Zero Waste Training for Municipality Officers

– **Training material-**

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On the Path to Zero Waste - Utopia or Reality?

Csilla Urbán, Humusz

Zero Waste?! Yes. It is a vision, a guidance which must be followed to keep life sustainable: we need to reduce the amount of waste generated. The solution lies not just in the well-known separate collection. Indeed. Although it is necessary for today's disposable consumer culture, it is also quite polluting. The concept aims not only to deal with waste, but to reduce its quantity and its hazard through prevention, responsible resource and energy management. We can all contribute to this.

The Household Waste Statistics (Eurostat) for 2014 shows that in Hungary 385 kg is produced per year per capita. 59% ends up in landfills, 10% in waste incinerators, only 6% were composted and 25% recycled. Although we are below the EU average (475 kg) for waste generation, there is room for improvement. We would also be interested because the current Waste Framework Directive requires that by 2020, 50% of household waste should be recycled or prepared for reuse. However, targets will increase with the amendments suggested by the Circular Economy Package: 70% recycling by 2030 is expected to be achieved. The essence of the targets is that the waste management of countries should move in the most environmentally, economically and socially advantageous way, according to the waste hierarchy.

However, the waste problem is complex and should not be approached from one side. Its environmental impacts are the most well-known (waste of resources, environmental burden on disposal and disposal, climate change related to carbon dioxide emissions), but economic and social aspects are also important. Waste management is a major cost to society (garbage collection, shipping, landfill taxes etc.), so waste reduction means serious financial savings, as well. The environmental costs and job creation potential of different treatment methods are also variable. At the bottom of the hierarchy are the methods that are most likely to pollute the environment - and thus the health of local people and provide fewer jobs. The local economy is best promoted by various prevention and re-use practices eg. Repair shops, reuse centers, producer markets.

The waste problem affects everyone, so everyone (from the public, from the public administration to the manufacturers) is responsible. As a result, it is not only the responsibility of waste managers, but many groups of society that can be involved. Thus, local governments have an important role to play. The zero waste concept not only involves technology solutions or services, each player has a variety of tools and an active role in waste reduction. The reality of its existence is demonstrated by many good practices that have been operating abroad for years. For example, in neighboring Slovenia, within 10

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years, the proportion of recycling has been increased to 49%, outracing Western European countries. In Italian cities (e.g. Capannori, Treviso) thanks to the Zero Waste program, the proportion of separate collection reaches 80%. In the French city of Roubaix, the population was directly addressed by a one-year Zero Waste Challenge, which means that household waste has been significantly reduced.

In order to have a significant role in waste management in public administration, there is a need for guidance from higher levels. The National Preventive Program is a document that aims to show guidelines for waste reduction measures and tools and is part of the National Waste Management Plan. The program recognizes the importance of re-use and awareness, but the promised territorial prevention programs are still lacking.

At local level, the decision-making of local governments enables the system to react to the needs and opportunities of the population. Leaders can call on local communities, collaborations are possible. We emphasize awareness raising, as ultimately the population influences the efficiency of the waste management system. It is made clear by the fact that only 10% of the population collects separately. In addition, there are serious problems with cleanliness: in the capital, contamination of the separately collected waste can exceed 50%. This is a serious problem: it does not only impede the fulfillment of the EU targets, but also adds to the costs of waste management. Appropriate information can also mean reducing problems such as burning household waste in boilers or illegal dumping. However, there is a need for adequate data (unfortunately, data of public interest are difficult to obtain or contradict each other), as well as economic assets such as pay-as-you-throw system (currently the smallest container size 80l, which can only be claimed by individuals).

There is already a network in Europe of municipalities that have accepted a zero waste approach. The Hungarian program was also launched by Humusz in 2015 to draw the attention of local authorities to waste reduction opportunities in Hungary. The Zero Waste Charta provides a point of reference showing solutions and examples of professional help. I would highlight some of the most important ones.

