

Roadmap for Latvia (LV)

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 (90.7 %), 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 in order to make recycling economically viable. 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. Report co-incineration as R1 operation if the operation meets the requirements of the WFD.**
- 4. Extend and enforce PAYT scheme. Provide incentives and support for households to participate in separate collection.**
- 5. Implement the bio-waste strategy including specific measures to divert biodegradable waste from landfill.**
- 6. Establish and control separate collection infrastructure and schemes. Implement door-to-door separate collection as soon as possible.**
- 7. Extend and improve the cost-effectiveness, monitoring and transparency of existing EPR schemes and eliminate free-riding.**

National waste management situation

Administrative structure: Latvia is divided into 10 waste management regions. The competent authorities for waste management on national level comprise the Ministry of Environmental Protection and Regional Development (MEPRD) and its aligned institutions. Latvia is characterised by a centralised administration structure. However, local authorities have strong waste control and general influence on the waste management sector in their territory. The national WMP is developed by the MEPRD and its competent institutions. The regional WMPs are elaborated by the MEPRD in cooperation with municipalities [BiPRO 2007-2011]; [LV MEPRD 2012].

Waste generation and collection: The total amount of municipal waste generated in Latvia is 680 kt/y. The per capita generation is 304 kg which is considerably lower than the EU-27 average (502 kg), [EUROSTAT 2012b]. Approximately 85 % of the population is connected to municipal waste collection services [EUROSTAT 2010]. Latvian authorities are continuing to implement measures necessary to make separate waste collection services more accessible to households. Means from EU funds are obtained to further develop the required infrastructure [EC 2012b].

Instruments applied to move up the waste hierarchy: A landfill tax was introduced in 1995. Currently, the total typical charge for landfilling is 40 €/t of non-hazardous municipal waste (10 €/t landfill tax rate plus 30 €/t landfill gate fee). The tax rate for municipal waste increased over time [EC 2012], however, the typical charge still remains comparably low (average in EU-27 is about 80 €), [EC 2012f]. A natural resource tax on several types of resources was introduced in 1995 to promote well-considered use of resources. A number of awareness campaigns on waste collection and management for households, schools and industry were initiated [BiPRO 2007-2011]; [LV MEPRD 2012].

Waste treatment: Latvia has sufficient capacity to dispose of non-hazardous municipal waste [EC 2012b]. The main treatment option for municipal waste is still disposal in landfills (90.7 %), [EUROSTAT 2012b]. During the last years, more than 500 dumpsites have been closed, gradually recultivated and replaced by regional landfills. There are still dumpsites which are not yet properly closed [BiPRO 2007-2011], however, the MEPRD states that in 2012 all dumpsites are closed but not all of them recultivated. WMPs foresee that this is done within the next years. Latvia reported that all landfills comply with the Landfill Directive. The remaining landfill capacity was 19,270 kt [LV Landfill 2007-2009]. It is not planned to build new landfill, but to extend existing landfill capacities to their projected size [LV MEPRD 2012]. Alternative waste treatment infrastructure is rather limited. At present, there is no infrastructure for municipal waste incineration. Latvia has a well developed infrastructure for recycling of paper and cardboard packaging waste and has several polymer recycling facilities for PET, LDPE and HDPE [LV WMP 2006-2012]. There are several companies dealing with preparation of glass for re-use and recycling, but there are no recycling facilities for glass. The level of metal packaging waste collection and recycling is low, while collection and recycling of metal-containing waste is well developed [LV MEPRD 2012]. A high share of biodegradable waste is still landfilled [BiPRO 2012b], but some alternative treatment is already available (5 large scale composting facilities and 1 anaerobic digestion facility), [Moora 2011].

