

Roadmap for Poland (PL)

To help ensure full implementation of EU waste legislation and the waste hierarchy, including by addressing the still very predominant reliance on landfilling municipal waste (73 %), the following recommendations are made:

Main recommendations

- 1. Increase progressively the existing landfill tax to divert waste from landfill. Use revenues to support separate collection and alternative infrastructure.**
- 2. Introduce an incineration and MBT tax to make recycling economically. Keep the landfill tax higher than taxes for incineration and MBT. Use revenues to support separate collection and alternative infrastructure.**
- 3. Improve the data collection system of municipal waste and include all household packaging waste into the data on generation and treatment of municipal waste.**
- 4. Establish and control separate collection infrastructure and schemes. Implement door-to-door separate collection as soon as possible. Support municipalities in organising separate collection by regional and national guidance documents and institutionalised exchange of know-how and best practice.**
- 5. Extend and improve the cost-effectiveness, monitoring and transparency of existing EPR schemes and eliminate free-riding.**
- 6. Create incentives for municipalities to establish separate collection and to move towards the first steps of the waste hierarchy – by systems of subsidies/penalties, environmental awards, pilot projects, appropriate fiscal and control measures.**

National waste management situation

Administrative structure: The competent authority for national waste management issues is the Ministry of the Environment (MoE). The national WMP is developed by the MoE. The regional WMPs are elaborated by each of the 16 Voivodships. Voivodships are further divided into counties and municipalities. General responsibility for enforcement of municipal waste management is within the responsibility of municipalities.

Waste generation and collection: The total amount of municipal waste generated is 12,038 kt making Poland one of the largest municipal waste producers among the EU-12. However, only 315 kg per capita is generated which is far below the EU-27 average (502 kg), [EUROSTAT 2012b]. By now about 80 % of the population is covered by municipal waste collection services [EUROSTAT 2010]. Illegal burning at households and illegal dumping is still occurring especially where collection of municipal waste is not available or not provided on the required frequency [ReTECH 2009]. The infrastructure for separate collection is still in the developing phase and needs further improvement, in particular in rural areas. Bio-waste is only collected separately in some municipalities (e.g. Elbląg, warmińsko-mazurskie voivodship). EPR or equivalent systems are in place, but limited for few waste streams. They are not able to cover the full cost of separate collection and recycling of the main waste streams [EC 2012].

Policy instruments applied to move up the waste hierarchy: A landfill fee for municipal waste was introduced in 2002, with a current level for residual municipal waste of 25 €/t in 2011 [EC 2012], [ETC/SCP 2012]. From 2007 to 2008 the fee was raised significantly to reduce the amounts landfilled. Since 2010 the fee level was not raised higher than the inflation rate and is not sufficiently high to promote alternative treatment options. Typical charges (tax + gate fee) for landfilling municipal waste range from 115 (28.13€) to 380 zł (92.94€), but mostly being about 200 zł (48.92€) [PL MoE 2012]. Restrictions on landfilling are not going beyond EU requirements; there is a ban on landfilling separately collected combustible waste [PL MoE 2012] which has little effect on the overall situation. PAYT schemes are implemented regionally [PL MoE 2012].

Waste treatment: Poland is self-sufficient in municipal waste disposal [EC 2012b]. The main treatment option for municipal waste is still landfilling (73 %). 610 landfills for non-hazardous waste were operating in 2010. The first reduction target for biodegradable waste going to landfill (75%) was set up for Poland to be achieved in 2010 (Poland was granted a transitional period on the basis of the Landfill Directive provisions). The Commission estimates on the basis of EUROSTAT data that the reduction target status was ca. 94 % in 2009 in comparison to 1995 [EC 2012a] and therefore the target is most likely not achieved in 2010 (fulfilment currently under revision). The MoE informed that the status was already 79 % in 2010 [PL MoE 2012]. In recent years investments were made into infrastructure and non-compliant landfills were closed and re-cultivated [EC 2012b]. However, illegal dumpsites still exist [ReTECH 2009], [PL MoE 2012]. In 2010 about 92 % of municipal waste was landfilled into landfills compliant with EU requirements [PL MoE 2012]. The development of infrastructure seems to be dynamic, but facing obstacles related to funding, administration and public omissions. New technologies for energy recovery from waste are foreseen to be comprehensively introduced. However, prognoses suggest that only some of the planned incinerators will be built. Investments are strongly focusing on MBT and RDF technologies. Recycling capacities for paper, steel and glass are sufficient; in this field the technologies are modern and compliant. Separate collection and sorting are challenges.