- Development and integration of a Zero Waste Plan into the settlement strategy, zero waste training for the workers of local government institutions, public institutions
- Showing good example in everyday decision making. For example: green public procurement, "greening" public institutions, creating an environmental fund.
- Support local communities, close cooperation with residents, non-governmental organizations, active involvement in decision-making, development, organization of volunteer programs.
- Facilitating awareness at as many places and levels as educational institutions through local media to community spaces. This includes appropriate information eg. What sort of waste can be disposed of and where?
- Expanding the system of separate collection for as many types of materials as possible e.g. Hazardous waste, batteries, accumulators, second-hand clothes, construction and demolition waste. Domestic or community composting programs.
- Promoting programs to promote prevention and reuse in communication, placeholder, organization eg. Exchange bargains, producer or flea markets, gift shops, repair shops, garage shops.

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- ❖ Attitude assessment, situation survey, assessment of problems and opportunities related to individual waste streams, mapping the population's knowledge.
- ❖ Addressing the problem of illegal landfilling and domestic incineration: in cooperation with civil guard, local NGOs, volunteers, communication mode of communication, risk transfer, alternatives.

Circular economy and domestic waste management planning

Csaba Markó, waste management expert

The Waste Framework Directive 2008/98/EC makes it mandatory for Member States to include waste management plans and prevention programs in waste management strategies and guidelines for waste prevention and recovery targets. The Hungarian government seeks to fulfill this task in a number of ways and to define the necessary measures in a more general and specific context:

- Waste management chapter of the National Environmental Program (NKP 2015-2020, 27/2015, (VI.17.) OGY), to be renewed every 6 years

- National Waste Management Plan and National Prevention Program to be renewed every 7 years (OHT-OMP Decision 2014-2020, Decision 2055/2013 (31 Dec.))

- The National Waste Management Public Service Plan to be renewed annually (OHKT 2016, 1250/2016 (V.27.))

- National Collection and Recovery Plan to be renewed annually (OGYHT 2016, Minister for Environmental Protection)

Their detailed presentation of content cannot be included here, but only their overall characterization.

National Environmental Program 2015-2020

The elaboration and general content requirements of the National Environmental Program (NKP) are set out in Annex LIII of the Act of 1995 on the general rules for the protection of the environment. The National Environmental Program is being prepared by the ministry responsible for environmental protection and is approved by the National Assembly, evaluating its implementation every two years. The NKP deals with waste management as a separate topic, but essentially as a general goal of preventing waste generation, the development of separate collection and recovery and the disposal of residual waste. These tasks are defined by waste streams. It is intended as a quantitative goal to meet EU requirements at the time of manufacture (2014). Specifics are assigned to the National Waste Management Plan (NWMP).

National Waste Management Plan and National Prevention Program 2014-2020

The development and general content requirements of NWMP and as part of the National Waste Prevention Plan (NWPP) are set out in the Waste Act CLXXXV. The Waste Act also provides for the

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establishment of territorial waste management plans and prevention programs for the jurisdiction of territorial environmental authorities (but territorial plans have not been drawn up since). The development of the plans is the responsibility of the Ministry responsible for environmental protection as of 1 January 2017. NWMP is approved by the Government, while territorial plans will be approved by the minister responsible for environmental protection. The implementation of the plans must be evaluated in the 4th year of the planning period.

The structure and content of the design and review of plans and programs shall be governed by Provisions 310/2013 (VIII.16.) Government Decree on detailed rules for waste management plans and prevention programs.

NWMP and NWPP set the targets for 2020 and the tasks to be carried out in the light of the waste management situation in 2011. The objectives are essentially aligned with the EU obligations that are being made (2013). Both the NWMP and the NWPP outline a vision for 2020 and then formulate one for each of the waste streams and areas of action in terms of objectives and measures needed to achieve them (R & D & I, awareness-raising, legislation, organizational changes, Industry, agriculture), health and hazardous waste, and sewage sludge, packaging, batteries, electrical equipment, medicines, pesticides, PCBs, oil, construction and demolition waste, Asbestos, rubber and asbestos waste). It sets out the general directions of action in the area and the steps to be taken in the area of prevention, recovery and disposal and then puts them into tabular form in the Action Program, specifying those responsible for implementation and potential sources of development costs and performance indicators. The NWPP has a similar structure of five intervention areas; reuse, green public procurement, environmentally conscious production, attitude formation and the prevention of construction and demolition waste.