The main problems identified with regard to the management of municipal waste in Latvia and their 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
1	Not all dumpsites are recultivated yet	During the last years, more than 500 dumpsites have been closed, gradually recultivated and replaced by new regional landfills. According to the recent information provided by the Latvian MEPRD, all dumpsites have been closed, however, some still need to be recultivated [LV MEPRD 2012]. Remediation of non-compliant dumpsites is ongoing; problems are caused by lack of co-financing which has to be provided by municipalities. Activity also was started later than planned due to the lack of legal basis [Reco 2012].	<ul style="list-style-type: none"> • Traditionally a large number of small landfill sites • Activities started later than planned due to the lack of legal basis [Reco 2012] • Limited financial resources available for proper recultivation of dumpsites • Lack of co-financing which has to be provided by municipalities [Reco 2012]
2	High share of bio-degradable waste going to landfills	Compared to the 1995 data, still a significant share of biodegradable waste was landfilled in 2009 (i.e. 84.3 %), [EC 2012a] and only a negligible percentage of the municipal waste is composted (i.e. 0.6 %), [EUROSTAT 2012b]. Latvia has benefited from a derogation regarding the obligation to reduce the quality of municipal biodegradable waste disposal. The reduction targets are to be achieved in 2010 (75 %), 2013 (50 %) and 2020 (35 %), [Ernst & Young 2011]. In order to comply with EU legislation and meet the 2013 and 2020 reduction targets Latvia will need to improve the management of biodegradable waste in the coming years by for instance evolving alternative waste treatment infrastructure, implementing measures to encourage separate collection of bio-waste, initiating awareness campaigns, etc.	<ul style="list-style-type: none"> • Limited bio-waste collection and treatment infrastructure [LV LAW 2012] • Limited measures in place to encourage separate collection of bio-waste • Lack of proper equipment and machinery (receptacles, trucks, etc.) • No clearly defined quality criteria for compost in place [LV LAW 2012] • Landfill restrictions/ban in place but not specifically related to biodegradable and untreated municipal waste • Limited number of high quality scientific studies on national/regional level (i.e. bio-waste management) [LV LAW 2012] • Limited information provision [LV BEF 2012], including guidelines or manuals on separate collection of bio-waste, guidance on promotion of home composting • Limited number of pilot projects (pilot projects in small regions before larger schemes and strategies can be adopted)
3	Waste treatment largely diverting from the waste hierarchy	The main treatment option for municipal waste is disposal in landfills. The current disposal rate is 90.7 %; alternative waste treatment infrastructure is rather limited (no incineration, limited number of recycling facilities, for instance for metal, glass, plastic packaging, etc). In Latvia (except for Riga), waste amounts going to landfills are rather small. Thus the landfill capacity is sufficient and therefore an incineration facility would probably be difficult to maintain. [LV BEF 2012]. The waste (pre-) treatment infrastructure is uneven distributed and unintegrated. According to EUROSTAT only around 8.8 % (2010) of the municipal waste is recycled. The MEPRD reported that the data seem too low for the current situation [LV BEF 2012]. Some uncertainties or differences in the reporting of MSW can result in different levels of recycling.	<ul style="list-style-type: none"> • High landfill capacity available (no pressure to create alternative treatment infrastructure) • Limited alternative municipal waste treatment infrastructure (no incineration, limited number of composting facilities, limited material recycling installations) • Missing incentives for recycling due to small country size; therefore poor and slow market development of recycling industry and for secondary raw materials • Lack of interest on behalf of the industry to invest into recycling infrastructure including separate collection infrastructure [LV MERPD 2012] • Formerly, recycling was allocated to the Ministry of Economics and not to the Ministry of the Environment (MERPD); this has changed some time ago and allows new coordination [LV MERPD 2012]