The main problems with regard to the management of municipal waste and their corresponding reasons are summarised in the following.

Overview of the most relevant problems and their reasons (in order of importance)

| No | Deficit/Problem | Description of the problem | Reasons |
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| 1 | Waste treatment largely diverting from the waste hierarchy | <p>The main treatment option for municipal waste is disposal in landfills. According to EUROSTAT the current disposal rate is about 74 % (2010) including 1 % incineration without energy recovery. 18 % of municipal waste is recycled. Composting reaches only 8 %. For 2010 no incineration was reported to EUROSTAT, but there is one incineration plant for municipal waste in Warsaw operating according to R1 criteria.</p> <p>According to [PIGO 2012] the recycling rates include to a large extent processing of so-called mineral fraction separated mechanically from household waste (screening); in fact this waste is landfilled, but does not appear in reports as it is not disposed under “D” code. [Company 2 PL 2012] reported that in 2010 the situation has changed already and volumes going to landfills dropped significantly by 30-50 %; the dominant disposal alternative to landfilling is splitting and production of low quality RDF for cement kilns.</p> <p>It is expected that incineration with energy recovery will increase. In addition, the current trend on the market is MBT or similar and further RDF processing of screen overflow fraction.</p> <p>8-10 incinerators for incineration of municipal waste are planned [ReTECH 2009]. There are 6 projects on the main list: Kraków, Szczecin, Bydgoszcz, Białystok, Konin and Poznań [PL MoE 2012]. Further, 11 MBTs and one incinerator with a small capacity were set up [Company 1 PL 2012]; [Przygoński 2012].</p> <p>It is crucial that in this context (high quality) recycling is strengthened and promoted by specific measures. Modelling of [EEA 2012] shows that the achievement of recycling targets of the WFD will require an extraordinary effort to improve in particular the collection coverage, separate collection, prevention, diversion of biodegradable waste from landfills, compliance with technical standards (especially as regards the Landfill Directive) and recovery/recycling capacity [EEA 2010], [ReTECH 2009], [BiPRO 2007-2011].</p> <p>A key element of the new waste system will be the ‘regional facilities’ for municipal waste (residual (mix) municipal waste and bio-waste). The new Act on waste sets out the basic obligations of municipalities to construct, maintain and operate municipal or regional (inter-</p> | <ul style="list-style-type: none"> • No real increase of the landfill fee from 2010 [PIGO 2012]; [Company 2 PL 2012] • Lack of economic incentives – landfilling is still cheaper than alternative treatment (ca. 200 zloty including marshal fee for landfilling and ca. 300 zloty for a complete treatment in MBT plants) [PIGO 2012] • Probably ineffective imposition of fees for waste management from households [Company 1 PL 2012] • Lack of modern infrastructure for treatment of municipal waste [Company 1 PL 2012], [BiPRO WFD 2011] • Lack of recycling due to poor separate collection • Absence of control of municipalities on household waste which jeopardized investors’ efforts to build treatment facilities. In the system used to date, there is no possibility (for municipalities or private investors) to guarantee waste volumes in the long run (inhabitants are signing individual contracts with collection companies) – accordingly, big projects of alternative treatment infrastructure (such as incinerators) are not bankable [PIGO 2012] (This will change with new provisions entering into force in 2013) • Neglect of investments [Company 1 PL 2012] • Uncertainty with regard to development of legal provisions (it was known that there will be changes in waste management, however, the extent of changes remained unknown), [Company 1 PL 2012] • Weak involvement of NGO’s in ecological education due to the lack of financing of such programmes [PIGO 2012] • Cohesion Funds are not optimally used to support the development of the infrastructure needed [EC 2012f] • Lack of strict implementation of legislation [PIGO 2012] |

