

Experiences in new EU Accession Countries

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Waste management in modern societies is passing through several development stages. However, the transition of waste management from a pure disposal management over a more or less controlled waste management towards a resource efficient material flow management offers great challenges for all stakeholders involved in the process. After the collapse of the communist regime and the political and economic opening of the Central and South-Eastern European reform, countries there has been a major backlog in the modernization of waste management. This offered the opportunity for international companies to extend their business to these new markets with technologies and services already used in their home markets. Because of their similar historical development within a communist system several typical characteristics can be identified, that are met by international waste management companies in their business practice within these countries. The cooperation of private waste management companies with the public authority of these former communist countries was a major challenge for both sides. Especially in the countries Romania, Bulgaria and Croatia that joined the EU within the last years this *clash of different systems* can still be felt today.

Saubermacher has made the step into the reform countries immediately after the political changes of the early nineties and can therefore rely on almost 25 years of practical experience. Each country had its own peculiarities, which require different measures and consequences by the management depending on timing and specific local conditions. Nevertheless, the points raised in this paper can be described as typical for the transition countries of Central and South-Eastern Europe. These peculiarities can still be found today, especially in the three discussed countries Romania, Bulgaria and Croatia that entered the European Union in 2007, respectively in 2013.

1. Current situation in new accession countries

Countries apply for the membership within the European Union and are formally recognized by the European Council as a candidate country after a detailed examination of their application. This leads to the granting of the country's candidate status. Accessing countries are those candidate countries which have completed accession negotiations and signed an accession treaty with the EU. The last accession rounds took place in 2007 with Bulgaria and Romania as well as in 2013 with Croatia. Current candidate countries are Iceland, the former Yugoslav Republic of Macedonia, Montenegro, Serbia, Albania and Turkey. Accession negotiations were opened with Turkey in October 2005, with Iceland in July 2010 and with Montenegro in June 2012. In November 2009 the Commission recommended the opening of negotiations with the former Yugoslav Republic of Macedonia, which has however yet to be agreed by the Council. [4]

Enlargement of the European Union is a key factor to an expansion of environmental protection. Therefore an important part of the accession process is the adoption of the European environmental legislation. Although environmental problems resulting from unsafe and inadequate waste management do exist even in existing EU member states it can be stated that especially the Central and Eastern European countries lag the necessary implementations for changes regarding their waste management sector. With the problem arising that these countries are confronted with similar legislative targets regarding diversion from landfill, recycling as well as the various producer responsibility obligations. As progress takes up pace very slowly the transition to meet the EU targets has to be done in an even shorter period of time. [1]

1.1. Transition periods

Both the countries that joined the European Union in 2007 as well as 2013 have to fulfil the so-called Copenhagen criteria. These include community rules, standards and policies that represent the European law framework as a whole. Due to the existing shortcomings of the new member states transition periods have been defined and agreed upon for the adoption regarding the EU legislation framework. Thus, the application of certain EU legislation requirements is postponed to a specified time frame. The relevant waste management transition periods for the countries Bulgaria, Croatia and Romania can be found in the table below.

Table 1: Transition period of relevant countries

| Countries | Directive 94/62/EG Packaging and Packaging Waste | Legislation 259/93/EWG/ Waste shipment | 1999/31/EG Landfill Directive | Dir. 94/67/EG and 2000/76/EG for the Incineration of hazardous waste | Directive 2002/96/EG Electrical and Electronic Equipment |
|-----------|--|--|--------------------------------------|--|--|
| Bulgaria | until 31.12.2014; with interm. steps | until 31.12.2014 | until 31.12.2014; with interm. steps | -* | until 31.12.2008 |
| Croatia | -* | -* | until 31.12.2020; with interm. steps | -* | -* |
| Romania | until 31.12.2011; with interm. steps | until 31.12.2015 | until 16.07.2017; with interm. steps | until 31.12.2008; with interm. steps | until 31.12.2008 |

* no transition period: becomes effective from accession

Sources:

Wirtschaftskammer Salzburg – Fachverband Abfall- und Abwasserwirtschaft (2014): Übergangsfristen der neuen Mitgliedsstaaten im Bereich Umwelt – Übergangsfristen nach Artikel 24 der Beitrittsakte. Online: https://www.wko.at/Content.Node/branchen/sbg/sparte_iuc/Abfall-und-Abwasserwirtschaft/uebergangsfristen_der_neuen_Mitgliedstaaten_im_Bereich_Umw.html, 2014-05-22.