No	Deficit/Problem	Description of the problem	Reasons
		<p>One example of such differences which might influence the recycling rate of MSW in Latvia is to what extent packaging waste from households and similar packaging from other sources is included in the reported recycling of MSW. Most Member Countries, including Latvia, have producer responsibility schemes on packaging waste and therefore packaging waste is not always regarded or reported to Eurostat as MSW. Significant amounts of sorted municipal waste are exported from Latvia for recovery in other Member States (in particular metals). Currently this issue is reviewed by the MoE of Latvia, as it seems that waste exported for recycling to other MS has not been included in the amounts of recycled MSW that Latvia has reported to Eurostat. There is currently no information available on which method Latvia uses for the reporting of MSW treatment to Eurostat as regards the MSW treated in the existing MBT plant [EEA 2012].</p> <p>Only a negligible percentage of the municipal waste is composted (0.6 %) [EUROSTAT 2011]. Most probably, under present conditions, the recycling targets of Art. 11 WFD will be difficult to reach. Besides, significant efforts will be needed to better implement the waste hierarchy and to meet the ambitious objectives of the Resource Efficiency Roadmap.</p>	<ul style="list-style-type: none"> • Insufficient restrictions for landfilling biodegradable and untreated municipal waste • The level of the landfill tax in place is comparably low • Limited administrative absorption capacity for EU funding (lacking technical support to realise complex projects simultaneously); in this context possibly the available Cohesion Policy funds are not sufficiently used to build the required alternative treatment infrastructure [EC 2012f]; however the MEPRD does not agree with this assumption [LV MEPRD 2012] • Limited resources available to properly undertake planning at competent authorities (waste management still a low priority within national policy and therefore limited financial resources available) • Quality of data/indicators regarding waste quantities and treatment [EEA 2012] • Difficult to establish large scale recycling facilities due to the small market (stronger cooperation between Baltic States could be supportive), [LV SLLC 2012]
4	Lack of separate collection of municipal waste	<p>The separate collection of municipal waste in Latvia is still in the developing phase, however by now the majority of inhabitants can use separate collection systems [LV SLLC 2012]. Waste management infrastructure with the separation needs to be further developed and expanded to all regions. Therefore, one of the main priorities of the Government is to improve the conditions for separate collection by providing information campaigns and investing in new collection infrastructure [BiPRO 2007-2011].</p>	<ul style="list-style-type: none"> • No PAYT systems in place [EC 2012] • Limited use of economic instruments and producer responsibility schemes to encourage separate collection [EC 2012] • Lack of interest on behalf of the industry to invest into recycling infrastructure including separate collection infrastructure [LV MERPD 2012]; [Reco 2012] • Lack of interest from municipalities to organize a sorted waste collection (2 times more expensive compared with the unsorted waste collection), [Reco 2012] • Limited co-financing rate by municipalities [Reco 2012] • Large regional differences regarding separate collection [LV LAWMM 2012] • Limited information provision and awareness raising campaigns regarding the importance of separate collection • Responsibilities for proper separate collection seem not to be clearly defined [LV SLLC 2012]
5	Incomplete	<p>The collection coverage of municipal waste is insufficient in particular in rural</p>	<ul style="list-style-type: none"> • Low population density in rural areas (and decreasing), [LV MEPRD 2012]

No	Deficit/Problem	Description of the problem	Reasons
	coverage of households with regard to municipal waste collection	<p>areas. Private companies are working especially within larger cities and higher concentrated areas [BiPRO 2007-2011]. Approximately 85 % of the population is connected to waste collection services [EUROSTAT 2012b]. The ministry reported that in average 86 % of the population are receiving waste management services by the end of 2011 [LV MEPRD 2012]. 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. Further, the ministry explained that there are some statistical problems.</p>	<ul style="list-style-type: none"> • Limited number of collection points • Private companies are mainly working within larger cities/higher concentrated areas due to cost efficiency • Municipalities are not always competent to issue contracts within public procurement that contain sufficient obligations to achieve full service provision and in compliance with national legislation [LV MERPD 2012] • Lack of industry to further expand the collection infrastructure [LV MERPD 2012] • Limitation of contracts to 5 years makes it sometimes difficult for municipalities to provide the same service afterwards [LV MERPD 2012] • Administrative absorption capacity for EU funding (lacking technical support to realise complex projects simultaneously) • Inhabitants do not want to contract with waste management companies, because this service is too expensive (low affordability – 52 % of average EU27), [LV SLLC 2012]; in this context inhabitants (especially in rural areas) do not get sufficient information from local municipalities [LV SLLC 2012] • Probably contracts for waste collection services are not designed in a way to provide for reasonable cost structure in urban and rural areas (e.g. through service packages)