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| | | <p>municipal) facilities. Municipalities are obliged to choose a company via public procurement that provides for construction, maintenance and operation of municipal or regional (inter-municipal) facilities [Company 1 PL 2012].</p> <p>According to latest information from the ministry [CA PL 2012], Poland plans to</p> <ul style="list-style-type: none"> - introduce additional acceptance criteria for landfilling of municipal waste (in practice a ban for landfilling untreated municipal waste) with the new order entering into force on Jan 1st 2013; - further increase the landfill fee; this is a pending order of the MoE which is absolutely key for MBT. In case the mesh minus fraction is further regarded as inert mineral material, the sustainability of MBT projects under construction will be damaged. This will also petrify the current structure of the waste market through operation of so called "substitute installations" [Company 2 PL 2012]. | |
| 2 | High share of biodegradable waste going to landfills | <p>A large amount of biodegradable waste is still landfilled (4,100 kt in 2008). In 2010, only about half of the EU average rate (14.7 %) was subject to composting (7.9 %) [EUROSTAT 2011]. Given the pre-accession level of landfilling, Poland was granted a transitional period and had to reach the first reduction target for biodegradable waste (reduction by 75 %) set by the Landfill Directive in 2010. The target was most probably not met. In 2009, the reduction target status was 93.6 % in comparison to 1995. According to [Ernst & Young 2011] Poland counts to the MS with the largest gap in terms of achieving the reduction target of the Landfill Directive [Ernst & Young 2011].</p> <p>The amount of separately collected municipal waste, including biodegradable municipal waste, is steadily increasing (268,000 t in 2008 and 788,000 t in 2009) [PL Landfill 2007-2009]; [CA PL 2012]. Nevertheless, in order to meet the 2010 and the following reduction targets in 2013 and 2020 the management of biodegradable waste needs to be improved significantly (incl. recycling infrastructure, separate collection, awareness campaigns). In 2013, the projected quantity of biodegradable waste that will have to be managed using alternative methods to landfill disposal is 2,100 kt and in 2020 2,800 kt [Ernst & Young 2011].</p> <p>A new ordinance regulating MBT processes was adopted, published and entered into force on 9th October 2012.</p> | <ul style="list-style-type: none"> • Limited separate collection of bio-waste • Lack of high quality pre-treatment for mixed municipal waste • Capacity for alternative treatment infrastructure (composting and biogas plants) not sufficient • No national PAYT schemes • Limited dissemination of information such as guidelines and manuals on separate collection of bio-waste, guidance/support on promotion of home composting, etc. • Limited number of pilot projects (pilot projects in small regions before larger schemes and strategies can be adopted) • Missing incentives which would motivate municipalities to reduce biodegradable content going to landfill are not implemented • Legal provisions for biogas plants treating waste are inhibiting that EU funds are used as preference is given to agricultural biogas plants and biogas retrieved from sludge [PIGO 2012] |
| 3 | Insufficient | The source separated collection of municipal waste is still in the developing phase and | <ul style="list-style-type: none"> • The source separation of municipal waste is lagging behind due to |