Richtlinie 1999/31/EG des Rates vom 26. April 1999 über Abfalldeponien geändert durch die Verordnung (EG) Nr. 1882/2003 des Europäischen Parlaments und des Rates vom 29.9.2003.

1.2. Implementation status in Bulgaria

When Bulgaria joined the EU in 2007 a national waste management act had already been adopted since 2003 defining the necessary responsibilities and obligations regarding organization, authorization, financing, supervision and control of waste management activities to the state and local authorities. With the current waste management act adopted in 2012 [16] the EU Waste Framework Directive has been introduced into the Bulgarian legislation and with the national waste management programme from 2008 central principles like the waste management hierarchy, the proximity principle, the producer responsibility and polluter pays principle came into effect at least on the legislative level. With the country's EU accession the central purpose of the waste related enforcements was to establish working control mechanisms and to set up a reliable development path for a better waste recovery and protection of the environment in general. [5] Overall it can be stated that the Bulgarian legal basis is gradually aligned to the European guidelines.

To meet the set targets the country had transition periods for the Packaging Directive (94/62/EG), the EU-Legislation on waste shipment (259/93/EWG), the Landfill Directive (1999/31/EG) and the Directive for Electrical and Electronic Equipment (2002/96/EG).

Regarding the Directive 94/62/EG for Packaging and Packaging Waste Bulgaria shall increase the total recycling quote for material recycling or incineration in incineration plants with energy recovery with several intermediate steps until the end 2014. There has already been a significant increase in the packaging waste recycling between 2004

and 2010 with the largest proportion of recycled packaging waste linked to paper and cardboard. [13] For 2010 Bulgaria has reported zero percent recycling to the European Union. Although packaging waste is not included within the recycling rate reported, it will require a high effort to fulfil the recycling target of fifty percent by 2020.

Referring to the EU-Legislation 259/93/EEC on waste shipment Bulgaria has to meet the requirements until the end of 2014. Therefore waste types of attachment III need to be notified at the competent authority. The Ministry of Environment is in charge of monitoring the compliance with and enforcing the regulation. Sanctions for violations of the regulation consist in the payment of the costs for safe disposal. [9]

As for the Landfill Directive 1999/31/EG several plants in Bulgaria do not fulfil the requirements of monitoring measures for water and leachate, the security of soil and water, the gas collection or the requirements concerning corrosive and oxidizing waste streams and regarding the prevention of incursion of water. These plants have to be reduced step by step. A landfill tax is in place and has to be paid for waste sent to non-hazardous landfills, municipal waste landfills and landfills for construction and demolition waste. There are two tax levels for the first two mentioned landfill types depending on their EU compliance: 1.53 EUR/t for waste sent to EU compliant landfills – which is expected to rise to 18 EUR/t by 2014 – and 3.06 EUR/t for non-compliant landfills. The tax for inert construction and demolition waste is even lower with 0.26 EUR/t. [8] The increasing landfill taxes would contribute to an improvement in the recycling rate in Bulgaria but it can be stressed that the country will have to make an exceptional effort in fulfilling the requirements of the targets set by the Waste Framework Directive.