Action plan

Horizontal measures addressing several problems

MEASURE	Type of instrument	Responsibility	Indicative time scale	Estimated costs	Estimation of achievable result
MEASURE 1: Increase progressively the current landfill tax (in combination with awareness raising)					
Increase progressively and differentiate the current landfill tax to higher total costs for landfilling than for alternative treatment	Economic/fiscal	MEPRD; Ministry of Finance	Ad-hoc to mid-term	Low	<ul style="list-style-type: none"> - Reduced amount of untreated municipal waste going to landfills - Improved collection and treatment of biodegradable waste. - Increased awareness on proper bio-waste collection and treatment, etc. - Increased acceptance of the increase of taxations, transparency - Prevention of illegal activities in waste management - Improved implementation, higher revenues
Define criteria for use of revenues collected from landfill tax	Legal Administrative	MEPRD; Municipalities	Short-term to mid-term	Low	
Initiate awareness campaigns regarding importance of increase of landfill tax for different target groups	Informative	MEPRD	Ad-hoc to short-term	Low	
Continue to undertake expert meetings on procedures for increase and management of taxes for local authorities to ensure harmonised approach	Information/education	MEPRD	Short-term to mid-term	Low	
MEASURE 2: Introduce tax on MBT					
Introduce tax on MBT (analogue to landfill tax but at a lower rate)	Economic/fiscal	MEPRD; Ministry of Finance	Ad-hoc to mid-term	Low	Prevent negative incentives for recycling
MEASURE 3: Restrictions/Ban on landfilling municipal waste					
Impose a ban on landfilling biodegradable waste (in case sufficient collection and alternative treatment capacity available); establish awareness raising and monitoring/controls	Legal	MEPRD	Long-term	Low	<ul style="list-style-type: none"> - Share of biodegradable waste going to landfills nearly zero; Increase in bio-waste composting/
Impose a ban on landfilling/restrictions for recyclables ; establish awareness raising and	Legal	MEPRD	Mid-term	Low	

MEASURE	Type of the instrument	Responsibility	Indicative time scale	Estimated costs	Estimation of achievable result
monitoring/controls					anaerobic digestion - Share of recyclables going to landfills nearly zero
MEASURE 4: PAYT scheme					
Implement PAYT system (as soon as appropriate collection and treatment infrastructure in place); inform on new systems by leaflets and brochures and introduce penalties on illegal activities; provide incentives for municipalities through awards Develop proper compensation mechanisms (e.g. rich urban would pay for less developed rural areas)	Economic/ Fiscal; Informative	MEPRD Municipalities	Mid-term to long-term	Low	Significant increase in recycling
MEASURE 5: EPR schemes					
Improve the performance of EPR schemes for the main waste flows (i.e. glass, plastics, paper and metal) by initiating in depth consultation with relevant sectors (i.e. glass, plastics, paper and metal) to achieve higher re-use and recycling rates	Economic/fiscal	MEPRD	Short-term to mid-term	Low	- Improved performance of EPR for the magic four - Improved performance of deposit refund systems
Establish a deposit refund systems for packaging (plastic, metal, glass)	Economic/fiscal	MEPRD Packaging industry NGO	new system will start in 2015	Low to medium	
MEASURE 6: Enhance enforcement					
See ' Action plan on specific measures per problem ' below					
MEASURE 7: Improve waste management planning					
Include/improve the forecast and judgment on future municipal waste generation and future treatment capacities	Administrative	MEPRD	Ad-hoc to short-term	Low	- Improved national/regional WMPs; - Improved waste management planning (e.g. required treatment capacities) - Higher quality of data and indicators; improved waste management planning
Improve the quality of data/indicators regarding waste quantities and treatment (measures to be defined); harmonise data collection with EU reporting requirements	Administrative	MEPRD	Ad-hoc to short-term	Low	
Provide sufficient human/economic resources to properly undertake waste management planning	Administrative Economic/fiscal	MEPRD Ministry of Finance	Short-term	Low	
Improve cooperation and coordination of waste management between different stakeholders (e.g. between adjacent municipalities via inter-municipal associations) and with other Baltic States	Administrative	MEPRD	Short-term	Low	

MEASURE	Type of the instrument	Responsibility	Indicative time scale	Estimated costs	Estimation of achievable result
Organize trainings and expert knowledge exchange programmes, conferences, etc.	Informative	MEPRD	Mid-term	Low	<ul style="list-style-type: none"> - Improved waste management planning due to sufficient availability of resources - Improved cooperation between different regions; exchange of experience, e.g. pilot study results, best practices, etc.
Establish a joint platform for exchange of experiences and waste management related problems between local authorities	Informative	MEPRD	Short-term to mid-term	Low	
MEASURE 8: Better use EU funds for establishment of alternative infrastructure					
Improve utilisation and allocation of the Cohesion Policy fund and other available funds to develop alternative waste management infrastructure (e.g. undertake high quality scientific studies in order to prioritise investments)	Administrative	Ministry of Finance	Short-term to mid-term	Low	<ul style="list-style-type: none"> - Better utilisation/ allocation of the CP fund; improved alternative waste treatment infrastructure - Improved adsorption of EU and possibly other available funds
Provide sufficient economic resources to MEPRD and municipalities to improve administrative adsorption capacity for EU funding (e.g. via LIFE)	Administrative	Ministry of Finance	Short-term to mid-term	Low	

