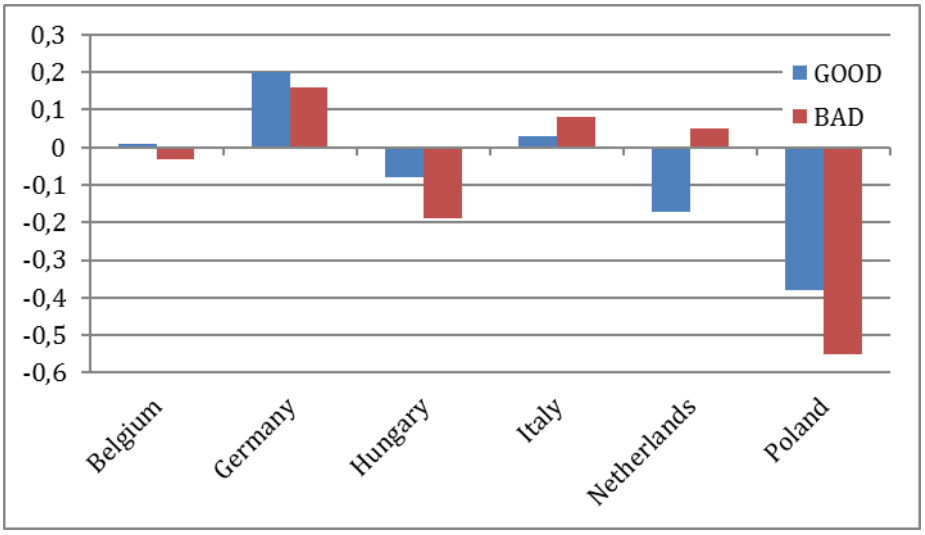

Figure 8. Environmental awareness in the six case areas according to family's income (N=11936)
Source: Authors' own elaboration based on data from ESS8

SSCA2 used a subjective well-being indicator from the ESS to identify income differences among people. 'Good' means that the respondent is relatively satisfied with their total income, while 'bad' refers to dissatisfaction about the family's monthly earnings. Figure 8 presents some interesting findings, insofar as both in

Italy and in the Netherlands people who consider negatively their subjective well-being have higher environmental awareness. In the other four cases the opposite is true.

Next, SSCA2 aims to further clarify environmental awareness as an epistemologically relevant ideational substance by examining its association with four other variables. These are the following ones:

1. *To what extent do you feel a personal responsibility to try to reduce climate change?* Responses are registered on a 0–10 scale where 0 means 'Not at all' and 10 refers to 'A great deal'.
2. *How likely do you think it is that limiting your own energy use would help reduce climate change?* Responses are registered on a 0–10 scale where 0 means 'Not at all likely' and 10 refers to 'Extremely likely'.
3. *Now imagine that large numbers of people limited their energy use. How likely do you think it is that this would reduce climate change?* Responses are registered on a 0–10 scale where 0 means 'Not at all likely' and 10 refers to 'Extremely likely'.
4. *How likely do you think it is that large numbers of people will actually limit their energy use to try to reduce climate change?* Responses are registered on a 0–10 scale where 0 means 'Not at all likely' and 10 refers to 'Extremely likely'.

As it seems, variable 1 refers to individual reflection; variable 2 to individual reflective intentions; variable 3 to perceptions about the significance of social reflection; and variable 4 to perceptions about reflective social capacities. Of course, SSCA2 assumes that the examined agent's environmental awareness is positively associated with all these variables; i.e. the higher one's environmental awareness is, the more (s)he is individually reflective; the more her/his intentions are reflective; the more (s)he believes in the significance of social reflection; and the more (s)he believes in reflective social capacities. SSCA2 examines these presupposed associations respective to the six case studies.

	N		Mean	Std. Deviation	Min.	Max.
	Valid	Missing				
1. To what extent feel personal responsibility to reduce climate change (individual reflection)	11,756	850	5.87	2.511	0	10
2. How likely, limiting own energy use reduce climate change (individual reflective intentions)	11,696	942	4.50	2.568	0	10
3. Imagine large numbers of people limit energy use, how likely reduce climate change (perceptions about the significance of social reflection)	11,614	1,046	5.66	2.235	0	10
4. How likely, large numbers of people limit energy use (perceptions about reflective social capacities)	11,654	1,000	4.09	2.082	0	10

Table 5. Mean values of the variables about reflectivity in the six case areas
Source: Authors' own elaboration based on data from ESS8

Based on Table 5. it should be noted that individual reflection has the highest mean value (5.87), then comes perceptions about the significance of social reflection (5.66), while individual reflective intentions and particularly perceptions about social reflections have much lower mean values, 4.50 and 4.09, respectively. These data refer to the following aspects: (1) people believe more in their own reflective agencies than others' similar capacities; (2) agents' ideational reflectivity is much stronger than their praxis-related one, i.e. reflective ideas not necessarily facilitate reflective actions; (3) people believe more in the relevance of social reflection than they actually think others are reflective; (4) regarding to all variables the mean values are moderate, which tendency refers to rather low reflectivity about environmental challenges.

	Mean	99% confidence interval		N	Std. Deviation
		Lower	Upper		
Belgium	5.96	5.75	6.16	1,747	2.374
Germany	6.62	6.55	6.69	2,790	2.275
Hungary	4.29	4.05	4.53	1,545	2.622
Italy	5.28	5.19	5.38	2,482	2.562
Netherlands	5.82	5.66	5.98	1,652	2.318
Poland	5.55	5.43	5.67	1,540	2.518
Total	5.87	5.75	5.99	11,756	2.511

Table 6. Individual reflection in the six case areas (To what extent feel personal responsibility to reduce climate change)
Source: Authors' own elaboration based on data from ESS8

Individual reflection has the highest mean value in Germany (6.62), then in Belgium (5.96) and in the Netherlands (5.82), although the latter is already under the total average. Hungary's score about individual reflection is the lowest among the cases. Of course, these findings add crucial information to the complexity of environmental awareness measured above, especially in the case of Hungary and Italy. Next, individual reflection is presented according to the examined agents' environmental awareness.

	Mean	99% confidence interval		N	Std. Deviation
		Lower	Upper		
Belgium	2.02	0.88	3.35	35	2.679
Germany	3.73	2.52	4.55	60	2.793
Hungary	0.93	0.39	1.73	64	1.813
Italy	2.05	0.92	2.95	44	2.655
Netherlands	2.56	1.65	3.64	56	2.588
Poland	2.86	2.21	3.51	124	2.779

Table 7. Individual reflection of people with low environmental awareness in the six case areas (To what extent feel personal responsibility to reduce climate change)
Source: Authors' own elaboration based on data from ESS8

	Mean	99% confidence interval		N	Std. Deviation
		Lower	Upper		
Belgium	5.48	5.24	5.71	1,147	2.234
Germany	5.89	5.80	5.99	1,519	2.185
Hungary	4.14	3.88	4.40	1,042	2.343
Italy	5.00	4.89	5.10	1,641	2.378
Netherlands	5.58	5.41	5.76	1,205	2.164
Poland	5.43	5.30	5.55	1,154	2.280

Table 8. Individual reflection of people with moderate environmental awareness in the six case areas (To what extent feel personal responsibility to reduce climate change)
Source: Authors' own elaboration based on data from ESS8

	Mean	99% confidence interval		N	Std. Deviation
		Lower	Upper		
Belgium	7.23	6.94	7.52	565	1.930
Germany	7.61	7.53	7.70	1,210	1.892
Hungary	5.22	4.72	5.73	429	2.857
Italy	6.15	5.98	6.32	773	2.608
Netherlands	7.03	6.74	7.33	389	2.035
Poland	7.37	7.13	7.61	249	2.029

Table 9. Individual reflection of people with high environmental awareness in the six case areas (To what extent feel personal responsibility to reduce climate change)
Source: Authors' own elaboration based on data from ESS8

Exactly in line with the assumption, environmental awareness is positively associated with individual reflection, in all cases, and in all categories. Some aspects to highlight: (1) individual reflection among Hungarians with low environmental awareness is extremely low, 0.93 respectively, but also Belgian and Italian data from this group are worth to note; (2) on the contrary, among Germans with low environmental awareness individual reflection is relatively high in comparison to the other cases; (3) Germany's mean values are the highest, while Hungarian scores are the lowest in every category.

	Mean	99% confidence interval		N	Std. Deviation
		Lower	Upper		
Belgium	4.88	4.67	5.08	1,747	2.365
Germany	4.43	4.35	4.51	2,782	2.711
Hungary	4.37	4.14	4.61	1,535	2.583
Italy	4.80	4.71	4.89	2,467	2.412
Netherlands	4.32	4.15	4.50	1,645	2.483
Poland	4.17	4.05	4.29	1,520	2.505
Total	4.50	4.38	4.62	11,696	2.568

Table 10. Individual reflective intentions in the six case areas (How likely, limiting own energy use reduce climate change)
Source: Authors' own elaboration based on data from ESS8

Moving forward to individual reflective intentions, case studies' mean values related to this variable are much more balanced. The total average is 4.50, but both the lowest score of Poland, and the highest mean value of Belgium, 4.17 and 4.88 respectively, are very close to it.

	Mean	99% confidence interval		N	Std. Deviation
		Lower	Upper		
Belgium	3.30	1.37	5.22	35	3.058
Germany	2.20	1.67	2.72	60	2.245
Hungary	2.36	1.12	3.59	62	2.653
Italy	3.25	2.48	4.02	42	2.682
Netherlands	2.23	1.26	3.19	55	2.461
Poland	3.32	2.88	3.76	118	2.482

Table 11. Individual reflective intentions of people with low environmental awareness in the six case areas (How likely, limiting own energy use reduce climate change)
Source: Authors' own elaboration based on data from ESS8

	Mean	99% confidence interval		N	Std. Deviation
		Lower	Upper		
Belgium	4.57	4.33	4.81	1,146	2.264
Germany	4.08	3.98	4.19	1,510	2.479
Hungary	4.19	3.92	4.46	1,038	2.426
Italy	4.70	4.60	4.81	1,628	2.339
Netherlands	4.29	4.09	4.48	1,200	2.376
Poland	4.15	4.01	4.29	1,141	2.482

Table 12. Individual reflective intentions of people with moderate environmental awareness in the six case areas (How likely, limiting own energy use reduce climate change)
Source: Authors' own elaboration based on data from ESS8

	Mean	99% confidence interval		N	Std. Deviation
		Lower	Upper		
Belgium	5.63	5.27	5.98	565	1.979
Germany	4.95	4.82	5.08	1,209	2.316
Hungary	5.14	4.66	5.61	426	2.455
Italy	5.14	4.98	5.30	776	2.220
Netherlands	4.75	4.37	5.13	389	2.121
Poland	4.63	4.33	4.93	247	2.023

Table 13. Individual reflective intentions of people with high environmental awareness in the six case areas (How likely, limiting own energy use reduce climate change)
Source: Authors' own elaboration based on data from ESS8

In line with the general trend, there are no big differences according to the categories, yet the presupposed positive association works well again.

	Mean	99% confidence interval		N	Std. Deviation
		Lower	Upper		
Belgium	5.80	5.64	5.96	1,746	1.944
Germany	5.71	5.64	5.78	2,776	2.345
Hungary	5.20	4.98	5.42	1,507	2.390
Italy	5.72	5.64	5.80	2,443	2.152
Netherlands	5.59	5.44	5.74	1,634	2.166
Poland	5.56	5.46	5.67	1,508	2.158
Total	5.66	5.56	5.76	11,614	2.235

Table 14. Individual perceptions about the significance of social reflection in the six case areas (Imagine large numbers of people limit energy use, how likely reduce climate change)
Source: Authors' own elaboration based on data from ESS8

Regarding to the individual perceptions about the significance of social reflection, similarly to the previous variable, there are no relevant differences about the case studies' mean values. The total average is 5.66 but the lowest and the highest measured mean values, Hungarian 5.20 and Belgian 5.80 respectively, are so very close to it.