1.3. Implementation status in Croatia

Croatia is a member of the European Union since 2013. Regarding the transposition of the acquis in the waste sector Croatia is very advanced, thus leading to only one transition period regarding the Landfill Directive. With the recent update to the national Waste Act which was adopted in 1995 the alignment to the Waste Framework Directive 2008/98/EC should be completed. [6]

The main policy documents on the national level are the Waste Management Strategy from 2005 and the Waste Management Plan from 2007 covering the period from 2007 to 2015. The main objective of the strategy is to establish a framework that helps to reduce the quantity of waste and to manage the waste in a sustainable manner. [10]

As the collection system has already reached a high percentage regarding organized municipal waste collection (96 percent in 2010 fulfilled the quantitative target for 2015 of ninety percent [6]) the focus is now set on reaching the recycling targets. This is expressed in efforts for the improvement of the recycling rate regarding already separately collected wastes that still tend to go into landfilling as well as in increasing the separate collection to minimize the amount of biodegradable municipal waste according to the transition targets.



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As mentioned above Croatia is only facing one single transition period regarding the implementation of the EU Landfill Directive 1999/31/EG. The requirement to reduce the amount of biodegradable municipal waste going to landfill to respectively 75 percent, 50 percent and 35 percent of the total amount (by weight) of biodegradable municipal waste produced in 1997 which has to be implemented in several intermediate steps until 2020, starting with December 2013. [2] The 75 percent reduction target has to be fulfilled until 2013 and the fifty percent target by 2016. Therefore all existing landfills shall comply with the requirements of the Directive by 31. December 2018, except the appropriate location of the landfill, as laid down in Annex I, point one. The landfill can be authorized only if the characteristics of the site with respect to the above mentioned requirements, or the corrective measures to be taken, indicate that the landfill does not pose a serious environmental risk. [3] Although until the year 2018 several intermediate steps shall ensure a gradual reduction of waste landfilled in existing non-compliant landfills the challenge in order to reach the targets regarding the reduction of biodegradable municipal waste to be landfilled is huge. Besides an increase of overall biodegradable municipal waste to over 1,000,000 tons in 2010 the last available figures show that still 96 percent were landfilled while only 1.3 percent went to composting plants. [6]

1.4. Implementation status in Romania

With the first national waste management strategy published in 2004 the focus was on the implementation of the legal framework necessary for EU accession. [12] Covering the time period 2003 to 2013 both the national waste management strategy as well as the national waste management plan is undergoing a review process to update existing targets and actions for the time frame 2014 to 2020. The review document of the updated national waste management strategy is already available. [11] The focus lies on waste prevention and reuse for more efficient use of resources, development and expansion of systems for segregated collection of waste, development and implementation of technologies and recycling and/or recovery facilities, support for energy recovery from waste – for waste that cannot be recycled – as well as reduction of the amount of waste disposed of through storage. [14]

Regarding the waste related requirements of the European Union the national waste laws have been fully aligned with the *acquis* although two transition periods are still in place. For the shipment of waste the respective legislation 259/93/EWG waste shipment is still transposed until the end of 2015. Waste shipments in the form of import, export or transit to/through Romania concerning waste types of attachment III need to be notified at the competent authority.

The second transition period is related to the Landfill Directive 1999/31/EG. As Romania is among the countries that were landfilling more than eighty percent of their municipal solid waste in 1995 the country had the option to obtain a derogation period of a maximum of four years. Romania qualified for this derogation, thus having the obligation for full compliance with certain types of landfills (2013 for non-hazardous

industrial waste and 2017 for municipal landfills). [1] To date several plants in Romania do not fulfil the requirements of monitoring measures for water and leachate, the security of the earth and water, the gas collection or the requirements concerning corrosive and oxidizing waste streams and regarding the prevention of incursion of water. These plants have to be reduced step by step. By 2015 it is planned to close 150 old municipal waste landfills in urban areas and another 1,500 old municipal waste landfills as well as unlawful sites in rural areas.

A high effort is needed for the achievement regarding the recycling level of fifty percent by 2020. Also a five year derogation until 2025 cannot change this level. As in other countries being at the beginning of introducing a separate collection, Romania does comparatively well in paper/cardboard and metal collection and recycling. However, as recycling of municipal waste has started recently the overall recycling rate is very low with approximately two percent. This already includes recycled packaging waste from households so the main challenge lies in the development of the necessary infrastructure for recycling of municipal waste. [7]

2. Challenges for waste management companies and experiences faced

After the collapse of the communist regime and the political and economic opening of the reform countries in Central and South-Eastern Europe there has been a major backlog in the modernization of waste management. This opened up the opportunity for international companies to expand their business to these new markets with technologies and services already used in their home markets. Economic constraints of the communities, but also political interests led to privatization of the former completely public owned municipal services. The cooperation of private waste management companies with the public authority of these former communist countries was a major challenge for both sides. Especially in the countries Romania, Bulgaria and Croatia that joined the EU within the last years this *clash of different systems* can still be felt today. It often lacked the legal framework and also the municipalities or regional governments had little experience with private companies.