PROBLEM 1: Not all dumpsites are recultivated yet

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: Rehabilitation/recultivation of all dumpsites							
Develop a schedule for the recultivation of all closed dumpsites (e.g. as part of the new WMP 2013-2020)	Administrative	MEPRD, Municipalities	Ad-hoc	Low	n.a.	Action plan for recultivation of dumpsites, including clear definition of tasks, responsibilities, time for achievement, etc.	+++
Provide sufficient economic resources for recultivation of dumpsites	Administrative/ Economic	Ministry of Finance MEPRD, Municipalities	Ad-hoc to Mid-term	Medium	ERDF; CF	All already closed dumpsites recultivated	

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
PROPOSAL 1: Establish appropriate collection and treatment infrastructure for biodegradable waste (in combination with awareness campaigns, etc.)							
Better utilise the available capacities of composting facilities and establish new composting facilities	Administrative	MEPRD, Ministry of Finance Municipalities	Short-term to Mid-term	Medium	ERDF; CF	Increase in biodegradable waste recycling (precise objective to be defined)	+++
Define specific obligations in environmental legislation and provisions in contracts for public procurement to ensure that sufficient bins/special bags for separate collection of bio-waste are provided by waste management companies (number, design, volume to be specified in the contract in accordance to the collection scheme, frequency, rural/urban areas)	Administrative	MEPRD, Municipalities	Short-term to mid-term	Low	n.a.	Improved compost quality; all households in urban areas covered by 2015; afterwards increase collection coverage in rural areas	
Initiate awareness campaigns for different stakeholder groups on separate collection of bio-waste, home composting, etc. – provide easily understandable information to households via leaflets and brochures	Informative	MEPRD Municipalities	Ad-hoc to short-term	Low	LIFE implemented in framework	Increased awareness; improved separate collection of bio-waste, increase home	

Proposals to address the problem	Type of the instrument	Responsibility	Indicative time scale	Estimated costs	Available EU Funding	Estimation of achievable result	Priority scoring
<ul style="list-style-type: none"> – provide an internet platform with information on collection systems, available infrastructure, etc. – make TV spots especially on bio-waste collection, importance of source separation, home composting, etc. – involve waste operators and establishments in waste awareness campaigns for open days, special activities, etc. 					of some LIFE financed project	composting, etc.	
<p>Foster the establishment and establish collection points for green garden waste at civic amenity sites or other bring systems (supervised single container collection)</p> <ul style="list-style-type: none"> - Ensure careful planning of collection points and include such information in the WMP - Provide co-financing (up to 50 % of implementation costs) - Inform households on collection points 	Infrastructural	MEPRD;; Municipalities	Ad-hoc to short-term	Low to medium	ERDF; CF	Improved separate collection of bio-waste and higher compost quality	
<p>Foster the establishment of high quality MBTs by</p> <ul style="list-style-type: none"> - Proper capacity and regional planning - Provision of co-financing (up to 50 % of implementation costs) 	Administrative	MEPRD	Mid-term to long-term	Medium	ERDF; CF	Diversion of BDW from landfill	++
<p>Undertake in-depth analysis of possibility in Latvia to opt for anaerobic digestion and foster the establishment of anaerobic digestion facilities by</p> <ul style="list-style-type: none"> - Proper capacity and regional planning - Provision of co-financing (up to 50 % of implementation costs) 	Infrastructural	MEPRD, Ministry of Economics, Ministry of Agriculture	Mid-term to long-term	High	ERDF; CF or EU funds managed by Ministry of Agriculture/ Ministry of Economics	Improved alternative bio waste treatment	
PROPOSAL 2: Support the creation of a market for compost							
<p>Establish voluntary agreements and certification systems with compost producers to inform consumers on high quality compost in cooperation with relevant stakeholders and aligned to already available certification systems in other MS e.g. Germany: Quality assurance system for the compost and digestate which should be used as fertiliser or soil improver (Bundesgütegemeinschaft Kompost e.V.), Sweden: System of certification of compost and bio-</p>	Informative	MEPRD, Ministry of Agriculture	Short-term to mid-term	Low	LIFE	Increased sales of compost	++