	Mean	99% confidence interval		N	Std. Deviation
		Lower	Upper		
Belgium	4.39	2.57	6.20	35	2.879
Germany	2.87	2.19	3.55	60	2.950
Hungary	3.25	1.78	4.71	56	2.905
Italy	4.29	3.43	5.15	40	2.953
Netherlands	3.14	2.04	4.23	53	2.737
Poland	4.25	3.82	4.69	119	2.497

Table 15. Individual perceptions about the significance of social reflection among people with low environmental awareness in the six case areas (Imagine large numbers of people limit energy use, how likely reduce climate change)
Source: Authors' own elaboration based on data from ESS8

	Mean	99% confidence interval		N	Std. Deviation
		Lower	Upper		
Belgium	5.55	5.37	5.74	1,146	1.810
Germany	5.39	5.30	5.49	1,509	2.212
Hungary	5.04	4.79	5.30	1,019	2.246
Italy	5.56	5.47	5.65	1,613	2.057
Netherlands	5.47	5.30	5.64	1,194	2.047
Poland	5.52	5.40	5.63	1,129	2.071

Table 16. Individual perceptions about the significance of social reflection among people with moderate environmental awareness in the six case areas (Imagine large numbers of people limit energy use, how likely reduce climate change)
Source: Authors' own elaboration based on data from ESS8

	Mean	99% confidence interval		N	Std. Deviation
		Lower	Upper		
Belgium	6.41	6.11	6.71	565	2.330
Germany	6.22	6.11	6.33	1,205	2.874
Hungary	5.87	5.44	6.31	423	2.708
Italy	6.16	6.01	6.31	771	2.483
Netherlands	6.31	6.00	6.61	386	2.652
Poland	6.42	6.18	6.65	247	2.543

Table 17. Individual perceptions about the significance of social reflection among people with low environmental awareness in the six case areas (Imagine large numbers of people limit energy use, how likely reduce climate change)
Source: Authors' own elaboration based on data from ESS8

Data in all categories are coherent without big differences, which is line with the general trend. The deviation is the biggest among people with low environmental awareness, insofar as Germany's 2.87 and Belgium's 4.39 values represent a real diversity. The assumption is valid respective to this variable too.

	Mean	99% confidence interval		N	Std. Deviation
		Lower	Upper		
Belgium	4.35	4.20	4.51	1,746	1.811
Germany	3.76	3.70	3.82	2,776	1.965
Hungary	3.73	3.53	3.93	1,515	2.212
Italy	4.54	4.45	4.62	2,446	2.241
Netherlands	4.35	4.23	4.48	1,640	1.847
Poland	3.99	3.90	4.09	1,531	2.065
Total	4.09	3.97	4.21	11,654	2.082

Table 18. Perceptions about reflective social capacities in the six case areas (How likely, large numbers of people limit energy use)
Source: Authors' own elaboration based on data from ESS8

As regards to the last used variable, perceptions about reflective social capabilities, again there are no relevant differences among the case studies. The total average is 4.09, but Hungary's 3.73, which is the lowest measured mean value, and Italy's 4.54, which is the highest, are both very close to it.

	Mean	99% confidence interval		N	Std. Deviation
		Lower	Upper		
Belgium	3.84	2.55	5.13	35	2.048
Germany	3.56	2.87	4.26	60	3.004
Hungary	2.33	1.28	3.37	57	2.079
Italy	2.83	2.06	3.60	39	2.593
Netherlands	4.86	3.89	5.83	53	2.429
Poland	3.32	2.95	3.70	123	2.182

Table 19. Perceptions about reflective social capacities among people with low environmental awareness in the six case areas (How likely, large numbers of people limit energy use)
Source: Authors' own elaboration based on data from ESS8

	Mean	99% confidence interval		N	Std. Deviation
		Lower	Upper		
Belgium	4.25	4.07	4.44	1,145	1.751
Germany	3.77	3.69	3.85	1,508	1.872
Hungary	3.76	3.52	3.99	1,029	2.141
Italy	4.48	4.38	4.58	1,622	2.161
Netherlands	4.32	4.18	4.47	1,199	1.826
Poland	4.03	3.92	4.14	1,150	2.012

Table 20. Perceptions about reflective social capacities among people with moderate environmental awareness in the six case areas (How likely, large numbers of people limit energy use)
Source: Authors' own elaboration based on data from ESS8

	Mean	99% confidence interval		N	Std. Deviation
		Lower	Upper		
Belgium	4.60	4.31	4.89	565	1.891
Germany	3.76	3.67	3.85	1,207	2.018
Hungary	3.88	3.47	4.29	421	2.344
Italy	4.76	4.61	4.92	768	2.341
Netherlands	4.39	4.13	4.65	386	1.809
Poland	4.18	3.92	4.44	246	2.176

Table 21. Perceptions about reflective social capacities among people with high environmental awareness in the six case areas (How likely, large numbers of people limit energy use)
Source: Authors' own elaboration based on data from ESS8

Perceptions about reflective social capabilities are also positively associated with environmental awareness. Differences among the cases are more relevant in the category of people with low environmental awareness.

As a conclusion it should be noted that after further clarifications the basic variable of environmental awareness was validated. Positive associations were presented between environmental awareness and all the four used indicators about individual reflection, individual reflective intentions, perceptions about the significance of social reflection, and perceptions about reflective social capacities. Therefore, environmental awareness is in fact an epistemologically relevant ideational substance from the 'deeper' layers of subjective ideas. In a last empirical test SSCA2 examines if environmental awareness really has value-based

ontological foundations as it was assumed above. Just to remind, in light of Schwartz's theoretical argument the chapter proposed the presumption that environmental awareness is positively associated with the values of universalism and self-direction.

The ESS is using the Portrait Value Questionnaire (PVQ) to measure individual value-sets. PVQ is a 21 items-based survey that proposes individual profiles with value-contents, and the respondents are perceiving on a 1–6 scale, where 1 is 'very much like me' and 6 is 'not like me at all', how much they can identify themselves with the given descriptions. SSCA2 then uses the centred values of each profile-variable, which means that the individual preference of a certain value-content is calculated in comparison to the given subject's total average about the 21 items. In light of this, in the tables below 0 is the total average, while values with positive scores are preferred and values with negative scores are non-preferred ones. Furthermore, for the adequate interpretation of data it is crucial to note that the individual understanding about the relative importance of a given value could be grasped not just through the preference of that certain value, but more by the intensity of this preference, i.e. by how much the value's score is higher than 0.

	OPENNESS TO CHANGE		OPENNESS TO CHANGE/SELF-ENHANCEMENT	SELF ENHANCEMENT		CONSERVATION			SELF TRANSCENDENCE	
AWARENESS	SELF DIRECTION	STIMULATION	HEDONISM	ACHIEVEMENT	POWER	CONFORMITY	TRADITION	SECURITY	UNIVERSALISM	BENEVOLANCE
LOW AWARENESS	0.24	-0.88	0.08	-0.51	-1.01	-0.12	0.28	0.49	0.38	0.85
MODERTATE AWARENESS	0.28	-0.68	0.07	-0.43	-0.93	-0.16	0.16	0.23	0.48	0.76
HIGH AWARENESS	0.42	-0.56	0.07	-0.46	-1.20	-0.33	0.01	0.13	0.69	0.88
Total	0.32	-0.64	0.07	-0.44	-1.02	-0.22	0.11	0.20	0.54	0.80

Table 21. Individual value-sets among people with low, moderate, and high environmental awareness in Belgium
Source: Authors' own elaboration based on data from ESS8

	OPENNESS TO CHANGE		OPENNESS TO CHANGE/SELF-ENHANCEMENT	SELF ENHANCEMENT		CONSERVATION			SELF TRANSCENDENCE	
AWARENESS	SELF DIRECTION	STIMULATION	HEDONISM	ACHIEVEMENT	POWER	CONFORMITY	TRADITION	SECURITY	UNIVERSALISM	BENEVOLANCE
LOW AWARENESS	0.78	-0.40	0.18	-0.43	-1.16	-0.51	-0.15	0.49	0.26	0.81
MODERTATE AWARENESS	0.62	-0.85	0.03	-0.58	-1.09	-0.45	0.07	0.40	0.58	0.98
HIGH AWARENESS	0.65	-0.80	-0.01	-0.65	-1.32	-0.57	0.03	0.33	0.85	1.07
Total	0.63	-0.82	0.02	-0.61	-1.19	-0.51	0.05	0.37	0.70	1.02

Table 22. Individual value-sets among people with low, moderate, and high environmental awareness in Germany
Source: Authors' own elaboration based on data from ESS8

	OPENNESS TO CHANGE		OPENNESS TO CHANGE/SELF-ENHANCEMENT	SELF ENHANCEMENT		CONSERVATION			SELF TRANSCENDENCE	
AWARENESS	SELF DIRECTION	STIMULATION	HEDONISM	ACHIEVEMENT	POWER	CONFORMITY	TRADITION	SECURITY	UNIVERSALISM	BENEVOLANCE
LOW AWARENESS	0.21	-0.43	0.14	-0.24	-0.44	-0.32	-0.04	0.51	0.20	0.30
MODERTATE AWARENESS	0.22	-0.63	0.13	-0.10	-0.41	-0.41	-0.02	0.49	0.21	0.41
HIGH AWARENESS	0.27	-0.64	0.13	-0.20	-0.48	-0.35	0.02	0.46	0.25	0.43
Total	0.23	-0.62	0.13	-0.13	-0.43	-0.39	-0.01	0.48	0.22	0.41

Table 23. Individual value-sets among people with low, moderate, and high environmental awareness in Hungary
Source: Authors' own elaboration based on data from ESS8

	OPENNESS TO CHANGE		OPENNESS TO CHANGE/SELF-ENHANCEMENT	SELF ENHANCEMENT		CONSERVATION			SELF TRANSCENDENCE	
AWARENESS	SELF DIRECTION	STIMULATION	HEDONISM	ACHIEVEMENT	POWER	CONFORMITY	TRADITION	SECURITY	UNIVERSALISM	BENEVOLANCE
LOW AWARENESS	0.10	-0.72	-0.85	-0.20	-0.58	0.00	0.46	0.69	0.36	0.56
MODERTATE AWARENESS	0.13	-0.79	-0.77	0.07	-0.55	0.05	0.33	0.56	0.35	0.44
HIGH AWARENESS	0.14	-0.86	-0.94	0.04	-0.70	0.05	0.43	0.56	0.52	0.49
Total	0.13	-0.81	-0.82	0.06	-0.59	0.05	0.36	0.56	0.40	0.46

Table 24. Individual Individual value-sets among people with low, moderate, and high environmental awareness in Italy
Source: Authors' own elaboration based on data from ESS8

	OPENNESS TO CHANGE		OPENNESS TO CHANGE/SELF-ENHANCEMENT	SELF ENHANCEMENT		CONSERVATION			SELF TRANSCENDENCE	
AWARENESS	SELF DIRECTION	STIMULATION	HEDONISM	ACHIEVEMENT	POWER	CONFORMITY	TRADITION	SECURITY	UNIVERSALISM	BENEVOLANCE
LOW AWARENESS	0.56	-0.15	0.29	-0.28	-1.04	-0.28	-0.34	-0.15	0.39	0.82
MODERTATE AWARENESS	0.63	-0.48	0.20	-0.44	-1.08	-0.29	-0.11	-0.04	0.53	0.80
HIGH AWARENESS	0.67	-0.43	0.10	-0.46	-1.19	-0.38	-0.23	-0.05	0.80	0.77
Total	0.64	-0.46	0.18	-0.44	-1.10	-0.31	-0.14	-0.04	0.59	0.80

Table 25. Individual value-sets among people with low, moderate, and high environmental awareness in the Netherlands
Source: Authors' own elaboration based on data from ESS8

	OPENNESS TO CHANGE		OPENNESS TO CHANGE/SELF-ENHANCEMENT	SELF ENHANCEMENT		CONSERVATION			SELF TRANSCENDENCE	
AWARENESS	SELF DIRECTION	STIMULATION	HEDONISM	ACHIEVEMENT	POWER	CONFORMITY	TRADITION	SECURITY	UNIVERSALISM	BENEVOLANCE
LOW AWARENESS	0.19	-0.58	-0.70	-0.38	-0.57	0.19	0.14	0.59	0.45	0.43
MODERTATE AWARENESS	0.25	-0.81	-0.98	-0.33	-0.65	0.21	0.24	0.66	0.52	0.63
HIGH AWARENESS	0.38	-0.60	-0.93	-0.38	-1.02	0.13	0.08	0.57	0.71	0.71
Total	0.27	-0.75	-0.95	-0.34	-0.71	0.20	0.20	0.64	0.55	0.62

Table 26. Individual value-sets among people with low, moderate, and high environmental awareness in Poland
Source: Authors' own elaboration based on data from ESS8

Based on the data presented in tables 21–26 it should be noted that twofold basic hypothesis about the positive association between environmental awareness and the values of universalism and self-direction is working in all cases, except for Germany where self-direction has an incoherent trend. Yet, this does not overrule the claim that, in light of the empirical findings, the epistemologically relevant ideational substance of environmental awareness has culturally framed, value-based ontological foundations.