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| | source separated collection of municipal waste | <p>represents a major challenge for Poland [Company 1 PL 2012], [BiPRO 2007-2011]. Environmental awareness is growing, but is still a challenge with respect to separate collection due to lack of financial incentives and convenience (PAYT systems are only implemented in some regions) [ReTECH 2009], [EC 2012].</p> <p>The separate collection will have to be considerably improved in the future in order to meet the requirements of the WFD including the recycling targets and to improve the quality of secondary raw materials. Large differences between cities and countryside and between regions exist; the worst situation is noted in Eastern and South-Eastern regions [PIGO 2012]. The readiness of municipalities to implement and control EPR is rather limited. Investments in infrastructure for separate collection from household waste are estimated to be rather underdeveloped [Ernst & Young 2012], [Company 2 PL 2012].</p> <p>The separate collection and secondary raw material (SRM) recovery was recently propelled by high prices of SRM on the trading market. However, with economic slowdown one can see a steady drop in SRM prices on the market. That will harm separate collection, as today it is not financed by municipalities except for collection of household packaging waste in public space. Under the new law on municipal waste,, applying from mid 2013, this will be within the responsibility of municipalities [Company 2 PL 2012].</p> <p>For packaging waste all EU targets were met. However, recycling and recovery for individual packaging waste streams and total packaging waste is still considerably below the EU average. In addition, there are concerns that the recovery and recycling targets are obtained largely due to processing waste from economic activities and not considering in due extent household packaging waste [Ernst & Young 2012], [Company 2 PL 2012]. Very often the packaging waste from commercial clients is not classified as waste code 15xxxx but 20xxxx [Company 2 PL 2012].</p> <p>Some actions have been taken to improve separate collection including implementation of regional PAYT schemes [EC 2012] and specific awareness campaigns addressing households. Since treatment standards are not defined (criteria for input and output material such as limit values), collection systems are random. Most municipalities, where MBT will be implemented, opt for glass/dry packaging/wet fraction [Company 2 PL 2012].</p> | <p>lack of implementation of municipal regulations and their monitoring (the implementation is in sole responsibility of municipalities)</p> <ul style="list-style-type: none"> • Missing harmonisation of approaches/code of practice of municipalities for the organisation and provision of separate collection of municipal waste [Company 1 PL 2012] • Relatively high costs related to the operation of separate collection systems – [PIGO 2012] clarified that this is only true outside the large towns where the population density is lower • Missing incentives for municipalities and waste collectors to control waste behavior by inhabitants and hence quality of waste types • Level of public awareness still comparably low [BiPRO 2007-2011] • Packaging waste targets can be achieved with commercial packaging waste and not necessarily including packaging waste from households [Ernst & Young 2011] • The municipal waste management system is currently in a transformation process [Company 1 PL 2012] • There is no system in place which would ensure a well planned, effective imposition of fees for the management of municipal waste from households [Company 1 PL 2012] • Until introduction of the new waste system in 2013 lack of economic incentives for inhabitants • No penalties for combustion of waste in house stove (furnace), a lot of plastic is burnt illegally [PIGO 2012] |
| 4 | Incomplete | According to [EUROSTAT 2010] the collection coverage for municipal waste is only 79.8 %. “The | <ul style="list-style-type: none"> • Low population density in rural areas (will continue to decrease) |

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| | coverage of households with regard to municipal waste collection and existence of illegal dumpsites | <p>system of municipal waste collection in Poland is ineffective due to ‘leakage’ – the gap between the amount of waste collected and the estimated amount of waste produced is large” [Ernst & Young 2011]. In 2009, only around 10,000 kt of municipal waste was collected. When considering total unaccounted waste for dumping, the worst situation (in comparison to other EU MS) was in Poland (1,980 kt); in this year the gap between generated and collected waste per resident is estimated to account for 16 % – 52 kg. The statistics suggest that about 2,000 kt of waste was dumped in the environment illegally (i.e. in an unregulated manner and against all EU requirements), [Ernst & Young 2011]. Consequently, an environmentally sound management of the total municipal waste is possibly not ensured. The waste which is not collected probably ends up in the environment and/or is burned (e.g. open burning in gardens, for heating in private households). In fact, illegal burning at households and illegal dumping is still occurring especially where collection of municipal waste is not available or not provided on the required frequency [ReTECH 2009]. About 92 % of municipal waste was landfilled into landfills compliant with EU requirements [PL MoE 2012].</p> <p>According to [Company 2 PL 2012] this problem will be solved starting July 2013 with the introduction of the waste fee collected from inhabitants. There will be no incentive to dump waste in forests since inhabitants are obliged to pay a fee.</p> | <ul style="list-style-type: none"> • Limited number of collection points • Administrative absorption capacity for EU funding (lacking technical support to realise complex projects simultaneously) • The obligation of municipalities to cover all households by collection services is legally defined but not respected due to lack of control [PIGO 2012] • Municipalities are free to establish their waste management system, including frequency of collection. Many communes established a bin of 120 l (emptied only once a month) and the inhabitant pays for it. If the frequency was once a week, there would be no motivation for people to burn waste or dump it illegally [PIGO 2012]. • [Company 2 PL 2012] stated that there is no particular problem with the collection coverage but rather the lack of contracts between households and collection companies, which in the end leads to the situation that those who do not have contracts dump waste illegally. |