Proposals to address the problem	Type of the instrument	Responsibility	Indicative time scale	Estimated costs	Available EU Funding	Estimation of achievable result	Priority scoring
fertiliser (digestate))							
Promote compost via provision of information on benefits, quality standards, etc. (e.g. via consumer organisations)	Informative	MEPRD, Ministry of Agriculture	Short-term	Low	LIFE	See above	
PROPOSAL 3: Improve knowledge basis regarding the prevention and management of biodegradable waste							
Use knowledge on new practices from previous pilot projects related to collection and treatment of bio-waste covering different for activities aimed at long-term implementation (to be further specified)	Administrative	MEPRD, Municipalities, NGO	Short-term to mid-term	Low to medium	LIFE	Improved knowledge and decision basis	+++
Provide guidelines and manuals on bio-waste management, etc. (utilise available studies from other EU MS and results from pilot projects undertaken in different regions of Latvia)	Informative	MEPRD Ministry of Agriculture	Ad-hoc to mid-term	Low	n.a.	See above	
Participate in EU compost networks or other international working groups to follow major developments and exchange information/experience	Administrative	Municipalities NGO	Ad-hoc	Low	n.a.	See above	
Conduct high quality scientific studies in the field of bio-waste management, etc.	Informative	MEPRD Ministry of Agriculture Ministry of Education and Science	Short-term	Low	LIFE	Improved knowledge basis (well grounded decisions regarding schemes/strategies to be implemented, etc.)	++
Initiate a national awareness and information campaign on food waste prevention addressing households including <ul style="list-style-type: none"> - Information on avoidable food quantities ending up as waste - Negative impact of food waste on the environment and related economic costs for households - Possible savings by better planning, food storage, cooking with leftovers, etc. For best practice see http://www.wrap.org.uk/content/household-food-waste-prevention	Informative	MEPRD	Mid- to long-term	Low	LIFE	Reduced food waste – reduced biodegradable waste	+

PROBLEM 3: 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
PROPOSAL 1: Establish appropriate infrastructure for separate collection (see specific measures PROBLEM 4)							
PROPOSAL 2: Establish appropriate infrastructure for separate collection and treatment of municipal waste (in combination with awareness campaigns, etc.)							
Foster the establishment of specialised sorting facilities by <ul style="list-style-type: none"> - Proper capacity and regional planning - Provision of co-financing (up to 50 % of implementation costs) 	Infrastructural	MEPRD, waste management companies	Mid-term	Low to medium	ERDF; CF	Higher quality of separately collected waste fractions	
PROPOSAL 3: Increase resources allocated to competent authorities and ensure cooperation between authorities							
Provide sufficient economic resources to properly undertake waste management planning (e.g. to scientific institutions to improve statistics) and establish a joint platform for exchange of experiences and waste management related problems between local authorities	Administrative Economic/fiscal	MEPRD; Ministry of Finance; Scientific Institutions	Short-term	Low	ERDF; CF	Improved waste management planning due to sufficient availability of resources	
Improve cooperation and coordination between municipalities to better organise waste management (especially as regards implementation of separate collection)	Administrative	MEPRD	Short-term	Low	n.a.	Improved cooperation between different regions; exchange of information, e.g. pilot study results, best practices, etc.	+++
Organize trainings and expert knowledge exchange programmes, conferences, etc.	Informative	MEPRD	Mid-term	Low	n.a.	Exchange of experiences	++

PROBLEM 4: Lack of separate 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
PROPOSAL 1: Establishment of appropriate infrastructure for separate collection (in combination with awareness campaigns)							
Foster the establishment and establish civic amenity sites for collection of all types of municipal waste, including the option to: <ul style="list-style-type: none"> - deliver and sort hazardous wastes - deliver products for possible reuse 	Infrastructural/ Administrative	MEPRD; Municipalities	Short-term to long-term	Low to medium	ERDF; CF; LIFE	Higher quality of separately collected waste; waste prevention via reuse	+++