3.3 Primer Socio-cultural Analysis

The Primer Socio-cultural Analysis (PSCA) of the REPAiR project was done in order to examine relevant stakeholders' perceptions and interpretations, i.e. ideational substances about institutional, policy-related, and socio-cultural and socio-moral features could be crucial pre-conditions or initiatives for sustainable waste/resource management. Beyond the importance of mapping out these cognitive-normative ideas, PSCA also enables to inquire the embeddedness of the selected stakeholders. Since these individual agents, like all subjects, are existentially related to a certain cultural context, therefore the logics, semantics, and patterns of their social surroundings have a framing capacity over their ideational contents (Danemark et al., 2002). Of course, agents have spontaneous and autonomous subjectivity to constitute their selves and to continuously construct, deconstruct and reconstruct their ideas, change their praxes. However, this individual actorness is not fully independent from the collective references. It is impossible to escape these cultural and linguistic structures, as it would mean a total social detachment (Archer 1995). 'Becoming' and 'being' are inseparably linked to 'othering' and the 'Other', thus the agent's subjectivity is grounded in its intersubjective embeddedness. This existential constellation also highlights that individually accepted and respected cognitive-normative ideas, like elements of one's knowledge, are not acquired subjectively, but through multi-layered intersubjective filters (such as traditions, rational justifications, paradigms, language, discourses etc.) could be understood as previous knowledge (Bhaskar 1986). In this sense, ideas are neither floating freely, they are not representations that could be grasped from the 'world-out-there', nor broad or extended enough to hold 'reality' as such (Vandenberghe, 2014). On the contrary, ideational substances of knowledge are always presented, constructed, negated, debated, translated, reinterpreted, transmitted etc. by 'knowers' who have culturally framed 'spokespeople' agency. Accordingly, the examined stakeholders' perceptions and interpretations about certain aspects' relevance for a sustainable waste/resource management also shed light on the cultural framings that constrain these individual ideas.

SSCA1 and 2 are addressing the value-, norm-, custom-, code-, and convention-related foundations of waste-conscious behaviour and more abstract level environmental awareness, i.e. if people belonging to different societies and (sub)cultures are more or rather less attached to their natural surroundings due to the framing capacities of particular logics, semantics, and patterns over their ideational substances. PSCA aims to reveal the same kind of socio-cultural and socio-moral embeddedness of relevant stakeholders from the field of waste/resource management, yet through a different lens. While SSCA1 and 2 describe the macro context by secondary analysis of representative survey data, PSCA tries to relate stakeholders' perceptions and interpretations mapped out by primary survey efforts to these general social constellations. Due to this framework, stakeholders are important for the inquiry not as individuals with

subjective ideas about environmental issues. Presumably, agents of these sectors both have adequate awareness and well-grounded intentions to contribute to sustainable waste/resource management. It is much more interesting, thus, to reveal that as agenda-setters, opinion-leaders, veto-players, and experience-holders what kinds of approaches they have about this desired prospect. So, PSCA is not about 'what to achieve', but more about 'how to progress'. The stakeholders' preferences about these optional alternatives shed light on their culturally framed ideas.

Some brief technical remarks: stakeholders in each case were identified by the project partners; they were surveyed online in their own language; the surveying happened between March and November of 2018. The survey has three major thematic blocks: an institutional, a socio-cultural, and a pairwise section.

3.3.1 Institutional block

This section of the survey aims to map out the perceived relevance of certain institutional aspects, among them financial factors, regulations and laws, implementation, infrastructures and new technologies, and learning and knowledge-transfer. The general question posed to the interviewees was the following: "*On a 0 to 10 scale, where 0 is 'absolutely not important' and 10 is 'absolutely important', how would you perceive the relevance of the following factors for a sustainable waste/resource management?*"

3.3.1.1 Financial factors

Regarding to the financial aspects the survey asked the stakeholders about the relevance of budget stability, gaining for additional financial resources, dealing with loss-making services, and securing equal accessibility even if it increases the costs.

Case	MV	N=	Case	MV	N=
Amsterdam	7.9	18	Pécs	8.6	17
Ghent	8.2	17	Łódź	6.5	12
Naples	8.0	8	Total	7.8	72

Table 27. Stable financial background of the responsible service provider to secure EU standard quality waste services for every customer

Source: Authors' own elaboration based on primary survey data (MV=Mean Value; N=Number of items)

Case	MV	N=	Case	MV	N=
Amsterdam	7.5	15	Pécs	7.2	17
Ghent	6.2	16	Łódź	6.1	12
Naples	6.3	7	Total	6.7	67

Table 28. To continuously aim for additional financial resources (e.g. private investments, government subsidies etc.) for waste sector
Source: Authors' own elaboration based on primary survey data (MV=Mean Value; N=Number of items)

Case	MV	N=	Case	MV	N=
Amsterdam	3.6	17	Pécs	5.3	16
Ghent	3.2	17	Łódź	7.0	8
Naples	4.0	7	Total	4.6	65

Table 29. To reduce the loss-making waste services and improve the profitable ones even if this intervention has social costs/potentially negative impacts
Source: Authors' own elaboration based on primary survey data (MV=Mean Value; N=Number of items)

Case	MV	N=	Case	MV	N=
Amsterdam	2.9	16	Pécs	2.8	16
Ghent	2.5	17	Łódź	7.0	9
Naples	3.1	7	Total	3.7	65

Table 30. To reduce the loss-making waste services and improve the profitable ones even if this intervention has environmental costs/potentially negative impacts
Source: Authors' own elaboration based on primary survey data (MV=Mean Value; N=Number of items)

Case	MV	N=	Case	MV	N=
Amsterdam	7.0	16	Pécs	6.2	17
Ghent	7.3	17	Łódź	7.1	12
Naples	8.3	6	Total	7.2	68

Table 31. To provide the same quality services for every customer even if securing accessibility is reducing profitability
Source: Authors' own elaboration based on primary survey data (MV=Mean Value; N=Number of items)

Respective to the financial aspects it should be noted that stakeholders in every case study area perceive the financial stability of responsible service providers as a basic pre-condition. About the efforts to continuously aim for additional

resources, however, there are some differences, insofar as stakeholders of Amsterdam and Pécs consider this task more important. To reduce loss-making services and improve profitable ones even if these interventions have social or environmental costs/risks is negatively perceived in all areas except for Łódź. Furthermore, it is worth mentioning about this theme that stakeholders generally understand environmental risks as more dangerous than potential social costs. Finally, about the dilemma of providing same quality services for all customers even if secured accessibility challenges profitability, stakeholders of Pécs have more unfavourable perceptions than their fellow partners.

3.3.1.2 Regulations and laws

This section of the survey focuses on regulative aspects, among them the perceived relevance of the general legal framework's comprehensiveness, the importance of explicit legal formalisations, and finally the significance of local autonomy about adopting place-based implementations.

Case	MV	N=	Case	MV	N=
Amsterdam	8.4	18	Pécs	9.4	17
Ghent	8.6	18	Łódź	7.8	13
Naples	6.4	7	Total	8.1	73

Table 32. Comprehensive and executable regulations on waste/resource management
Source: Authors' own elaboration based on primary survey data (MV=Mean Value; N=Number of items)

Case	MV	N=	Case	MV	N=
Amsterdam	7.6	18	Pécs	7.6	17
Ghent	7.8	16	Łódź	8.0	13
Naples	7.4	8	Total	7.7	72

Table 33. To explicitly formalise in different (national, regional, local, organisational etc.) level regulations all the waste/resource management-related issues and practices
Source: Authors' own elaboration based on primary survey data (MV=Mean Value; N=Number of items)

Case	MV	N=	Case	MV	N=
Amsterdam	8.6	18	Pécs	9.1	17
Ghent	8.3	18	Łódź	7.8	13
Naples	8.3	7	Total	8.4	73

Table 34. To leave room for implementation based on the local context
Source: Authors' own elaboration based on primary survey data (MV=Mean Value; N=Number of items)

About the comprehensiveness of legal frameworks stakeholders generally have positive perceptions, except for Naples. The formalisation of waste/resource management-related policies and practices at various levels (hierarchically ordered) of regulations is highly appreciated, yet to leave room for place-based solutions in the local context is even more favoured by the stakeholders.

3.3.1.3 Implementation

The survey also turned to the stakeholders to ask their ideational understandings about the relevance of benchmarking and monitoring, imposition of fines on violating customers, leaving grace periods before fines become due, and also about the importance of promotion campaigns.

Case	MV	N=	Case	MV	N=
Amsterdam	6.6	17	Pécs	7.9	15
Ghent	7.1	15	Łódź	7.0	11
Naples	7.7	7	Total	7.3	65

Table 35. To benchmark by a multi-level monitoring system waste/resource management service providers according to outputs/costs indicators
Source: Authors' own elaboration based on primary survey data (MV=Mean Value; N=Number of items)

Case	MV	N=	Case	MV	N=
Amsterdam	6.9	18	Pécs	7.8	17
Ghent	7.7	18	Łódź	7.4	13
Naples	8.8	6	Total	7.7	72

Table 36. Strict fines on violating customers
Source: Authors' own elaboration based on primary survey data (MV=Mean Value; N=Number of items)

Case	MV	N=	Case	MV	N=
Amsterdam	4.1	16	Pécs	7.7	17
Ghent	3.4	18	Łódź	6.5	12
Naples	5.0	7	Total	5.3	70

Table 37. To leave grace period before fines on violating customers become due
Source: Authors' own elaboration based on primary survey data (MV=Mean Value; N=Number of items)

Case	MV	N=	Case	MV	N=
Amsterdam	8.1	16	Pécs	8.8	17
Ghent	8.1	18	Łódź	8.6	13
Naples	9.1	8	Total	8.5	72

Table 38. Promotion campaigns to encourage participation in and acceptance of waste/resource management
Source: Authors' own elaboration based on primary survey data (MV=Mean Value; N=Number of items)

Benchmarking of service providers is prioritised by the stakeholders of Pécs and Naples, but not so much by respondents in Amsterdam. Strict fines on violating customers is very positively perceived in Naples and much less in Amsterdam. To leave a grace period before fines become due is accepted in East Europe, while generally rejected in the Western case studies. Finally, promotion campaigns are highly appreciated in all case areas.