National Waste Management Public Service Plan 2016

The preparation of the NWMPSP was mandated by the Waste Act in 2015 as a public task. In practice, National Waste Management Coordination and Asset Management (Hungarian abbreviation: NHKV), established for the public service of public waste management, prepares 68/2016 on the detailed rules for the National Waste Management Plan. (III.31.) Government Decree, in the light of NWMP. NWMPSP should be reviewed annually by 31 October each year and the next year's plan will be submitted to the Government through the Minister responsible for the establishment of a public service charge for waste management (for 2017 this has not yet been done). The NWMPSP contains the minimum requirements that public service providers have to fulfill in order to collect and sort, pre-treat, recycle or dispose of municipal waste separately for the service fee specified in the separate decree. The amount of the fee paid varies in proportion to over or underperformance. The performance requirements cover the ratio of separately collected waste to the type of material, the manner of collection, sorting, pretreatment efficiency, organization and means of collection and transport.

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National Collection and Recovery Plan 2016

The production of NCRP was carried out in accordance with the LXXXV. as of 1 January 2017. NCRP should be established annually by 20 September each year for the following year and approved by the Minister responsible for the Environment (for 2017 this has not yet been done). NCRP determines the recovery rates for products with environmental tax for the collection and recovery system based on centralized co-ordination basically based on expanded manufacturers' responsibility, in order to achieve the goals set out in the NWMP.

Circular Economy Package, plans and implementation

Following the establishment of the NWMP and the NCPs in 2015, and after the revision in 2016, the European Commission's package of proposals for the transition to a circular economy was published, so its contents could not be taken into account during the planning. As the proposals set out the goals for 2025 and 2030 by further developing existing, valid targets, it may seem sufficient to deal with them only in the next planning cycle. However, the measures and developments envisaged by 2020 do not seem to be sufficient to justify the imposition of newer and more stringent requirements, particularly in the light of actual implementation, and this is not even reflected in the NWMPSP and NCRP targets to be renewed annually. As an illustration, a few figures on the requirements and the status of implementation (note that performance statistics and reports must be submitted within 18 months of the current year, so the most recent "verified", statistically evaluated data show more than two years in actual actual situation):

	Existing EU requirement	NWMP/ NCP goals and objectives	Circular economy package	Fulfillment
Utilization of packaging waste	2012: 60%	2012+: 60%	-	2014: 59,7%
Utilization of packaging waste as a raw material	2012: 55%	2012+: 55%	2025: 65% 2030: 75%	2014: 52,3%
Utilization of paper waste as a raw material	2012: 60%	2012+: 60%	2025: 75% 2030: 85%	2014: 66,1%
Utilization of metal/steel waste as a raw material	2012: 50%	2012+: 50%	2025: 75% 2030: 85%	2014: 83,5%
Utilization of aluminum waste as a raw material			2025: 30% 2030: 50%	2014: 59,7%

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Utilization of plastic waste as a raw material	2012: 22,5%	2012+: 22,5%	2025: 50% 2030: 50%	2014: 36,7%
Utilization of glass waste as a raw material	2012: 60%	2012+: 60%	2025: 75% 2030: 85%	2014: 36,3%
Utilization of wood waste as a raw material	2012: 15%	2012+: 15%	2025: 25% 2030: 30%	2014: 31,2%
Utilization of paper/metal/plastic/glass content of municipal waste as raw materials	2020: 50%	2020: 50%	-	2014: 40,7%
Utilization of municipal waste as a raw material	-	-	2025: 55% 2030: 60%	2014: 30,5%
Landfilling of municipal waste	-	-	2030: 10%	2014: 58,8%
Landfilling of municipal biowaste	2016: <820 et	2016: <820 et	2025: <% 2030: 30%	2014: 1000 et
Utilization of municipal biowaste as a raw material	-	-	2025: 50% 2035: 65%	2014: 38%
Utilization of constuction/demolition waste as raw materials	2020: 70%	2020: 70%	2020+: 70%	2014: 60,5%