Saubermacher started in the reform countries immediately after the political changes of the early nineties and can therefore rely on almost 25 years of experience. During the first internationalization step Saubermacher expanded its business to the direct neighbouring countries like Slovenia, the Czech Republic and Hungary. Within a later step Croatia, Romania, and Bulgaria have joined the Saubermacher Group as well. Each country had its own peculiarities, which required different measures and consequences by the local management depending on the timing and specific local conditions. Nevertheless, the following points can be described as typical of the transition countries of Central and South-Eastern Europe. These peculiarities can still be found today, especially in the three discussed countries Romania, Bulgaria and Croatia that entered European Union in 2007, respectively in 2013.

2.1. Lack of modern infrastructure – plants, equipment and technologies –

When Romania and Bulgaria entered the accession status of the European Union, the regional waste management was predominantly undifferentiated and primarily consisted of a commingled collection and unordered waste disposal on wild dumping sites or non-sanitary landfills. Within the commercial and industrial sector recycling existed only for a few fractions like e.g. paper and cardboard. Sorting and treatment plants were few in numbers and mostly of small dimensions. The poor road infrastructure made it difficult to collect waste to cover all areas with modern waste collection equipment.

2.2. Lack of capital

The communities and local authorities usually had no money to buy vehicles and equipment even if they already had delayed necessary investments for years. They were (and are still) depending on grants and donations or tried to transfer their duties to private companies to fulfil waste collection services. However, both described cases do have their pitfalls. Despite funding communities often have neither the financial means to bear their own contribution, nor the organizational experience to apply for the grants in a formal correct way. Especially in countries like Bulgaria and Romania EU funds reserved for these new accession countries were therefore not used.

In some cases, the cornucopia of EU subsidies were used in such an uncontrolled way, that oversized or uneconomic landfills or treatment plants were built. Often this happened under the influence of political interests and misuse of public funds though against the interests of the private sector. Even if in this way the public authority was able to secure the financing of the construction, subsequently there was a lack of money for sufficient maintenance and proper operation.



Figure 1: Oversized landfill project financed by EU in Rousse, Bulgaria 2005

In awarding of public contracts to private waste management companies, the problem of lack of capital is even more apparent. In case that waste management was still organized by the municipality, it is a common wish of the authority that the private partner takes over the existing communal company in the process of privatization. The public side therefore expects from the private partner to take over the (overstaffed) personnel, purchases modern equipment and delivers a perfect performance in all services.

On top of that the already low waste charges, that often were not even covering the existing costs, should not be increased because of causing political troubles. If the private partner manages to convince municipality to raise waste charges, it could happen that the payment rate from the citizens is dropping. Therefore, if the polluter pays principle was applied, the quality of waste management should correlate with the socioeconomic circumstances and possibilities of the population.

2.3. Lack of know-how – experts and skilled labour –

A lack of expertise was reflected both on the level of ordinary workers as well as within the management positions. While it was possible to raise the quality at the low worker level with appropriate training, it was quite difficult to gain higher quality levels in the management hierarchy. Especially in the boom years in Eastern Europe up to the beginning of the economic crisis (late 2008) it was difficult to get and especially hold good local managers or professionals. Good employees were expensive, in short supply on the market and were lured away quickly. This also had a massive impact in the public sector, since good management employees were poached by the private sector because of low salaries. The remaining or new employed staff often had technical and organizational weaknesses that led to increased bureaucracy and complicated the daily cooperation with the authority for the private sector. Meanwhile, more stability and quality has returned due to the economic crisis and due to internal measures of the authorities.