3.3.1.4 Infrastructure and technologies

This section was designed in order to explore the stakeholders' perceptions about using eco-innovative and smart technologies in challenging circumstances respective to costs, acceptability, and accessibility.

Case	MV	N=	Case	MV	N=
Amsterdam	8.3	18	Pécs	8.2	17
Ghent	7.6	18	Łódź	6.5	13
Naples	9.0	7	Total	7.9	73

Table 39. Using eco-innovative and smart technologies to improve waste/resource management even if these developments are increasing the costs of services
Source: Authors' own elaboration based on primary survey data (MV=Mean Value; N=Number of items)

Case	MV	N=	Case	MV	N=
Amsterdam	6.2	14	Pécs	4.9	16
Ghent	5.5	15	Łódź	6.9	13
Naples	9.3	8	Total	6.6	66

Table 40. Using eco-innovative and smart technologies to improve waste/resource management even if these developments are challenging the acceptability of services
Source: Authors' own elaboration based on primary survey data (MV=Mean Value; N=Number of items)

Case	MV	N=	Case	MV	N=
Amsterdam	5.7	15	Pécs	4.4	16
Ghent	5.8	16	Łódź	5.8	13
Naples	4.7	7	Total	5.3	67

Table 41. Using eco-innovative and smart technologies to improve waste/resource management even if these developments are challenging the equal accessibility of services
Source: Authors' own elaboration based on primary survey data (MV=Mean Value; N=Number of items)

Applying eco-innovative and smart technologies in case of potentially increasing costs of services is generally perceived as positive; a bit under the average among stakeholders of Ghent, and even more unfavourably in Łódź. In case of challenges to acceptability of services, it is highly supported just in Naples. And if using eco-innovative and smart technologies challenges equal accessibility, then it is generally understood as something negative option by stakeholders.

3.3.1.5 Learning/knowledge-transfer

Finally, this last section of the institutional block asked the stakeholders about the relevance of best practices and online sources of applicable innovations, while it also aimed to explore what are the interviewees' perceptions about locally developed solutions and adaptions, as well as innovation-related collaborations.

Case	MV	N=	Case	MV	N=
Amsterdam	8.3	17	Pécs	9.0	16
Ghent	8.1	18	Łódź	7.5	13
Naples	9.3	7	Total	8.4	71

Table 42. Waste/resource management service providers should continuously study best practices
Source: Authors' own elaboration based on primary survey data (MV=Mean Value; N=Number of items)

Case	MV	N=	Case	MV	N=
Amsterdam	5.7	14	Pécs	7.9	17
Ghent	5.3	16	Łódź	6.8	13
Naples	7.6	7	Total	6.7	67

Table 42. Waste/resource management service providers should continuously learn from webinars (online presentations about best practices and innovative solutions)
Source: Authors' own elaboration based on primary survey data (MV=Mean Value; N=Number of items)

Case	MV	N=	Case	MV	N=
Amsterdam	7.0	17	Pécs	7.4	16
Ghent	6.1	18	Łódź	6.2	13
Naples	7.4	7	Total	6.8	71

Table 43. Instead of developing local innovations, waste/resource management service providers should adapt an existing model of best practices if it seems a cheaper solution
Source: Authors' own elaboration based on primary survey data (MV=Mean Value; N=Number of items)

Case	MV	N=	Case	MV	N=
Amsterdam	8.7	17	Pécs	9.2	18
Ghent	8.9	17	Łódź	7.3	13
Naples	8.3	8	Total	8.5	73

Table 44. Waste/resource management service providers should cooperate in developing and sharing eco-innovative solutions
Source: Authors' own elaboration based on primary survey data (MV=Mean Value; N=Number of items)

Stakeholders mostly have mixed perceptions about learning and knowledge-transfer. Cooperation among service providers in order to develop and share eco-innovative solutions is highly supported. It is also appreciated if service providers are putting efforts into the examination of best practices. However, studying webinars is perceived as something important only in Naples and Pécs. If adaption of existing models of best practices is cheaper than locally developed solutions, then stakeholders of Naples and Pécs agree that 'copy & installation' should be preferred as opposed to place-based innovations, while their fellow partners do not perceive this option as something crucial.

Amsterdam	
Waste/resource management service providers should cooperate in developing and sharing eco-innovative solutions	8.7
To leave room for implementation based on the local context	8.6
Comprehensive and executable regulations on waste/resource management	8.4
Ghent	
Waste/resource management service providers should cooperate in developing and sharing eco-innovative solutions	8.9
Comprehensive and executable regulations on waste/resource management	8.6
To leave room for implementation based on the local context	8.3
Naples	
Waste/resource management service providers should continuously study best practices	9.3
Using eco-innovative and smart technologies to improve waste/resource management even if these developments are challenging the acceptability of services	9.3
Promotion campaigns to encourage participation in and acceptance of waste/resource management	9.1
Pécs	
Comprehensive and executable regulations on waste/resource management	9.4
Waste/resource management service providers should cooperate in developing and sharing eco-innovative solutions	9.2
To leave room for implementation based on the local context	9.1
Łódź	
Promotion campaigns to encourage participation in and acceptance of waste/resource management	8.6
To explicitly formalise in different (national, regional, local, organisational etc.) level regulations all the waste/resource management-related issues and practices	8.0
Comprehensive and executable regulations on waste/resource management *and* To leave room for implementation based on the local context	7.8

Table 43. Top 3 most relevant institutional aspects according to the cases
Source: Authors' own elaboration based on primary survey data

About the top 3 most relevant institutional aspects stakeholders of Amsterdam and Ghent have similar perceptions: cooperation among service providers in order to develop and share eco-innovative solutions; service providers should have the autonomy to develop place-based legal frameworks and practices; and in general waste/resource management should be comprehensively regularised. The last two factors are understood as basic conditions also by stakeholders of Pécs and Łódź. Actually, by the Polish stakeholders legal frameworks and promotion

campaigns are perceived as the most crucial institutional elements. In Pécs the general understanding is similar, yet not promotion campaigns but innovation-oriented cooperation among service providers is ranked at the top. In Naples stakeholders are focused on promotion campaigns, examination of best practices, and applying of eco-innovative solutions even if this latter effort challenges acceptability of services.

Amsterdam	
To reduce the loss-making waste services and improve the profitable ones even if this intervention has environmental costs/potentially negative impacts	2.9
To reduce the loss-making waste services and improve the profitable ones even if this intervention has social costs/potentially negative impacts	3.6
To leave grace period before fines on violating customers become due	4.1
Ghent	
To reduce the loss-making waste services and improve the profitable ones even if this intervention has environmental costs/potentially negative impacts	2.5
To reduce the loss-making waste services and improve the profitable ones even if this intervention has social costs/potentially negative impacts	3.2
To leave grace period before fines on violating customers become due	3.4
Naples	
To reduce the loss-making waste services and improve the profitable ones even if this intervention has environmental costs/potentially negative impacts	3.1
To reduce the loss-making waste services and improve the profitable ones even if this intervention has social costs/potentially negative impacts	4.0
Using eco-innovative and smart technologies to improve waste/resource management even if these developments are challenging the equal accessibility of services	4.7
Pécs	
To reduce the loss-making waste services and improve the profitable ones even if this intervention has environmental costs/potentially negative impacts	2.8
Using eco-innovative and smart technologies to improve waste/resource management even if these developments are challenging the equal accessibility of services	4.4
Using eco-innovative and smart technologies to improve waste/resource management even if these developments are challenging the acceptability of services	4.9
Łódź	
Using eco-innovative and smart technologies to improve waste/resource management even if these developments are challenging the equal accessibility of services	5.8
To continuously aim for additional financial resources (e.g. private investments, government subsidies etc.) for waste sector	6.1
Instead of developing local innovations, waste/resource management service providers should adapt an existing model of best practices if it seems a cheaper solution	6.2

Table 44. Bottom 3 least relevant institutional aspects according to the cases
Source: Authors' own elaboration based on primary survey data

Respective to the bottom 3 least relevant institutional factors stakeholders of Amsterdam and Ghent have common understandings as well. They reject profit-orientation of service providers if this goal creates social costs or environmental risks, just as they are not in favour of leaving grace period for violating customers. Stakeholders of Naples also reject profit-orientation of service providers in case of potential social costs or environmental risks and they do not see the importance of eco-innovative solutions either if these technological/service developments challenge equal accessibility. Stakeholders of Pécs have negative perceptions about eco-innovative solutions and smart technologies if these improved services are not accepted by customers or equal accessibility is not maintainable due to these developments. Those eco-innovations that challenge equal accessibility are also deeply rejected by stakeholders of Łódź. Furthermore, they are not in favour of adaption of existing models of best practices instead of locally produced innovations, while they do not consider the efforts of service providers for additional financial resources as something important either.

3.3.2 Socio-cultural block

This second block of the survey aimed to reveal how stakeholders perceive the relevance of various social and cultural features for a sustainable waste/resource management. Both the importance of individual understandings, attitudes, behaviours, and praxes, and rather collective norms, conventions, codes, and social rules were asked. The features could be grouped into 7 interrelated dimensions: social integration, self-transcendence, openness to change, social progressiveness, trust, participation and deliberation. The question posed to the respondents was the following one: "*As some research highlights, the social and cultural milieu of a collective entity (society or smaller community, social group) – through the generally accepted and respected social values, norms and attitudes – could influence the effectiveness of public policies. Based on this argument, we are now interested in how you perceive the relevance of the following social and cultural features and attitudes for a sustainable waste/resource management. The scale refers to the same values: 0 to 10, where 0 is 'absolutely not important' and 10 is 'absolutely important'.*"

3.3.2.1 Social integration

Social integration could be important for sustainable waste/resource management since the realisation of a pan-relational connectedness, not just about intersubjective relations, but also respective to the subjective–objective vis-à-vis nexuses, would be fundamental for the agents' existential attachment to their objective, natural, and social surroundings. In a disintegrated community/society common interests, responsibilities and goals remain unrecognised as subjects are only striving for individual survival (welfare and wellbeing) understood from a detached and contemplative position. This social phenomenon was addressed by four variables in the survey.

Case	MV	N=	Case	MV	N=
Amsterdam	8.0	15	Pécs	8.4	16
Ghent	7.6	16	Łódź	6.1	15
Naples	8.1	7	Total	7.6	69

Table 45. A collective feeling of unity arising from common responsibilities, interests and objectives
Source: Authors' own elaboration based on primary survey data

Case	MV	N=	Case	MV	N=
Amsterdam	6.9	15	Pécs	8.4	16
Ghent	7.5	14	Łódź	4.9	14
Naples	6.9	7	Total	6.9	66

Table 46. A bond of social togetherness based on an informal agreement that everybody should have the same opportunities
Source: Authors' own elaboration based on primary survey data

Case	MV	N=	Case	MV	N=
Amsterdam	6.9	15	Pécs	8.2	16
Ghent	7.3	16	Łódź	5.8	14
Naples	7.6	7	Total	7.2	68

Table 47. Social cohesion based on commonly respected principles that everybody is entitled to basic individual rights and needs
Source: Authors' own elaboration based on primary survey data

Case	MV	N=	Case	MV	N=
Amsterdam	7.8	16	Pécs	8.9	16
Ghent	7.5	16	Łódź	6.5	12
Naples	7.3	8	Total	7.6	68

Table 48. Social unitedness founded on the idea of advancing public interests
Source: Authors' own elaboration based on primary survey data

3.3.2.2 Self-transcendence

Strongly related to the previous socio-cultural and socio-moral aspect, self-transcendence refers to an individual stance that emphatically considers others' perspectives and needs. It is a non-egoistic understanding that facilitates solidarity and justice through willingness for deeds which promote the realisation of common interests and equality. It identifies the subject not as one against the

others, but as one among the others. Without self-transcendence the subject is treating its objective, natural and social surroundings from a position striving for control over resources and others, which stance and praxis reproduce hierarchies, dependencies, and inequalities all against a sustainable waste/resource management. The survey used three variables to get a more detailed picture about the perceived relevance of this dimension.