Municipal and civil cooperation

Péter Merza, Humusz

Local governments and civil society organizations are in a two-way relationship. Cooperation is beneficial to both parties and as a result of the cooperation, social and added value is created, which can be enjoyed by both of the local community and the local government. (Sebestyén, 2011)

By supporting local initiatives, local governments do not only fulfill their social obligations but also fulfill their environmental duties. By developing collaborations at local level, the environment of the local community becomes more sustainable, problem solving becomes more efficient and even environmental problems can be prevented.

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The responsible leaders and decision makers of the settlements are in the best interest of the local community. Of a community who is well aware of the values of their surrounding environment, their past and ideas about their future. They try to make their world in a narrower and broader sense better with their bottom-up initiatives. By leveraging them, the multiplier effect of the local government can be strengthened. Such initiatives may include: preservation and development of residential environments; exploration and protection of natural, cultural values; environmental investments, developments, environmental-value initiatives that build on the local economy such as: bio market, small-scale network, shopping communities.

Non-governmental organizations may participate as experts in drafting, commenting or designing local regulations, programs. For example: bike paths, construction of educational paths, elaboration of a waste management plan or even design and operation of a community compost point.

NGOs are actively involved in education and in awareness raising. This is also a public interest activity. Encouraging education is investing in the future. Environmental education also covers issues with focus on local affairs and global sensitization.

Environmental education is increasingly being part of public education, and civilians and local or national green organizations, as well as the Green Kindergarten and Eco-School program, have been playing an unavoidable role for civilians. The financial contribution of local governments is a great help for increasing the level of awareness-raising. Environmental initiatives can stimulate the activities of local communities and institutions. Population surveys and attitude surveys can be used to develop more targeted development programs.

Non-profit organizations assist the local governments in their activities. In addition, they also have a source-creating and mobilizing function. The former is, for example, a service provided to an institution or financial support, the latter being an example of voluntary work. In 2004, 382 municipalities reported having received financial support through a nonprofit organization. (Sebestyén, 2011)

Good examples and good practices in the relationship between local governments and civil organizations:

• Wekerle Community Circle organizes flea markets and baby clothes markets, which promotes the prolongation of the life of the objects and prevents them from getting into waste.

• Humusz operates a Community Compost Point, which reduces the green waste of the local population. The Municipality of Újbuda was represented on the opening ceremony of the Compost Point and helped to be publicated on the media.

• Residential discussion against waste incineration at home in Bordány and Ipolytölgyes organized by Humusz.

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• Hulladékvadász.hu: After the announcement at the Municipality of Józsefváros, only a week was needed to clear the chaotically messy Clinics metro station. (February 2017) The XIII. District is also the leader in the elimination of illegal landfills, the process is supported by residential announcements.

• Waste Commando Social Patrol Service: a volunteer organization formed in several large cities.

Local organizations act as a bridge between public administration and the population through engaging in public life and even act as a catalyst for local affairs. Tasks and burdens can be taken off the shoulders of the local government.

Literature used:

István Sebestyén (2011): Dimensions of cooperation between local governments and civil organizations, possibilities for functional analysis and measurement of the connection system detailed Ph.D. dissertation (University of Pécs, faculty of Arts and Sciences)

Prevention and reuse of waste in Hungarian legislation and practice

Mihály Hartay, Environmental Advisor, Textrade Kft.

Prevention and reuse are at the top of the waste hierarchy of the Directive 2008/98/EC and the Hungarian Waste Act CLXXXV 2012. On the other hand, neither in the EU nor in the country has made any significant progress, neither in legislation nor in the field of practical life.