Action plan

Horizontal measures addressing several problems

| MEASURE | Type of the instrument | Responsibility | Indicative time scale | Estimated costs | Estimation of achievable result |
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| MEASURE 1: Progressively increase existing landfill tax | | | | | |
| 1) Continue to increase of the landfill tax 2) Utilize revenues from the landfill tax to further develop infrastructure for collection and treatment of municipal waste and related activities (awareness campaigns etc.) | 1) Legal/ Economic 2) Administrative | 1) MoE 2) Municipalities | Short- to mid-term | Low | - Reduced amount of untreated municipal waste going to landfills |
| Communicate the increase of the landfill tax to investors and stakeholders; inform on the importance of increase of the landfill tax | Informative | MoE | Short- to mid-term | Low | |
| Undertake expert meetings on procedures for implementation and management of landfill tax for local authorities/municipalities | Informative | MoE | Short- to mid-term | Low | |
| MEASURE 2: Introduce incineration and MBT tax | | | | | |
| Introduce a tax for incineration and MBT to prevent underdevelopment of recycling on long-term basis in harmonisation with the tax on landfilling | Economic/Fiscal Legal | MoE | Mid- to Long-term | Low | - Support of recycling |
| MEASURE 3: Restrictions/Ban on landfilling (and incinerating) municipal waste | | | | | |
| Impose a ban on landfilling biodegradable waste collected also for mixed municipal waste (currently there is only a provision for separately collected bio-waste) | Legal | MoE | Mid-to long-term | High | - Share of biodegradable waste going to landfills reduced; - Increase in composting/ anaerobic digestion - Improved implementation - Higher revenues |
| Ban the landfilling of waste not undergone sufficient pre-treatment | Legal | MoE | Mid-to long-term | High | |
| Ban/restrict the landfilling or incinerating of recyclables (such as paper, glass, metal), | Legal | MoE | Mid-to long-term | Low | |
| Ensure implementation of provisions and prosecution via intensified controls (expand technical capacity of authorities) | Administrative | MoE, Inspectorate | Short- to mid-term | Low to medium | |
| MEASURE 4: PAYT scheme | | | | | |
| Implement PAYT scheme covering all households; Introduce penalties to address any unwanted side-effects (e.g. illegal dumping) | Economic/Fiscal Informative | MoE | Long-term | Low to medium | - Increase of separately collection, reduce landfilling - Incentives for municipalities |
| Support municipalities by introducing PAYT scheme by providing information on how to set up/introduce such systems by making available guidance, support experience exchange, conferences, buddy systems, awareness on benefits and costs | Informative | MoE | Long-term | Low | |

| MEASURE | Type of the instrument | Responsibility | Indicative time scale | Estimated costs | Estimation of achievable result |
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| Make the application of PAYT scheme a legal obligation to municipalities (e.g. volume based/frequency based approach, as soon as appropriate collection and treatment infrastructure in place) | Administrative Legal | MoE | Long-term | Low | - Increase economic incentives to enhance separate collection |
| Inform households/support information provision by local authorities on PAYT scheme by leaflets and brochures and campaigns, inform on benefits and possibility to save money if separation is properly applied, in parallel inform on impacts of illegal burning/littering and make campaign of inspection | Informative | MoE, Municipalities | Long-term | Low | |
| Improve monitoring of development and implementation of municipally organized collection model (PAYT scheme) by the state institutions | Administrative | MoE | Long-term | Low to medium | |
| MEASURE 5: EPR schemes | | | | | |
| Improve the performance of existing EPR schemes for the main waste flows by initiating in depth consultation with relevant sectors and by ensuring a clear correlation between the quality (recyclability) of product set on the market and the contribution paid to the system (to encourage eco-design), intensified controls of organisations taking over the obligations of producers necessary | Administrative | MoE | Short-term | Low | - Creation of economic conditions to launch separate collection and establish sorting infrastructure - Improved performance of EPR for particular waste streams - Improved performance of deposit refund systems |
| Set in place and improve the performance of deposit refund systems for packaging in particular for refillable beverage packaging (e.g. increase deposit and refunds and improve public awareness by campaigns, etc.) In general all voluntary schemes are compliant with EU legislation and free movement of goods; mandatory systems need to fulfil certain criteria to be compliant in order to ensure fair balance between environmental objectives and internal market needs. | Economic/ Fiscal | MoE | Long-term | Medium | |
| MEASURE 6: Enhance enforcement | | | | | |
| See below specified where relevant | Administrative | MoE | Short-term | Low | - Better implementation of legal provisions |
| MEASURE 7: Better use EU funds for establishment of infrastructure which ensures achievement of targets in 2020 (other than landfills and unproven facilities/technologies) | | | | | |
| Increased utilisation and allocation of the Cohesion Policy fund and other available funds to develop waste management infrastructure which ensures achievement of targets in 2020 (e.g. undertake high quality scientific studies in order to prioritise investments) with a priority on the first steps of the waste hierarchy | Administrative | MoE | Short-term to mid-term | Low | - Improved alternative waste treatment infrastructure |
| Provide sufficient human/economic resources to MoE and municipalities to improve administrative adsorption capacity for EU funding (e.g. via LIFE) | Administrative | MoE, Ministry of Finance | Short-term to mid-term | Low | - Improved adsorption of EU and possibly other |