Case	MV	N=	Case	MV	N=
Amsterdam	8.1	16	Pécs	8.8	16
Ghent	7.9	16	Łódź	6.9	14
Naples	7.4	7	Total	7.8	69

Table 49. Willingness for doing, making, undertaking something on one's own accord in the name of collective goals
Source: Authors' own elaboration based on primary survey data

Case	MV	N=	Case	MV	N=
Amsterdam	8.0	15	Pécs	7.9	16
Ghent	7.1	15	Łódź	6.0	14
Naples	8.0	7	Total	7.4	67

Table 50. Acting on behalf of the community without force or coercion to promote public interests
Source: Authors' own elaboration based on primary survey data

Case	MV	N=	Case	MV	N=
Amsterdam	7.2	16	Pécs	7.8	16
Ghent	7.1	15	Łódź	6.8	12
Naples	6.3	7	Total	7.0	66

Table 51. Supporting others by free choice
Source: Authors' own elaboration based on primary survey data

3.3.2.3 Openness to change

This dimension refers to the subject's self-capacity of reflexive and critical (re–)evaluation of individual understandings, ideas, habits and practices. Without this ability the subject prefers to rather stick with well-tried routines. Openness to change enables one for continuous self-reconstruction (Gestalt-switches) and to ease the constraining impacts of cultural logics, semantics, and patterns. As a sustainable waste/resource management requires a dynamic adaptability from agents in order to adequately cope with constantly updated and improved institutional practices, without an individual readiness for shifts, these policies could find it harder to achieve changes about subjective praxes.

Case	MV	N=	Case	MV	N=
Amsterdam	8.4	16	Pécs	9.1	16
Ghent	8.4	16	Łódź	7.6	14
Naples	7.6	7	Total	8.2	69

Table 52. Willingness to make changes in one's own life and lifestyle
Source: Authors' own elaboration based on primary survey data

Case	MV	N=	Case	MV	N=
Amsterdam	8.3	15	Pécs	8.8	16
Ghent	8.4	16	Łódź	7.5	13
Naples	8.3	7	Total	8.3	67

Table 53. Openness for new challenges
Source: Authors' own elaboration based on primary survey data

Case	MV	N=	Case	MV	N=
Amsterdam	8.1	15	Pécs	8.1	16
Ghent	8.3	16	Łódź	7.3	13
Naples	8.4	7	Total	8.0	67

Table 54. Searching for new opportunities
Source: Authors' own elaboration based on primary survey data

Case	MV	N=	Case	MV	N=
Amsterdam	7.0	14	Pécs	7.6	16
Ghent	6.8	16	Łódź	7.0	14
Naples	7.6	7	Total	7.2	67

Table 55. Ability to cope with individual failures
Source: Authors' own elaboration based on primary survey data

Case	MV	N=	Case	MV	N=
Amsterdam	7.8	15	Pécs	8.7	16
Ghent	8.4	16	Łódź	6.3	12
Naples	7.7	7	Total	7.8	66

Table 55. Being critical on one's own customs and habits
Source: Authors' own elaboration based on primary survey data

3.3.2.4 Social progressiveness

This dimension is about collective agency; about a social actorness (1) that tries to overcome challenges instead of normalising them, (2) that optimistically believes in progression, and (3) that refuses the acceptance of 'lost cases'. This actorness was identified by three variables.

Case	MV	N=	Case	MV	N=
Amsterdam	8.3	16	Pécs	8.0	16
Ghent	7.6	16	Łódź	6.8	13
Naples	8.1	7	Total	7.8	68

Table 56. Confidence in the possibility that things could be better
Source: Authors' own elaboration based on primary survey data

Case	MV	N=	Case	MV	N=
Amsterdam	8.4	15	Pécs	8.8	16
Ghent	8.0	16	Łódź	6.8	13
Naples	8.3	7	Total	8.0	67

Table 57. Faith in the achievability of progressive reforms
Source: Authors' own elaboration based on primary survey data

Case	MV	N=	Case	MV	N=
Amsterdam	7.3	16	Pécs	8.6	16
Ghent	7.2	16	Łódź	6.9	12
Naples	8.4	7	Total	7.7	67

Table 58. Optimistic beliefs that wrongs are repairable
Source: Authors' own elaboration based on primary survey data

3.3.2.5 Trust

Trust is an incentive for social interactions. Either it is based on rational, moral, or emotional/psychological justifications, trusting others enables one to establish intersubjective nexuses. Therefore, it promotes social attachment and civic engagement. Distrust, on the contrary, triggers atomisation and isolation, which both undermine sustainable waste/resource management as individuals who lack confidence in their social surroundings would not believe that others care about natural environment, neither ideationally, nor practically. Trust was addressed by three variables.

Case	MV	N=	Case	MV	N=
Amsterdam	6.9	16	Pécs	7.1	16
Ghent	6.3	16	Łódź	6.7	12
Naples	4.9	7	Total	6.4	67

Table 59. To believe that generally people are honest in dealing with others
Source: Authors' own elaboration based on primary survey data

Case	MV	N=	Case	MV	N=
Amsterdam	6.3	15	Pécs	6.7	16
Ghent	6.2	16	Łódź	6.3	13
Naples	5.6	7	Total	6.2	67

Table 60. To believe that generally people are helpful
Source: Authors' own elaboration based on primary survey data

Case	MV	N=	Case	MV	N=
Amsterdam	6.9	15	Pécs	7.4	16
Ghent	6.3	16	Łódź	6.3	12
Naples	4.3	7	Total	6.2	66

Table 61. To believe that generally people are taking into consideration common norms before doing actions or making decisions
Source: Authors' own elaboration based on primary survey data

3.3.2.6 Participation

This dimension refers to various forms of social engagement. Both individuals' willingness for participation in collective actions aiming for common interests and their readiness to take part in protests, demonstrations and boycotts, as well as in the mission of civil organisations, associations or clubs could be important for sustainable waste/resource management, insofar as engagement necessarily promotes social attachment and integration. Three variables were used in the survey in order to grasp stakeholders' perceptions about the relevance of this dimension.

Case	MV	N=	Case	MV	N=
Amsterdam	7.9	16	Pécs	8.5	16
Ghent	7.3	15	Łódź	6.8	14
Naples	7.6	8	Total	7.6	69

Table 62. Willingness to participate in activities promoting public interests
Source: Authors' own elaboration based on primary survey data

Case	MV	N=	Case	MV	N=
Amsterdam	6.3	15	Pécs	6.9	15
Ghent	6.4	16	Łódź	5.5	13
Naples	7.5	8	Total	6.5	67

Table 63. Joining civil organisations and/or social movements
Source: Authors' own elaboration based on primary survey data

Case	MV	N=	Case	MV	N=
Amsterdam	6.1	15	Pécs	7.3	16
Ghent	7.1	15	Łódź	7.6	13
Naples	8.3	7	Total	7.3	66

Table 64. Protesting against things (decisions, actions, outcomes) that are contradicting or preventing the facilitation of public interests
Source: Authors' own elaboration based on primary survey data

3.3.2.7 Deliberation

Finally, deliberation is about consensus-seeking communicative interactions that pay respect to all agents' perspectives and arguments. These discourses are rather about justifications among equal truth-candidates than imposing Truths on others. Sustainable waste/resource management requests deliberative communications as individuals need to internalise why environmental awareness and praxes based on this understanding are relevant, rather than to simply accept these logics and semantics as something imposed on them. Thus, it needs to be an internal inspiration rather than an externally motivated obligation. Two variables addressed deliberative justifications in the survey.

Case	MV	N=	Case	MV	N=
Amsterdam	7.6	16	Pécs	7.3	16
Ghent	8.3	15	Łódź	7.3	12
Naples	8.4	7	Total	7.8	66

Table 65. To respect the individual opinion and approach of others
Source: Authors' own elaboration based on primary survey data

Case	MV	N=	Case	MV	N=
Amsterdam	8.1	16	Pécs	7.8	16
Ghent	8.5	16	Łódź	7.6	13
Naples	8.7	7	Total	8.1	68

Table 66. Being open for discussion with everybody
Source: Authors' own elaboration based on primary survey data

Dimension	Amsterdam	Ghent	Naples	Pécs	Łódź	Total variable
Social integration	7.400	7.475	7.475	8.475	5.825	*7.330*
Self-transcendence	7.767	7.367	7.233	8.167	6.567	*7.420*
Openness to change	7.920	8.060	7.920	8.460	7.140	*7.900*
Social progressiveness	8.000	7.600	8.267	8.467	6.833	*7.833*
Trust	6.700	6.267	4.933	7.067	6.433	*6.280*
Participation	6.767	6.933	7.800	7.567	6.633	*7.140*
Deliberation	7.850	8.400	8.550	7.550	7.450	*7.960*
Total case	*7.486*	*7.443*	*7.454*	*7.964*	*6.697*	

Table 67. Aggregate table about the perceived relevance of socio-cultural dimensions for a sustainable waste/resource management according to cases (mean values)
Source: Authors' own elaboration based on primary survey data

Respective to stakeholders' perceptions about the various socio-cultural and socio-moral features there are some tendencies that should be noted. First of all, stakeholders of Łódź believe the least that these factors have relevance for a sustainable waste/resource management. On the contrary, Hungarian respondents consider the importance of these features as the most substantial. Stakeholders of Amsterdam and Ghent have closely similar understandings. Some reflections on the examined dimensions: (1) trust is viewed as the least relevant feature, which is a bit surprising if it is accepted that without trust social interactions are constrained; (2) yet, the stakeholders' perceptions about trust are more justified if it is underlined that respondents highly prioritise openness to change, which means that they rather expect reflexive individual efforts than macro level structural changes as sources for shifts about routinised praxes; (3) in line with this, stakeholders also prefer deliberation, i.e. open and diverse communicative interactions that could help to convince individual agents about the need for reflexive and critical re-evaluation of subjective stances and practices; (4) participation is the most favoured among stakeholders of Naples, most probably because they want people to be engaged against the non-transparent manipulations affecting the efficiency of waste/resource management in the region; (5) social progressiveness – a macro level optimism and a collective belief that things can be changed – is also prioritised by stakeholders of Naples, possibly because of the same reason, while respondents in

Amsterdam have positive perceptions about this feature as well; (6) social integration and self-transcendence are considered in all case areas quite consistently.

As regards to this socio-cultural block of PSCA it should be highlighted that the findings are in positive relation with the conclusions of SSCA2, insofar as in those macro contexts, in Belgium, in the Netherlands, and in Italy respectively, where people have higher environmental awareness, stakeholders perceive the relevance of social-cultural features for a sustainable waste/resource management as more fundamental than in macro contexts where environmental awareness is less common, like in Poland. Only Pécs does not fit into the framework, however about the validity of the Hungarian case it should be admitted that a scientific scepticism is rather justified. Sadly, the error of triple hermeneutical interpretation, i.e. the unfortunate situation that the interviewees were well aware about the expectations of the interviewer related to the 'right responses', cannot be excluded in the case of Pécs. This statement was proposed not because Pécs contradicts the basic argument of this examination, but because Pécs is the only case that refutes it.