The Government Decrees related to the prevention of the Hungarian Waste Act have not yet been prepared such as new deposit regulations, re-use regulation, life-cycle analysis etc. A National Waste Prevention Program has been prepared as part of the 2014-2020 Waste Management Plan, but its action plan does not set deadlines, responsibilities, funding sources for waste reduction tasks, so it is unsuccessful to begin its implementation. NWPP related territorial prevention programs have not been completed yet.

The legal bases for switching to a circular economy have been very slow for years, and since 2008, this has typically not been the new target for packaging materials in the EU's 12 most advanced countries. The seriousness of the changeover to the circular economy is characterized by the fact that the EU intends to finance only 5 billion Euros.

Despite the failure of the Union and Hungary, there are good practices in re-use in Hungary. Several for-profit companies - without operating subsidies - have developed their own re-use systems e.g. second-hand clothing and deposit fee for glass beverage container.

The Hungarian-owned Textrade Kft. within its own financing has developed a used clothes collector system with 1200 containers and collects 5-6000 tons / year in the country. In addition, from Western Europe it buys 40000 tons of unclassified used clothes and sorts it - with the creation of 300 jobs in Székesfehérvár - the largest plant in Central Europe - has installed state-of-the-art technology.

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As shown by the single-use glass life cycle analysis, it is the most environmentally unfriendly packaging, so it should only be used in a deposit-based system. Nevertheless, in Hungary, the deposit system only operates in the beer industry and in low-priced wines.

The Dreher brewery operates an exquisitely operated deposit system. Rotating about 40 Million bottles - despite the growing amount of aluminum cans - can still be operated economically. After a third rotation, the deposit-based system is already economical and a bottle can makes up to 30 turns.

The Varga Winery introduced and still operating economycally a closed-type deposit system since 2013. The economic analysis of the operation concludes that there is 63 HUF saving/bottle, without having to pay the purchase cost of the glass to the customer. With its 4.6 million bottles, it has created its own 300 million HUF investment. The need for a closed system justified, among other things, the self-adhesive label used by others.
These examples show that there is a place and role for re-use. This should be encouraged by state regulation, if necessary by providing funding for the economy.

Tasks to strengthen the role of prevention and re-use:
- Legislative definition of industry and service obligations, prohibiting environmental pulluting (eg self-adhesive label on wine glass)
- raising the mandatory of product warranty from 1 year to 3 years,
- encouraging and supporting a deposit-based system,
- standardization of glass shapes (EU task), financing of regional washers investments,
-Change the waste definition (EU task) to avoid getting the (re)usable product into a waste disposal site.

Complete rebuilding of the National Prevention Program and the definition of deadlines, responsibilities and funding sources for the tasks specified therein.

Rig Waste Collection Project Idea - how to go further

Szabolcs Fábry, Mayor, MNVH Veszprém County

The task to be solved in Hungary is the nationwide extension of selective waste collection to households, to 6 million inhabitants by 2020.

The budget for waste management public service is best increased by the current transport costs, an alternative to this is horse-drawn carriage collection system. The system was being modelled in Nagyvázsony, after a 4-week trial of the Nagybajom region.

Project idea

The idea is a project based on "horse carriage" collection: A completely new kind of recyclable, sustainable, environmentally-friendly selective collection and transport system used in many European Union countries. With the extension of the project, billions of HUF could be saved nationwide if only horse-drawn carriage garbage collection would be introduced in villages, resort areas and small towns. The waste collecting carriage is pulled by one or two horses, in a continuous 3-4 hour run with only one pause. They are capable of pulling up to one and a half tons of waste, less than a waste collection car.

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However, the horse-drawn carriage can way more easily maneuvering in narrow streets and difficult terrain than the at least 20 tons heavy garbage truck. The purchase price of a garbage truck is 50,000,000 HUF, while the cost of purchasing the horse-drawn carriage and the cart horse is 4,000,000 HUF. The annual maintenance cost of a diesel truck is 6,500,000 HUF but the horse carriage and cart horse will cost only 2,100,000 HUF per year. The expected lifespan of the truck is 10 to 15 years, a horse lives for 25 to 30 years, and can also provide replenishment and expansion through reproduction.