| MEASURE | Type of the instrument | Responsibility | Indicative time scale | Estimated costs | Estimation of achievable result |
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| | | | | | available funds |

PROBLEM 1: Waste treatment largely diverting from the waste hierarchy

| Proposals to address the problem | Type of the instrument | Responsibility | Indicative time scale | Estimated costs | Available EU Funding | Estimation of achievable result | Priority scoring |
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| PROPOSAL 1: Expand infrastructure for separate collection and ensure 100% collection coverage for municipal waste (see measures for PROBLEM 3 and 4) – in combination with awareness raising | | | | | | | +++ |
| PROPOSAL 2: Include packaging waste from households into the statistics of municipal waste management and subsequent reporting to EUROSTAT | | | | | | | |
| Include packaging waste from households into the statistics of municipal waste management and subsequent reporting to EUROSTAT | Administrative | MoE; Voivodships, Municipalities | Mid-term | n.a. | n.a. | Better data on real recycling rates | ++ |
| PROPOSAL 3: Establish appropriate infrastructure for recycling and recovery of municipal waste | | | | | | | |
| Further establish specialised sorting facilities | Infrastructural | MoE; Municipalities | Mid-term to long-term | Low to medium | ERDF; CF | Increase in recycling and recovery | +++ |
| Establish incineration facilities with energy recovery (R1 compliant) for municipal waste treatment (<i>In parallel provide comprehensive information on the safe technologies of modern waste incineration to the public to stop omissions against new technologies</i>) | Infrastructural/ Informative | Municipalities; MoE | Mid-term to long-term | High | ERDF; CF | | |
| Expand recycling and recovery infrastructure for bio-waste (see below PROBLEM 2) | Infrastructural | Municipalities; MoE | Mid to long-term | High | ERDF; CF | | |
| PROPOSAL 4: Set local targets for recycling and limits for landfilling to be achieved by municipalities, improve control of compliance | | | | | | | |
| Organize trainings and expert knowledge exchange programmes, conferences, etc. between all administrative levels and stakeholders from industry, associations and NGOs for institutionalized information exchange, <i>ensure information provision to municipalities and industry</i> | Informative | MoE | Mid-term | Low | n.a. | Better framework and reliability for investments on behalf of the industry | ++ |
| PROPOSAL 5: Support PPP by guidance | | | | | | | |
| Provide for guidance and contract templates to support the success of PPP (including regionally, nationally and EU funded projects) | Legal Administrative | Ministry of Regional Development, | Ad-hoc | Medium | ERDF; CF | Faster establishment of infrastructure | + |

| Proposals to address the problem | Type of the instrument | Responsibility | Indicative time scale | Estimated costs | Available EU Funding | Estimation of achievable result | Priority scoring |
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| | | Municipalities, MoF, MoE, | | | | | |