3.3.3 Pairwise comparison block

This third block of the PSCA survey used the method of pairwise comparison in order to more accurately find out the preferences of stakeholders about theoretically interlinked aspects posed as oppositional alternatives. In spite of all its shortcomings this method is adequate to grasp the analysed agents' preferences about basic institutional (organisational, legal and financial) frameworks, policy designs, and governance styles. The question posed to the respondents was the following: "*Finally, we are interested in how you perceive the relevance of the following factors compared to each other for a sustainable waste/resource management. 1 means you completely agree with the statement on the left; and 10 means you completely agree with the statement on the right. If your answer should fall between 1 and 10, pick up the number that rightly reflects on your perception.*"

3.3.3.1 Financial framework

This question aimed to reveal if the stakeholders prefer that waste/resource management should be funded by private or public financial resources.

					Scale
Waste/resource management should be funded by private financial resources					1–5
Waste/resource management should be funded by public financial resources					6–10
Case	MV	N=	Case	MV	N=
Amsterdam	7.0	15	Pécs	6.5	16
Ghent	5.5	12	Łódź	6.9	14
Naples	8.8	8	Total	6.9	65

Table 68. Private or public financial resources
Source: Authors' own elaboration based on primary survey data

In all case areas stakeholders are in favour of waste/resource management being funded by public financial resources. There are, though, significant differences among the perceptions particularly if we compare answers from Ghent and Naples.

3.3.3.2 Legal framework

This section of the pairwise comparison block of the survey is interested in the stakeholders' preferences about local, national and EU level regulations as main legal frameworks respective to the field of waste/resource management. Three questions were used as variables.

					Scale
Waste/resource management should be regulated by local level regulations					1–5
Waste/resource management should be regulated by national level regulations					6–10
Case	MV	N=	Case	MV	N=
Amsterdam	7.8	16	Pécs	5.9	16
Ghent	7.9	14	Łódź	6.4	13
Naples	8.1	8	Total	7.2	67

Table 69. Local or national level regulations
Source: Authors' own elaboration based on primary survey data

					Scale
Waste/resource management should be regulated by local level regulations					1–5
Waste/resource management should be regulated by EU level regulations					6–10
Case	MV	N=	Case	MV	N=
Amsterdam	7.1	16	Pécs	5.0	16
Ghent	7.4	14	Łódź	5.8	14
Naples	7.4	7	Total	6.5	67

Table 70. Local or EU level regulations
Source: Authors' own elaboration based on primary survey data

					Scale
Waste/resource management should be regulated by national level regulations					1–5
Waste/resource management should be regulated by EU level regulations					6–10
Case	MV	N=	Case	MV	N=
Amsterdam	6.0	15	Pécs	4.7	16
Ghent	7.5	15	Łódź	5.5	13
Naples	6.7	7	Total	6.0	66

Table 71. National or EU level regulations
Source: Authors' own elaboration based on primary survey data

About the favoured legal frameworks, a dual tendency should be noted: on the one hand, national level regulations are prioritised against local frameworks, while on the other hand, EU ordinances are preferred to both local and national regulations in four out of the five case areas. The exception is Pécs where stakeholders do not have positive perceptions about EU frameworks. It should be also mentioned that in Central-Eastern Europe EU regulations are much less appreciated than in Amsterdam, Ghent and Naples.

3.3.3.3 Policy and governance

This section was developed in order to map out the stakeholders' preferences about policy-designs, strategy-formulation mechanisms, and styles of collaboration in waste/resource management, as well as their understandings about who should be the main actors in the field. Four variables were used in the survey at this section.

					Scale
Multi-level strategies on waste/resource management should be formulated in bottom-up sense					1–5
Multi-level strategies on waste/resource management should be formulated in top-down sense					6–10
Case	MV	N=	Case	MV	N=
Amsterdam	6.7	13	Pécs	4.3	16
Ghent	5.4	12	Łódź	4.8	13
Naples	4.9	7	Total	5.2	61

Table 72. Bottom-up or top-down strategy-formulation
Source: Authors' own elaboration based on primary survey data

About strategy-formulation there are differences among the case areas, insofar as both in Amsterdam and in Ghent stakeholders are rather in favour of top-down logics, while respondents of Naples, Łódź, and Pécs support more bottom-up way of policy-making.

					Scale
In waste/resource management related decision makings, political actors should take the lead					1–5
In waste/resource management related decision makings, non-political actors should take the lead					6–10
Case	MV	N=	Case	MV	N=
Amsterdam	6.0	13	Pécs	7.8	16
Ghent	4.7	14	Łódź	9.0	12
Naples	6.7	7	Total	6.8	62

Table 73. Political actors or non-political actors as main players
Source: Authors' own elaboration based on primary survey data

About the aspect of who should dominate the decision makings of waste/resource management, stakeholders are generally in favour of non-political actors' generative agency, except for Ghent where respondents rather expect political agents to be influential.

					Scale
Waste/resource management related strategies and policies should be discussed by a narrow coalition of actors					1–5
Waste/resource management related strategies and policies should be discussed by a wide coalition of actors					6–10
Case	MV	N=	Case	MV	N=
Amsterdam	7.4	14	Pécs	8.6	17
Ghent	7.4	14	Łódź	8.3	13
Naples	9.1	8	Total	8.2	66

Table 74. Narrow or wide coalition of collaborating actors in the discussing phase
Source: Authors' own elaboration based on primary survey data

					Scale
Waste/resource management related strategies and policies should be developed by a narrow coalition of decision makers					1–5
Waste/resource management related strategies and policies should be developed by a wide coalition of decision makers					6–10
Case	MV	N=	Case	MV	N=
Amsterdam	5.5	14	Pécs	8.3	16
Ghent	6.4	14	Łódź	8.6	14
Naples	8.1	8	Total	7.4	66

Table 75. Narrow or wide coalition of collaborating actors in the decisional phase
Source: Authors' own elaboration based on primary survey data

Respective to the discussion and development of waste/resource management strategies and policies, stakeholders in all case areas agree that rather wide coalition of agents should be involved and tasked. There is a division, though, worth mentioning between Amsterdam and Ghent on the one hand, and Naples, Pécs, and Łódź on the other, as stakeholders of the previous regions are a bit less in favour of broad inclusions than their fellow partners. It is crucial to note as well that, with the exception of Łódź, stakeholders believe that the discussions of

strategies and policies should be more opened than the effective decisional processes.

3.3.3.4 Institutional reflection

Finally, the pairwise comparison block also asked the stakeholders' preferences about the institutional reflective capacities of waste/resource management: if they prefer the service providers to strive for imminent answers or rather to aim for long-term solutions.

					Scale
Waste/resource management policies should offer solutions to imminent challenges					1–5
Waste/resource management policies should aim for long-term solutions					6–10
Case	MV	N=	Case	MV	N=
Amsterdam	8.4	16	Pécs	8.5	15
Ghent	8.3	13	Łódź	8.6	13
Naples	7.3	7	Total	8.2	64

Table 76. Imminent answers to challenges or long-term solutions
Source: Authors' own elaboration based on primary survey data

There is a general consensus among stakeholders that waste/resource management policies should strive for long-term solutions.

3.4 Overview of the socio-cultural analysis

This chapter proposed empirical evidences about two interlinked thematic scopes. At first, SSCA2 revealed that environmental awareness as an epistemologically relevant and praxes-related indicator of the agent's attachment to its natural surrounding is ontologically framed by a value-based subjective stance shaped by macro level socio-cultural and socio-moral contextual features. In line with this, SSCA2 explored that people with low, moderate, and high level of environmental awareness have diverse value-sets; environmental awareness is growing with the appreciation of values about universalism and respect for diversity.

In light of this, as long as the macro level social-cultural surroundings are seriously important, stakeholders belonging to diverse collective milieus have to have different perceptions (ideational constructions) about how to improve waste/resource management. Not necessarily about the aspects of what to achieve, but more respective to how to achieve these objectives. The second part of this chapter, the PSCA inquiry, aimed to map out these differences among stakeholders from the case areas.

About the main findings of SSCA2:

- Among the REPAiR case studies the German society has the highest level of environmental awareness; it is followed by Italy and Belgium; the Netherlands and Hungary have similar scores (close to the total average of the examined sample), while Poland has the lowest.
- In Germany and Italy only 1.9% of the population has low environmental awareness; in Belgium 2.3%, in the Netherlands 3.6%, and in Hungary 4.5%. Poland's 8.7% of low environmental awareness is much above the total average of the examined sample. Respective to the category of moderate awareness, 54% of the German people belongs to this group, while in the rest of the case areas this rate is somewhere between 65–75%. In Germany, Italy, and Belgium people with high environmental awareness is above 30% (in the case of Germany it is more than 40%), while in Hungary it is 27.1%, in the Netherlands it is 23.1%, and in Poland it is only 15.9%.
- As regards to the socio-demographic variables, in all cases environmental awareness is higher among women and among more educated people. In Belgium with the age environmental awareness is continuously decreasing, while in Hungary it is the opposite, i.e. with age environmental awareness is increasing up until to the age of 56- then it starts to decrease. In Germany and in Italy only one age group, people between 26 and 40 have significantly lower environmental awareness. In the Netherlands, however, people between 41 and 55 have much lower environmental

awareness. In Poland people between 26 and 55 have higher environmental awareness. As regards to subjective well-being, in the Netherlands and Italy people who consider their well-being rather negatively have higher environmental awareness, while in the other cases the opposite is true.

- Respective to reflectivity the following should be noted in general: (1) people believe more in their own reflective agencies than in others' similar capacities; (2) agents' ideational reflectivity is much stronger than their praxis-related one, i.e. reflective ideas not necessarily facilitate reflective actions; (3) people believe more in the relevance of social reflection than they actually think others are reflective; (4) regarding to all variables the scores are rather moderate, which tendency refers to a rather low reflectivity about environmental challenges.
- As regards to the cases: (1) reflectivity is growing with the environmental awareness; (2) individual reflectivity is so very low among Hungarians (they do not accept that they are responsible for environmental damages); (3) individual reflective intentions are rather balanced regards to the cases (people in all cases would be ready kind of similarly to do something for their environment – of course, this intention is growing with awareness in all cases); (4) Hungarians rather do not believe in reflective social capacities (they do not think that others around them would do something for their natural environment)
- Environmental awareness has clear an stable value-based foundations, it is growing with the appreciation of values about universalism and respect for diversity.

About the main findings of PSCA:

- As regards to the institutional features, for the stakeholders of Amsterdam and Ghent cooperation among service providers, the autonomous agency/capacity of service providers, and comprehensive regularization over waste/resource management is the top 3 important element; the latter two factors are crucial for stakeholders of Łódź and Pécs as well, while the Polish respondents also favored promotion campaigns and their Hungarian colleagues eco-innovative developments; in Naples stakeholders are focused on promotion campaigns, examination of best practices, and on applying eco-innovative solutions.
- Respective to the socio-cultural features, stakeholders of Łódź believe the least that these factors have any relevance for a sustainable waste/resource management; stakeholders in all cases highly prioritize openness to change, which means that they rather expect reflexive individual efforts than macro level structural changes in order to improve waste/resource management; stakeholders in all cases believe in the

importance of deliberative communications as a mode to encourage individuals for shifts about their praxes; participation and social progressiveness is very much appreciated by the stakeholders of Naples most probably because of the tendency of social disengagement from environmental issues.

- As regards to the pairwise aspects: stakeholders of Amsterdam and Ghent prefer private funds as the main financial source for waste/resource management, while their colleagues in Naples, Pécs, and Łódź favor public funds; in East Europe EU level regulations of waste/resource management are rather disliked; the preferred mode of policy formulation is bottom-up in Naples, Pécs, and Łódź, while rather top-down in Amsterdam and Ghent; in line with this, in Amsterdam and Ghent a rather narrower coalition of agents is favored as the main decision-maker entity; there is a general consensus among stakeholders that waste/resource management policies should strive for long-term solutions.