From idea to implementation

Four years ago, during a holiday on the South Lake Balaton, the idea was born. I have awakened early in the morning on the long weekend of Pentecost, because of the rattling noise of a garbage-picking car in the resort area. So my question was: Why can not the collection work quietly with horses? From here the project idea was launched. The project was preceded by two professional conferences and years of professional consultation and preparation in Siófok and Nagyvázsony between 2012-2015. With the involvement of specialists, we have developed a nationwide development program with the assistance of Arator Environmental Ltd. and GEOHIDROTERV Geology Engineering, Environment and Water Management Ltd. In Nagyvázsony we have modeled the selective waste collection with a horse-dawn wagon, with a waste collection carriage prototype from the Danka workshop in Nagykőrös. In April 2016, a short film featured with supported statistics, cost reduction data and environmental indicators was also presented. In June 2016, the BBC wrote an article on the initiative.

The 4-week trial run started on November 14th in Nagybajom and in its neighborhood. After obtaining the necessary license, the collection of selective waste was carried out with a horse-drawn carriage during the 4-week trial period (14th November – 9th December 2016) in Kisbajom, Kiskorpád, Kutas, Nagybajom, Pálmajor, Szabás, Somogysárd and Újvárfalva settlements. Collecting was carried out just like with garbage trucks every two weeks. After the visit, selective waste was transported and dumped into 2 containers of 30 cubic meters to the collection point (Nagybajom landfill). After the containers have been filled, these are delivered to the waste management center by a multilift truck, which is capable for transporting two containers at a time. During the test operation, we achieved approximately 270 l of fuel savings, thus preventing approximately 860 kg of CO2 emissions, and we collected 157 m^3 of waste.

This form of collection has had a positive effect on the population, especially among the children, making it more effective for the public's awareness of the importance of selective waste collection. The crew of the riding car has been given special training on selective waste collection so residents can get information and assistance from them.

Future outlook

Large-scale modeling and the test run in Nagybajom shows all that has been demonstrated by the 8 months length comprehensive application analysis. The horse-drawn wagon system can be used in 75%

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of the country's settlements. It is a future prospect that the system of selective waste collection by horse carriage extends to a significant part of the small villages in Hungary and brings the expected savings. In the case of initiating the project in up to 2 settlements per a month with a population of 2000, a savings of 4.4 million HUF will be generated in one year. It is also true of districts where the population, due to the possibilities (the route is difficult to navigate) does not exceed 2,000 people. After replacing the garbage car with a carriage, no staff redeployment of garbage trucks is required (since the released capacity can be diverted to other places), but it can make new jobs, because the minimum required for the operation of the horse-drawn wagons is at least 2 people. The next step is to start the project in Cegléd, Kaposvár, Veszprém and Baranya County.

This is a new approach to domestic relations that integrates social, environmental and financial policies in an integrated way in the field of waste collection. The replacement of current high-consumption and pollutant (carbon-dioxide) lorries by means of horse-drawn waste collection wagons signifies significant cost savings and 25,000 tons of carbon dioxide emission reduction per year in this service area. Local workers are a real efficiency-enhancing measure of the public works program, which promotes positive social and other positive impacts in small villages by keeping the population in place. It is not beside the point of spare the road network, nor of the saving of the existing collection infrastructure (vehicle fleet). If the large-scale sample project system gradually expanded across 60 regions, it would lead to 6.6 billion direct budget savings and 4260 new jobs, in addition to fulfilling the waste management objectives.

Waste management in practice

Mátyás Hartman, Environmental and Technical Manager, Green Bridge Region Nonprofit Ltd.

In the last decade, the waste management of settlements has been constantly changing. One thing has not changed: the task and responsibility of local governments.