2.4. Lack of political stability – domestic legislation/policy and political will –

Tendering or awarding of municipal contracts has always been an instrument of political interests. The large backlog in all areas of waste management in these reform countries opened new opportunities to private companies to grow rapidly and gain new market shares. As great as the market opportunities were, this is also true for the political and the associated economic risks that were and are still enormous. In many areas, including the Public Procurement Act, the legal rules were not yet mature, so tenders and contracts were formulated in an unprofessional manner and with high economic risk for both sides. Especially the big difference between written contract and real practice takes foreign companies some time to get used to this *modus vivendi*.

2.5. Lack of concern for local peculiarities

Even prior to the EU accession all countries began to adapt their legal framework to the requirements of the EU. However, the fact was overlooked that in some individual areas of waste management own local systems had been developed – even without any legal background. Therefore the introduction and implementation of EU-based policies and laws posed new problems for the implementation. The introduction of the Packaging Directive lead for instance to the establishment of collection systems,

which have the task to collect packaging materials and supply for recycling. However, it had been ignored that particularly in Romania and Bulgaria an informal sector existed that heavily depended on the collecting and selling of waste materials. People from the poorest population often belonging to the gipsy minority belong to this sector collecting recyclables either in the cities from the waste containers or directly on the landfill from the tipped waste. Throughout the country collection points were developed in which the valuable recyclables – especially metals, paper/cardboard and plastics – could be sold by price per kilo. The implementation of a legislative packaging system without inclusion of this part of the population would have withdrawn their bases of existence.



Figure 2: Informal waste sector



Figure 3: Intentionally set fire at a landfill out of protest

2.6. Lack of environmental consciousness/awareness

In many cases there are economic constraints hindering environmental protection turning it into apparently luxury. Environmental awareness, however, is less dependent on financial resources, but more on successful education and public awareness programs. The time factor also plays an important role. People need time to understand and to adopt to new systems. While legislation can change over night and technology can be bought, social factors need to be constantly addressed and developed.

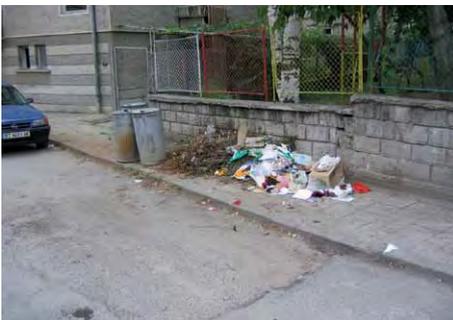


Figure 4: Change of waste management system and raised environmental awareness (before)



Figure 5: Change of waste management system and raised environmental awareness (after)

3. Conclusion and lessons learned

The development of waste management was and still is strongly driven by legal constraints and the growing necessity to protect the environment. Environmental legislation forces scientific institutions and private companies to be innovative and to transform waste management towards a resource efficient material flow management. The access to the EU of the former communist countries in Central and South-Eastern Europe gave a boost to environmental protection and therefore also to the development of waste management in these countries. Adoption and implementation of EU-legislation served as a clear guideline especially for the economically unstable and politically wavering countries by forcing politicians to keep to this path. This raised the predictability regarding economic and political development, thus opening up the opportunity for international companies to extend their business to these new markets with technologies and services already used in their countries of origin.

Even if the similar historical background of the communist system leads to typical characteristics that international companies meet in their daily business practice, each country has its own peculiarities, which require different measures and consequences by the management depending on the timing and specific local conditions. In addition to the usual risks, such as exchange rates, inflation, etc., especially the waste management sector due to the close ties to the public sector is affected by the economic constraints of the communities and the still very large political interests. The legal system often does not guarantee legal certainty and private waste management companies can therefore easily be subject to the mercy of policy makers. To be successful in these markets despite of all these framework conditions, a company has to show flexibility, endurance and willingness to take risks. Even though Saubermacher has withdrawn from some of these countries for various reasons, the company has contributed with its involvement in all the three countries to a more rapid and orderly development of waste management.

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