4. Company related investigations

4.1 Recalling the concept of corporate environmentalism

As it is described in Deliverable No.3.2 (Grünhut et al. 2018) of the REPAiR project, corporate environmentalism refers to the recognition and integration of environmental concerns into a firm's decision-making process, and it is one way how a business entity can address environmental issues (Banerjee, 2002). Firms' pro-environmental behaviours can be twofold. One of them is 'externally' regulated (by a meta-governmental, governmental, local governmental organisation). The other one – that is more important from the point of view of environmental consciousness – is self-regulatory mechanism. It is attributed to a variety of different motives (and as an interdependent phenomenon, 'understanding what really motivates corporate environmentalism is important for policymakers, since the effectiveness of government environmental policies depends in large part on how corporations will respond to them' (Lyon and Maxwell, 2004, p. 16). The latter approach (self-regulatory mechanism) is usually manifested in the use of environmental management systems such as the EU's Eco-Management and Audit Scheme (EMAS) and the International Organization for Standardization's ISO 14001 quality management system (Hillarya and Thorsenb, 1999; Neugebauer, 2012). The first version of EMAS was issued in 1993 while the first version of ISO 14001 was launched in 1996.

'ISO 14001:2004 specifies requirements for an environmental management system to enable an organisation to develop and implement a policy and objectives which take into account legal requirements and other requirements to which the organisation subscribes, and information about significant environmental aspects. 'ISO 14001:2015 revised this management system including stricter regulations for firms applying for the certification.[25]

4.2 Corporate environmentalism in the six countries and regions

In the former deliverables (D3.3, 3.4, 3.5, 3.6, 3.7) we presented the emergence and the trends of the two main environmental management schemes that may indicate the environmental engagement of companies. Where there was available, we used former investigations in order to show the motivations behind the introduction of them. Having regarded the trends of the numbers ISO14001, we have to realise that 37.6% of the ISO14001 certificates (in 2016) was in these six countries in Europe, led by Italy, bearing more than 22% of the European ISO14001 certifications (Figure 9).

[25] www.iso.org

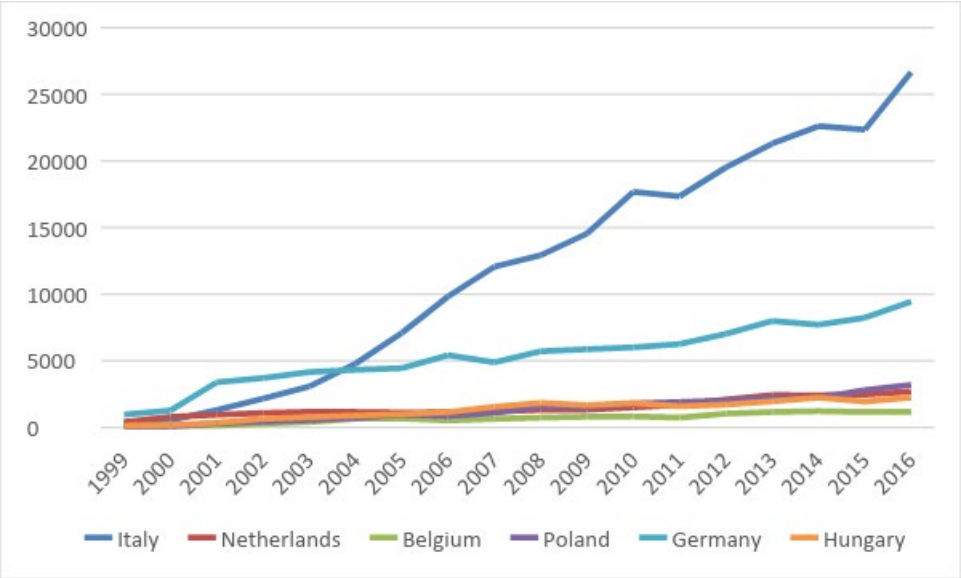

Figure 9: ISO 14001 in the six case study regions (1999-2016)
Source: https://www.iso.org/the-iso-survey.html

We can get a clearer picture about the trend if we compare the rates for 1 million people (Figure 10). This picture shows us that around 2006 in Belgium, Poland, and around 2007 in Germany there was a drop that can be explained by the expiry of the certificates and the lower amount of renew. Another drop can be detected in some countries in 2011 (Belgium, Hungary, Italy). (The change of the population has no effect on the trend as it was quite stable in every case.)

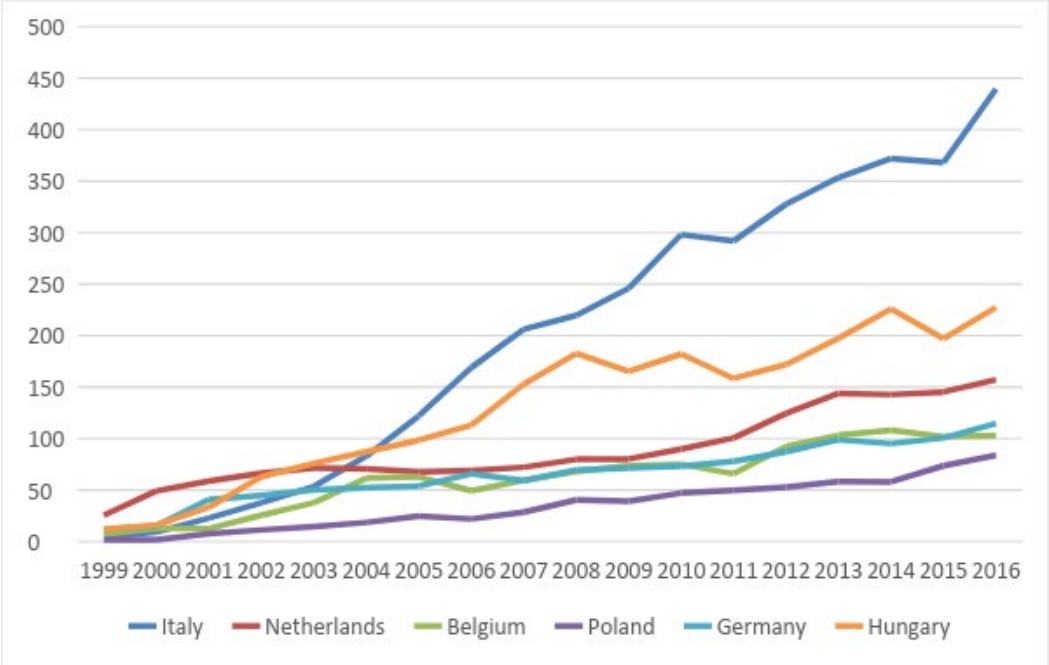

Figure 10: Number of ISO 14001 certificates per 1 million capita in the six countries between 1999 and 2016
Source: Based on https://www.iso.org/the-iso-survey.html; EUROSTAT data, own contribution

From 1999 until 2003 the Netherlands was forth runner in the per capita number of ISO 14001 certificates when Hungary got the leadership for two years. What is very unambiguous is that Italy has the leadership in corporate environmentalism and Hungary has also relatively high per capita number of certificates. However, while the trend in Italy is almost continuously increasing, it is very hectic in Hungary. (The reason behind might be again the late renew of certificates.)

Analysing the number of ISO14001 certificates over the number of 100,000 companies (Figure 11), the picture is similar to the one before. Italy is a leading country followed by Hungary and Germany (with a major gap), then, after a gap the order is the Netherlands, Belgium and Poland, respectively.

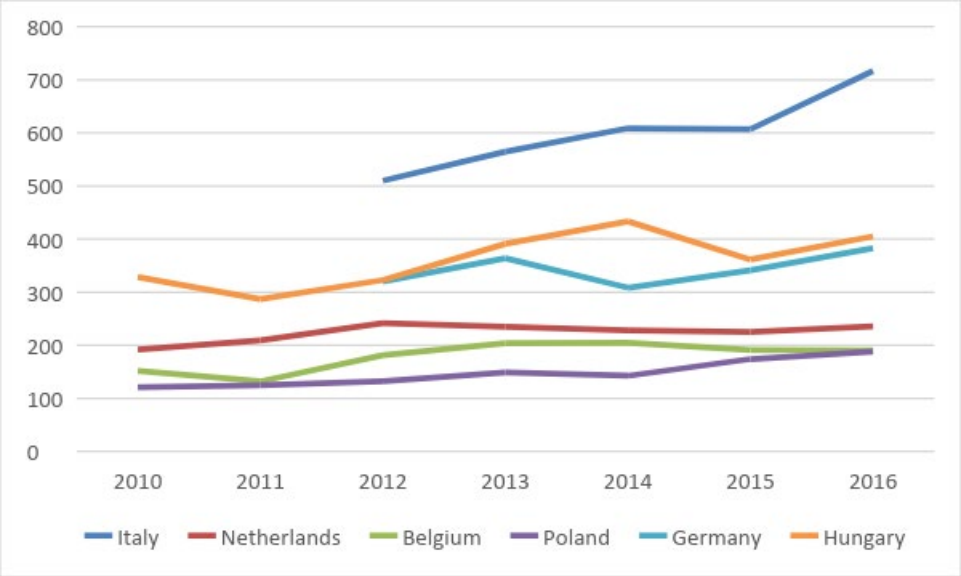

Figure 11: Number of ISO 14001 certificates per 100,000 companies (2010-2016)
Source: Based on https://www.iso.org/the-iso-survey.html; EUROSTAT data, own contribution

Having regarded the dispersion of EMAS certifications (Figure 12), the North-South dichotomy can be seen in Italy (that might reflect to the economic historical difference in Italy), besides, the dominance of Naples can also be seen. In Germany, a south-western dominance is pictured. Due to the low number of EMAS in the other countries, territorial condensation cannot be said dominant, however, in the case of Hungary and Belgium, the concentration of the EMAS in the capitals can be seen.