PROBLEM 2: High share of biodegradable waste going to landfills

| Proposals to address the problem | Type of the instrument | Responsibility | Indicative time scale | Estimated costs | Available EU Funding | Estimation of achievable result | Priority scoring |
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| PROPOSAL 1: Set up infrastructure for separate collection and treatment of biodegradable waste | | | | | | | |
| 1) Expand infrastructure for separate collection of bio-waste <ul style="list-style-type: none"> ○ door-to-door collection ○ collection points for green garden waste at civic amenity sites or other bring systems (supervised single container collection) 2) Information campaigns for households on separate collection of bio-waste via leaflets, brochures, website and available infrastructure. Involve waste operators and establishments in awareness campaigns 3) Promote home composting | Infrastructural /Informative | 1) Municipalities, 2) Voivodships, Municipalities 3) Voivodships, Municipalities | mid-term | Low to medium | n.a. | Increased separate collection of bio-waste | +++ |
| Establish a network of composting plants | Infrastructural | Municipalities, Voivodships | Mid-term to long-term | Medium to high | ERDF; CPF; EIB | Increase of composting; better compost quality. | |
| Establish biogas plants/anaerobic digestion | Infrastructural | Municipalities, Voivodships | Mid-term to long-term | Medium to high | ERDF; CPF; EIB | Increase of energy recovery from bio-waste | |
| PROPOSAL 2: Support the creation of a market for compost | | | | | | | |
| Promote compost via provision of information on benefits, quality standards, etc. (e.g. via consumer organisations) | Informative | MoE; Ministry of Agriculture and Rural Development | Short-term | Low | n.a. | Increased sales of compost | ++ |
| PROPOSAL 3: Improve knowledge basis regarding the management of biodegradable waste | | | | | | | |
| Provide guidelines and manuals on separate collection and bio-waste management addressing authorities | Informative | MoE | Ad-hoc | Low | n.a. | Improved knowledge basis regarding bio-waste management | ++ |

| Proposals to address the problem | Type of the instrument | Responsibility | Indicative time scale | Estimated costs | Available EU Funding | Estimation of achievable result | Priority scoring |
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| Increase the number of pilot projects related to collection and treatment of bio-waste covering different regions | Administrative | MoE; Municipalities | Short- to mid-term | Low to medium | LIFE | Improved knowledge and decision basis | |
| Enhance exchange of information/experience of municipalities already realising separate collection of bio-waste to other municipalities – Learn from good/bad experiences | Informative | MoE, Municipalities | Ad-hoc to mid-term | Low | n.a. | Improved knowledge of municipalities starting with separate collection | |

PROBLEM 3: Insufficient source separated collection of municipal waste

| Proposals to address the problem | Type of the instrument | Responsibility | Indicative time scale | Estimated costs | Available EU Funding | Estimation of achievable result | Priority scoring |
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| PROPOSAL 1: Include packaging waste from households to achieve the targets of the Packaging Directive and define standards for separate collection | | | | | | | |
| Include packaging waste from households in the statistics on municipal waste | Administrative | MoE | Short-term | Low | n.a. | Improved performance in statistics | +++ |
| Define standards for separate collection services (e.g. through public procurement on collection frequency, bins etc.) | Administrative | MoE – guidelines, Municipalities - procurement | Ad-hoc | Low | n.a. | Increase collection coverage in rural areas | |
| PROPOSAL 2: Establish appropriate collection infrastructure for separate collection and harmonise systems (in combination with awareness raising campaigns) | | | | | | | |
| Provide guidelines and manuals on how to implement separate collection to municipalities (harmonisation of systems) | Informative | MoE | Ad-hoc to short-term | Low | n.a. | Harmonisation of separate collection systems | +++ |
| Further establish civic amenity sites in combination with re-use and repair centres for collection of all types of municipal waste (e.g. bulky waste, WEEE etc.) <i>Include civic amenity sites in the WMP and inform households on the location and services of civic amenity sites</i> | Infrastructural | Municipalities, Voivodships, MoE | Short-term to long-term | Low to medium | ERDF; CF; LIFE | Higher quality of separately collected waste; prevention of waste via reuse of products | |
| Enhance the connection to separate collection systems for packaging waste to 100% by implementing in rural areas <i>at least</i> sufficient bring systems (containers, improve civic amenity sites) but preferably improve separate collection by expanding door-to-door collection (provide separate containers either free of charge, or with | Infrastructural | Municipalities, Voivodships, MoE | Short-term to mid-term | Medium | ERDF; CF | Improved separate collection | |