That is, the provision of public waste management services by means of a public service contract with a public service provider. Municipalities form a self-government regulation on all things, duties, obligations and rights. Before deciding, public hearings may be held to acquaint public opinion, which is mandatory prior to the decision on the separate collection of municipal waste. According to the CLXXXV Waste Act 2012, fundamentally changed the public service. Among other things, it provided nonprofit management, majority state or municipal property, rated public service providers, and since 2016 introduced the state public service provider, which coordinates, supervises, collects public service fees, resell service fees to public service providers, takes over asset management the waste facilities, examines the adequacy of public service providers. These tasks are provided by the National Waste Management Coordination and Asset Management closed incorporated company. An important change is that the coordinating organization is the owner of all public waste and the public service is the possessor.

The Waste Act as a legal environment has changed over 200 points during four years, mainly affecting municipal solid waste. The basic objective of the reform of the public service is to preserve the benefits

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of the reduction of the flat fee, to ensure a uniform public service level, to compensate the national differences within the public service and to set the public service financing system a sustainable path.

Based on the plans, there will be 20 to 21 public services areas from 1st April 2017, which will also significantly reduce the number of public service providers.

There are significant differences between some public service providers and settlements. There is a system where 60% of the waste is diverted from the landfill, but in most cases it is 30-40%. The newly introduced National Waste Management Public Service Plan (2016) defines specific targets for packaging materials: Paper 10 kg / person / year, Glass 6 kg / person / year, Plastic 4 kg / person / year, Metal 1 kg / person / year. This is currently not being met or some public service providers are only satisfied with a few waste stream.

Other issues, topics that the lecture still touches:

- How effective can technologies be, what is the role of the population?
- Where can local civilians and local authorities links with local waste management?

Treatment options for green goods

Dorotya Harazin, composting expert

What's in the bin?

52% of municipal solid waste is organic matter. If we were composted with a well-functioning system, we would be able to divert huge amounts of waste from landfills and incinerators. 30-40% of the content of our thrash bin would be composted, because it contains garden and kitchen waste, they are „green goods".

green goods : Vegetables, fruit residues from the kitchen, fallen leaves in the garden, trimmed grass, dried flowers

Why composting is good?

By composting, organic matters return to the environment as a nutrient, into the self-sustaining cycle of nature. Structure of the soil becomes better, air circulation, and has good effect on soil water and nutrient storage. It improves the soil's biological activity, and help the plants' natural resistivity. Its dark color increase the soil's warming up facility. Materials in it can be easily picked up by plants, slowing the release of nutrients, thereby reducing the risk of leaching. Compost is also suitable for nutrient resupplying and fertilization. By creating duff compost you don't have to burn dead fallen leaves, it doesn't pollute the air. Economical, because we do not have to buy leaf mould or manure, our rubbish prize will be lower. Fewer rubbish get to the landfills, less greenhouse gas is produced.

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What is composting?

System of degrading and building processes. Organic material re-utilisation, which generates humous-rich land compost. Dry rot occurs in an oxygen-rich environment rather than rot, this is why aeration of compost is important.

Municipal composting

It is the best solution for managing municipal green goods, because we do not create „waste", but it is upcycled locally, it isn't get into waste management system. It's environmentally friendly, available for everyone, requires minimal(financial and other)input and it doesn't recommend special technology. It is approach-shaping, because the circle of nature takes place in front of our eyes.

- Homemade composting : Private gardens, used locally, savings for the family. The role of local government, for example, with regular compost frame allocation and training on composting methodology. The theoretical background is essential for proper composting!
- Community composting: It also has a community-building role, they can take the land for its own use. It can be created from the collaboration of some families from the grassroots or by the influence of local governments when it helps the composting practice of the living community by providing space, tools and training. Many settlements also support composting in public institutions, which also save money for them (for example in the homes of the elderly, in schools, kindergartens, etc.).
- In case of composting on a compost site, the public service provider delivers selectively collected green goods from the houses. Costly, it does not produce high quality compost. The law requires two green waste collection activities per year, but other compostable materials will not be treated in general.

What local government can do?

Municipalities can distribute compost frames for families, but also for local communities for community composting. The frame made of simple laths is the best and cheapest solution. Families can use compost for potting soil or as garden soil improvers. The local government must provide adequate training and professional advice, so it is advantageous to have a contact with competent NGO organization. They can, among other things, help the composting population with presentations, information, free tools or rental opportunities, adjuncts, presentations, compost master training and counseling.