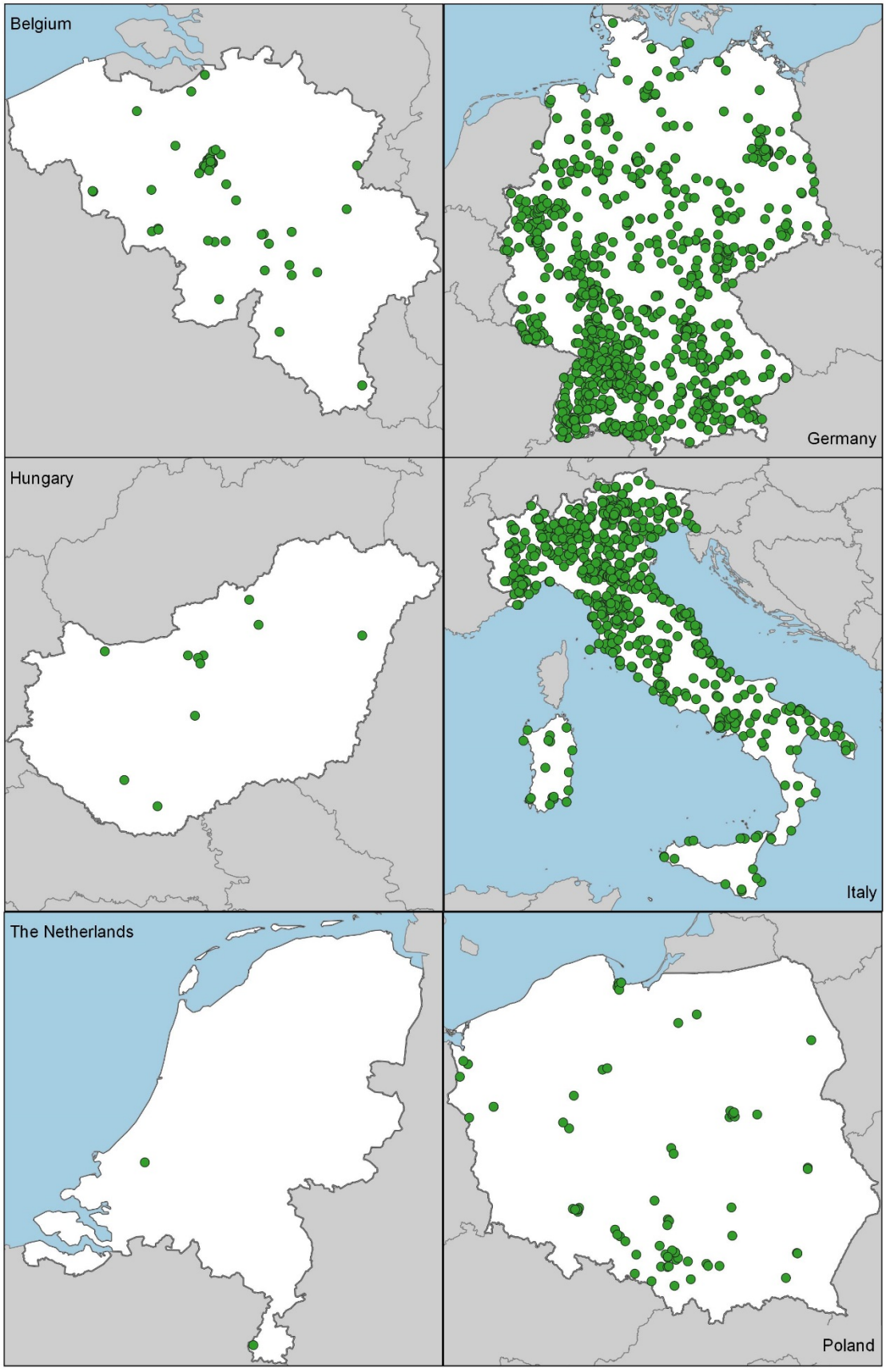

Figure 12: EMAS certifications in the six case study countries (2016)
Source: http://ec.europa.eu/environment/emas/register/reports/reports.do Map: Tamás Szabó

4.3 Corporate environmentalism and the motivation behind

It is difficult to reveal the motivations behind the huge differences in corporate environmental responsibility/corporate environmentalism. We could see that – for instance – the Netherlands is "the" leading country in circular economy with its companies, organisations, industrial parks, spatial plans (etc.) of circular economy. However, in connection to corporate environmentalism we can hardly say that. Firms with ISO 14001 (per 100,000 companies) are relatively few, and with the two EMAS certifications (cf. also D 3.2 – Grünhut et al. 2018), the Netherlands is the last in the six countries. On the other hand, Italy has the highest number of ISO 14001 certifications. The reason can be that Italy – in general – is quite conscious in environmental and waste issues. One of the reasons – besides the several positive initiations – can be the bad experience of waste management crisis in Naples that culminated in 2007-2008.

In their research, Mueller et al. (2011) tried to reveal the behaviour and the reasons behind the choice of certificates (and environmental related corporate social responsibility (CSR)) of German companies. Their empirical results show that German companies have a rather conservative view on environmentalism that is probably induced by strong government regulations. Concerning Mueller et al. (2011) results, the issue of climate change is seen as the main reason for corporate environmental responsibility. Mueller et al. (2011) have also emphasised that many German companies that focus on environmental initiatives (in order to stay competitive) have invested in the conservation of resources (Mueller et al., (2011). A summary of German use of EMS standards can be presented by the words of Neugebauer (2012).

Having regarded the EMAS certifications it should be emphasised that EMAS certification is available not only for companies but for local governments and other non-for-profit organisations as well. Investigations show that the drivers of the entities to choose EMAS are varied. In Germany Neugebauer's (2012) investigation showed that in Germany 'ISO 14001 has become institutionalised to an extent where it is de-facto mandatory whereas EMAS is only implemented by firms that have an internal motivation to do so. The decision about EMAS is often made at the site level whereas ISO 14001 is decided about at the highest corporate level' (Neugebauer, 2012, p. 252). On the other hand, Murmura and colleagues' (2018) empirical results showed that EMAS certification seems to be strictly correlated to ISO 14001; in fact the majority of companies which operate in international markets have both standards; moreover companies of larger size opened up primarily to certification compared to those of smaller size and are prompted to certification for different reasons (Murmura et al., 2018, p. 691).

In his empirical investigation, Kudłak (2017) analysed the most important drivers motivating companies to implement ISO 14001 environmental management systems (EMS) in Poland (between 1996 and 2006). The chief three drivers found by Kudłak are (1) the effort to eliminate their adverse impact on the natural environment (58.36%), (2) the wish to enhance their image (58.36%), and (3) the

wish to comply with environmental regulations. Kudłak also pointed out that the importance of economic drivers and the stakeholder's pressure remained relatively low as well (Kudłak, 2017).

Concerning a survey in 1998-99, Hungarian companies were already committed to environmental management in that early phase of environmental certifying processes. One of the reasons (but not solely) was the high rate of investments of Western European companies (from the end of 1960's) and they brought their 'environmental-conscious culture' (Málovics et al., 2007).

Besides, Ransburg and Vágási, 2007 also viewed economic factors as motivators for the introduction of an environmental management scheme, including the positive effect on corporate image. On the other hand, environmental sustainability or protection appeared as a low-level factor in motivations (Málovics et al., 2007). Csutora and colleagues' (2014) examination revisited the issue of the motivation factors of corporate environmentalism (via certification) later on. Their results showed that Hungarian companies were more sceptical towards the benefits of the implementation of corporate sustainability/introduction of environmental schemes.

5. Conclusion

Based on the investigation made for Deliverable 3.8 it can be said that the eastern-western (north-south) dichotomy – that derives from the history, as it was highlighted in several parts of the second chapter – can be seen in the economy, innovation or in the structure of the labour market, however, recent differences in demographical trends derive mainly from the 2000's (but still with an economic reason). Poland and Hungary are facing population loss, due to outward migration (and also an ever-decreasing trend in fertility). The outmigration is especially affected Pécs in the past few years when the city lost around 7-8% of its population.

After a descriptive chapter about the socio-spatial-economic situation of the six case study countries and regions, based on empirical data, an in-depth socio-cultural comparison took place. The first part of Chapter 3 presented a secondary socio-cultural analysis on the linkage between waste-consciousness where SSCA-1 used Flash Eurobarometer Report 388 as a source for data. During the secondary analysis a composite variable was developed, the Waste-conscious Behaviour index which was the explanandum in the inquiry, and tested its relationship to the respondents' social milieus that were, accordingly, the explanant factors. The second part of the secondary socio-cultural analysis (SSCA2) similarly strives to identify a cognitive-normative ideational substance that could describe individual subjects' attachment to their natural surroundings and it also sheds light on the culturally framed ontological foundations of environmental awareness. The third part (PSCA) is introduced the view-points of the REPAiR stakeholders allowing a quantitative analysis.

Although, concerning that Steg and Vlek (2009) argue that individuals are fairly inconsistent in their environmental behaviour (one may behave in environment-friendly in waste recycling, while behaving in an environment-burdening manner in the transport domain), our secondary analyses showed that either we are investigating waste-sensitivity or individuals' position towards climate change (as an indicator of environmental awareness), research results show similar findings in both 'domains'. There are two main groups in that sense; Belgium, Italy and Germany are in the group with higher household sensitivity while Hungary, Poland and the Netherlands have lower ones. The order within the groups sometimes changes but the trend can be seen like this.

Taking into account the socio-cultural features of environmental awareness, the analysis showed that being a woman can mean a higher environmental awareness in the six case study areas. Actually, this phenomenon was also found in Bodor and colleagues' work (2018) where environmental awareness towards renewable energy and energy efficiency was analysed.

Inglehart (1997, 2000, 2005) argues that in post-industrial societies post-material values, norms and attitudes are more common which socio-cultural and socio-

moral phenomena – among other implications – are in favour of praxes like taking collective responsibilities and willingness for participation. Based on this argument, it is compatible to assume that societies with higher income rates are rather tempted to show more committed caring towards their natural environment, i.e. collective waste consciousness is more common. However, investigations did not support entirely this presumption. Although the Netherlands has higher GDP (by 10,000 EUR more) than Italy, waste consciousness is significantly higher in the latter country, and that finding is true also regarding to the Italian case study region compared to the Dutch one.

Geographical location still matters; however, the eastern-western difference can be detected here as well. The cities of Łódź and Ghent are located in the central parts of their countries, but whilst Łódź is rather a secondary centre within its country as well, being just in a transition to find its main role (culture.pl), Ghent is a major hub at the national and in the interpretation at European level as well. On the other hand, Naples, such as Pécs, represents a central role in a region (Campania) that has many struggles and represents the negative side of the nation's territorial differences (same as South-Transdanubia).

Going towards waste sensitivity and environmental awareness the picture is a bit different and is further from the classic eastern-western (north-south) approach, although, the dichotomy in culture can be detected in few cases (e.g. the level of acceptance of EU regulations or leaving a grace period before fines, by the opinion of stakeholders).

Continuing with the spatial differences, it seems that the six case areas can be divided into two main groups relating to both waste sensitivity, the worry about climate change and corporate environmentalism. The first group with more environmental awareness (based on the statistical analyses of the project) includes Germany, Italy and Belgium, while the second group (with usually lower values than the EU average) consists of the Netherlands, Hungary and Poland. (Basically, the order is usually the same as it is mentioned above.) Taking into account the complex economic and/or socio-cultural background it cannot be said that the two groups represent two main socio-cultural entities. Although, the second group consists of two post-soviet countries, it also consists of the CE policy leading country, the Netherlands. On the other hand, both groups equally consist of countries where the high or low level of well-being (subjective economic situation) is accompanied by high environmental awareness.

Having regarded the PSCA, where respondents were mainly the stakeholders of REPAiR project, the results of the quantitative analysis verified some results (and emphasised some recent challenges) that were identified in the qualitative research of the project in WP6 (governance and institutional investigations). These were – among others – (compared to the other cases) the ‘negative’ perception about the comprehensiveness of legal frameworks in Naples, or the high importance of the possibility of manoeuvre locally in the case of Pécs, that might reflect to the very recent centralisation process in Hungary.

As regards to this socio-cultural block of PSCA it should be highlighted that the findings are in positive relation with the conclusions of SSCA2, insofar as in those macro contexts, in Belgium, in the Netherlands and in Italy respectively, where people have higher environmental awareness, stakeholders perceive the relevance of social-cultural features for a sustainable waste/resource management as more fundamental than in macro contexts where environmental awareness is less common, like in Poland. (Only Pécs does not fit into this framework. An explanation (without any empirical proof) of this might be that the interviewees were well aware of the expectations of the interviewer related to the 'right responses'.)

Corporate level investigation shows a different picture. The leadership of Italy is unambiguous, however, the second place for Hungary poses some question marks in spite of its remarkable rank of the result of stakeholder survey. As it can be seen in D 3.7 (Varjú et al. 2017) (and mentioned above), the motivation of introducing EMS of companies derived rather from outer expectation than inner motivation.

Most of the correlations that were revealed here in the summary section are based on the basic tentative comparison of the researchers, based on the different empirical findings. These correlations and results are promising but further proof and investigations are needed.

The outcomes of this deliverable were feed into WP7 works and actions. Based on the outcomes of D3.8 six hand-outs were made for the cross-case knowledge transfer PULL (WP5) workshop held in Naples Consortium Meeting in May, 2019, in order to inform stakeholders about the socio-cultural features of the sending societies. Outcomes of the D3.8 analysis were integrated into the D7.2, online knowledge transfer handbook as well.

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