| Proposals to address the problem | Type of the instrument | Responsibility | Indicative time scale | Estimated costs | Available EU Funding | Estimation of achievable result | Priority scoring |
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| a deposit) | | | | | | | |
| Define criteria and obligations in contracts to ensure the provision of sufficient bins/special bags for separate collection of municipal waste and collection frequency (both separate collection and residual waste bin) | Administrative/ Infrastructural | Municipalities | Short-term to mid-term | Low | n.a. | More participation in separate collection | |
| Initiate awareness campaigns for households on separate collection (leaflets and brochures, internet, smart phone applications, TV spots) | Informative | MoE, Municipalities | Ad-hoc to short-term | Low to medium | LIFE | Increased awareness and participation in separate collection | |
| Establish recycling-on-the-go schemes via legal obligations for retailer or via financial/informative support to set up more recycling bins in public places like shopping centres, markets, squares and avenues | Infrastructural Legal Financial | MoE, Municipalities | Short- to mid-term | Medium | n.a. | High quality of separately collected recyclate | |
| PROPOSAL 3: Improve supervision and enforcement | | | | | | | |
| Define responsibilities in supervision of separate collection on the local and national level and place responsibilities for controlling of illegal dumping activities on municipalities | Administrative | MoE | Ad-hoc to short term | Low | n.a. | Improved waste management on local and regional level | |
| Introduce legal requirements for local management companies to control appropriate source separation by inhabitants (inform inhabitants via informative leaflets on waste prevention and appropriate source separation) and penalise non-compliance | Legal | MoE, Municipalities | Short-term to mid-term | Low | n.a. | Improved separate collection of MW in municipalities | +++ |

PROBLEM 4: Incomplete coverage of households with regard to municipal waste collection and existence of illegal dumpsites

| Proposals to address the problem | Type of the instrument | Responsibility | Indicative time scale | Estimated costs | Available EU Funding | Estimation of achievable result | Priority scoring |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|--------------------------------------|------------------------|-----------------|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| PROPOSAL 1: Closure and rehabilitation of all active illegal dumpsites | | | | | | | |
| Close all active illegal dumpsites | Infrastructural | Voivodships, Municipalities | Ad - hoc | Medium | ERDF; CPF; EIB | Only operation of EU compliant landfills and reduction of air/soil pollution sources. Possibility to gain more material for recovery and recycling. | +++ |
| Rehabilitation of all closed dumpsites | Infrastructural | Municipalities, Voivodships | Ad – hoc to mid-term | Medium | ERDF; CPF; EIB | See above | |
| PROPOSAL 2: Increasing inspection and control; raising public awareness | | | | | | | |
| Provide for inspections by the national inspectorate and the state police to reveal and fine illegal dumping | Administrative | Inspectorate, Police, Municipalities | Ad – hoc to mid-term | Medium | n.a. | Only operation of EU compliant landfills. More revenues for investment into new infrastructure | +++ |
| Undertake awareness campaigns and provide information on the negative impacts of illegal dumping on human health and the environment | Informative | MoE, Voivodships | Ad – hoc to mid-term | Low | LIFE | | |
| PROPOSAL 3: Expand appropriate collection infrastructure for municipal waste | | | | | | | |
| Increase the collection frequency and availability of collection systems (door-to-door or bring systems) especially in rural areas (e.g. via public procurement) | Infrastructural | Municipalities | Short-term | Low to medium | ERDF; CF | 100% coverage | |
| Initiate awareness campaigns regarding importance of waste collection and negative impacts of illegal dumping and burning on the environment and human health | Informative | MoE; Municipalities | Short-term to mid-term | Low | LIFE | Increased awareness | |
| Improve the fee system for municipal waste collection paid by households (especially decrease fees in rural areas e.g. through specific obligations in contracts (changes in public procurement)), eventually subsidise rural areas through revenues obtained from fines and the landfill fee | Administrative/ Economic | MoE, Municipalities | Short-term to mid-term | Low | n.a. | Improved collection (less illegal dumping and burning), increased collection of recyclables | +++ |

| Proposals to address the problem | Type of the instrument | Responsibility | Indicative time scale | Estimated costs | Available EU Funding | Estimation of achievable result | Priority scoring |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|----------------------------------|------------------------|-----------------|----------------------|----------------------------------------------------------|------------------|
| PROPOSAL 4: Initiatives/obligations to increase collection coverage for municipal waste | | | | | | | |
| Develop incentives/define obligations for private companies to increase collection services in rural areas (e.g. definition of service packages for private contractors) | Administrative Economic/fiscal | Municipalities | Short-term to mid-term | Low | ERDF; CF | significantly increased coverage in rural areas | ++ |
| Supervise compliance and quality of service provided by waste management companies through inspections and control activities | Administrative | Inspectorates; Municipalities | Ad-hoc to short term | Medium | n.a. | Improved quality of services provided by waste companies | ++ |