Proposals to address the problem	Type of the instrument	Responsibility	Indicative time scale	Estimated costs	Available EU Funding	Estimation of achievable result	Priority scoring
- prepare for reuse (repair) Improve the accessibility to civic amenity sites Include civic amenity sites in the WMP and inform households on the location and services of civic amenity sites							
Expand bring systems for separate collection in rural areas for at least paper, plastic, glass and metal (e.g. start with paper and glass); provide for specific provisions in contracts issued in context of public procurement; provide door-to-door separate collection whenever feasible	Infrastructural	Municipalities	Short-term	Medium	ERDF; CF	High quality of separately collected waste; improved collection coverage	
Expand bring systems for separate collection in urban areas for at least paper, plastic, glass and metal; provide for specific provisions in contracts issued in context of public procurement	Infrastructural	Municipalities, waste management companies	Short-term	Medium	ERDF; CF	See above	
Provide guidelines and manuals on separate collection	Informative	MEPRD, Municipalities, waste management companies	Ad-hoc to short-term	Low	n.a.	Improved knowledge basis	
Initiate awareness campaigns on separate collection, recycling centres, fee systems, etc. (households, SMEs, retailers etc.) – provide easily understandable information to households via leaflets and brochures – provide internet platform with information: every municipality should inform on collection systems and infrastructure available (e.g. civic amenity sites) – make TV spots especially on waste prevention, correct source separation involve waste operators and establishments in waste awareness campaigns for open days, special activities etc.	Informative	MEPRD Municipalities, waste management companies	Ad-hoc to short-term	Low	LIFE	See above	
PROPOSAL 2: Implement measures to encourage/ensure separate collection and recycling							
Introduce legal requirements for waste management companies to control appropriate source separation by inhabitants (inform	Legal	MEPRD, Municipalities	Short-term to	Low	n.a.	Improved separate collection of MW in	

Proposals to address the problem	Type of the instrument	Responsibility	Indicative time scale	Estimated costs	Available EU Funding	Estimation of achievable result	Priority scoring
inhabitants via informative leaflets on waste prevention and appropriate source separation) and penalties in case of non-compliance (e.g. fines, termination of contract)			mid-term			municipalities	
Introduce penalties for non-compliance to source separation of households (e.g. higher prices for waste collection, temporary termination of service provisions, etc.)	Legal	MEPRD, Municipalities State Police	Ad-hoc to short term	Low	n.a.	Improved quality of waste management and transparency	
Introduce incentives (e.g. discount on a waste bill) for proper separation of waste by households (provide separate containers either free of charge, or a with deposit)	Legal	MEPRD, Municipalities	Ad-hoc to short term	Low	n.a.	Improved quality of waste management and transparency	
Information campaigns (guidelines, manuals) on separate collection (smart phone application for separate collection containers, civic amenity sites, etc), recycling centres, fee systems for different target groups (municipalities, companies) according to their needs	Informative	Municipalities, Waste management companies	Ad-hoc to short-term	Low	LIFE	Improved separate collection of MW	
Introduce environmental awards for municipalities which are front runners in separate collection of municipal waste and in general municipal waste management, to support and enhance competition for best performance (e.g. 'best municipality' shall be awarded with more funds from environmental funds)	Economic/fiscal /administrative	MEPRD Ministry of Finance	Short-term to mid-term	Low	Revenues from landfill tax (the share allocated to municipalities)	Improved MW waste management on local level	++
PROPOSAL 3: Introduce controlling mechanisms for separate collection							
Introduce penalties and fines for non-compliance with separate collection requirements (different systems for municipalities, households and companies, depending on their obligations)	Legal	MEPRD	Short- to mid-term	Low	n.a.	Improved separate collection of MW	
Define responsibilities for supervision of separate collection system between local and national level and place responsibilities for controlling of illegal dumping activities on municipalities	Administrative/ possibly also legal	MEPRD, Municipalities, SEI	Ad-hoc	Low	n.a.	Improved supervision of MW operations	+++
Improve monitoring of development and implementation of municipally organized collection model (PAYT scheme) by the state institutions	Administrative	MEPRD, SEI	Short-term to mid-term	Low to medium	ERDF	Improved coverage of PAYT	
Intensify environmental audits for packaging recovery organisations	Administrative	MEPRD	Short-	Low to	n.a.	Improved collection of	