Good examples

We know many good exercises from 15th 16th districts of Budapest, also from Miskolc. There is a community compost point in the center of Humusz Alliance (11th district of Budapest) where people and workers in the area can carry their green goods to compost. The staff members of the association supervise and maintain the compost point properly. From the compost produced, members of the composting community can bring the requested quantity of it into their homes at any time.

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There was a compost action in Paris for public institutions and residential communities. After a two-round tender evaluation, the local government delivered a composting plant or a wormcomposting-box free of charge to community composting contractors.
The initiative started in 2010 and since then 200 communities have been involved in the program - half of them are still operating the system so far, there are 2000 people composting in this program. According to the call, however, it is indispensable for an enthusiastic company of at least ten people to undertake composting tasks and one or more people involved in compost master training.

We also find a good example in the Basque Country, in the town of Usurbil. Separate collection of municipal waste was introduced in 2008. The city with six thousand inhabitants sent 175 tons of waste every month to the landfill.
One year after the introduction of a home-based separate waste system, this number fell to 25 tons. The achievement of the results was greatly influenced by the introduction of community composting. The municipality has set up community compost points at its own expense (€ 2,000), where the moist and dry ingredients and food remains separately collected. For the maintenance of a compost point, a total of 16 families will be required to undertake an agreement with the local government to fully operate the composting and designate a compost master. The resulting compost is used by the composting families, but it is also used in public parks. The population of the city is also encouraged by community composting economically: participants in the program will have to pay 40% less garbage price - so much because it is estimated that 40% of waste generated by usurbillian households can be composted.

What will become Zero Waste? - Opportunities for resource creation

Gabriella Zagyva, Environmental and Application Officer, Local Government of the Great Village of Alsónémedi

When we talk about generating resources in general, most people will have the resources and the money to come into their mind. But what if, we are talking about generating funds about the Zero Waste program?

To answer this question, look back on the waste pyramid and examine it for the resources!

Incineration and landfilling requires a lot of material resources, but we do not have to make too much on human intellectual resources, and creativity.

The implementation of recycling and selective collection also requires considerable financial resources, since collection, transport, sorting, processing and sales have to be paid, but it is important to involve human resources and facilitate the participation of the population as well.

Re-use - today's fashionable DIY - requires more creativity than money, but in most cases we can not use our broken, discarded things again without money. If you want to re-use it on a larger scale, for example, using a reuse center or a donation store, it also involves substantial funding.

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Finally, what are the resources involved to prevent the production of waste?

What resources do we free, what can be a financial savings for a household or municipality if there is not or is less the amount of waste to be treated?

I believe that the financing of the implementation of the Zero Waste program must be treated with the same approach as the program itself. In the process of generating resources, therefore, we should not only account for our material, but also our human resources.

The financial resources may include external - tender and internal - taxes, budgetary resources.

Some of the tender opportunities are support environmentally friendly, eye-catching programs, but our experience is that the tenders are unpredictable,unplannable, inflexible and expensive. However, in all tenders there is a possibility to smuggle a small change of view, waste reduction, as all tenders have commitments for sustainability, and the provision of information and publicity can be solved with minimal - possibly zero - waste.

In the case of internal financial resources, based on the examination of possible local taxes, it can be said that local taxes are not the best financial resources. However, it is possible to use the Environmental Protection Fund in a smart way, to review the existing plans and concepts - the Environmental Program, LA21, Waste Management and Prevention Plan, and to implement Null Waste as well as budget transfers for implementation. It is also possible to exploit the less wasteful solutions for purchases.

To take advantage of human resources, we must learn the good practices that enable people, civil society organizations, local educational institutions and local businesses to engage, community building and creating opportunities to produce less waste.

For both material and human resources, measuring, feedback and exemplary reporting by the Office are important, even if the Wasteless Office seems to be the same utopia as the Zero Waste Program itself.

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