Proposals to address the problem	Type of the instrument	Responsibility	Indicative time scale	Estimated costs	Available EU Funding	Estimation of achievable result	Priority scoring
and specify the requirements for the content of audits (packaging audits)			term	medium		packaging waste	
PROPOSAL 4: Increase cooperation between relevant stakeholders							
Encourage cooperation between municipalities (e.g. via formation of inter-municipal associations) to implement schemes for separate collection and coherence of systems	Administrative	MEPRD	Ad-hoc to short-term	Low	LIFE	Increased cooperation between municipalities and other relevant stakeholders to improve separate collection, etc.	+++
Improve cooperation between environmental and statistical offices (clarification on classifications, definitions, exchange on knowledge and information, organisation of expert workshops, etc.)	Administrative	MEPRD	Ad-hoc	Low	n.a.	Improvements in MW data collection and reporting	
Initiate in depth consultation with relevant actors from industry, retailers and waste management organisations in order to improve separate collection	Administrative	MEPRD	Ad-hoc to short-term	Low	n.a.	Improved cooperation between different stakeholders to improve separate collection, recycling	

PROBLEM 5: Availability/Quality of statistical data

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: Improve statistical data base							
Harmonise statistical data collection and calculation methods in order to produce reliable data suitable for future planning and enable the evaluation of targets	Administrative Legal	MEPRD	Ad-hoc to short-term	Low	n.a.	National overview on waste management related data; enable coordinated implementation and planning activities, avoid misinterpretation of data	+++
Improve and up-date statistical data base (precise responsibilities, regular proceed reported data)	Administrative Legal	MEPRD	Ad-hoc to short-term	Low	n.a.	National overview on waste management related data; enable coordinated implementation and planning activities	
Include/improve the forecast and judgment on future	Administrative	MEPRD	Short- to	Low	n.a.	Improved national/regional WMPs;	

Proposals to address the problem	Type of the instrument	Responsibility	Indicative time scale	Estimated costs	Available EU Funding	Estimation of achievable result	Priority scoring
municipal waste generation and treatment capacities			mid-term			Improved waste management planning in the future (e.g. required treatment capacities)	
PROPOSAL 2: Obtain reliable data on municipal waste collection systems and treatment infrastructure							
Establish reporting obligations of municipalities to the MEPRD (e.g. harmonised reporting procedures, implement internet based reporting, reporting formats, reporting standard, other routines to transfer information to national level use, clear reporting responsibilities)	Administrative Legal	MEPRD	Ad-hoc to short-term	Low	n.a.	National overview on waste management related data; enable coordinated implementation and planning activities	++
Enforce reporting obligations of municipalities to the MEPRD (e.g. introduce penalties/fines for non-compliance and non-timely reporting)	Administrative Legal	MEPRD	Short- to mid-term	Low	n.a.	See above	
PROPOSAL 3: Adjust the statistical system							
Include the statistics on all household packaging waste generation and treatment in the statistics on municipal waste generation and treatment; if it is not possible to distinguish between commercial and household packaging waste due to reporting systems undertake a study which allows reliable estimate of the recycled amounts	Administrative	MEPRD	Short-term	Low	n.a.	Improvements in municipal waste data collection and reporting	+++
Report co-incineration of municipal waste as R-1 operation and report exported waste for recycling under ‘recycling’	Administrative	MEPRD	Short-term	Low	n.a.	See above	+++
As regards data on MBT processes consider the exit of MBT and where this waste material is going to (recycling, recovery, landfill)	Administrative	MEPRD	Short-term	Low	n.a.	See above	+++
Improve consultation between environmental and statistical offices	Administrative	MEPRD	Ad-hoc to long-term	Low	n.a.	See above	++

Proposals to address the problem	Type of the instrument	Responsibility	Indicative time scale	Estimated costs	Available EU Funding	Estimation of achievable result	Priority scoring
Continue in depth consultation with relevant actors from industry, retailers and waste management organisations in order to improve the statistical system	Administrative	MEPRD, Association of local authorities	Ad-hoc to short-term	Low	ERDF; CF	See above	++