

Roadmap for Czech Republic (CZ)

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 (67.9 %), 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 in order to make recycling economically viable. Keep the landfill tax higher than taxes for incineration. Use revenues to support separate collection and alternative infrastructure.**
- 3. Extend and enforce PAYT scheme. Provide incentives and support for households to participate in separate collection.**
- 4. Implement the bio-waste strategy including specific measures to divert biodegradable waste from landfill.**
- 5. Establish and control separate collection infrastructure and schemes. Implement door-to-door separate collection as soon as possible.**
- 6. Extend and improve the cost-effectiveness, monitoring and transparency of existing EPR schemes and eliminate free-riding.**
- 7. Enhance cooperation between all different administrative levels by in-depth consultation and establishment of inter-municipal organisations.**

National waste management situation

Administrative structure: The competent authority for national waste management issues is the Ministry of Environment (MoE) developing the national WMP. The current WMP (2003-2013) is under revision; however it included ambitious targets reflecting the EC targets and going beyond. Regional WMPs are elaborated by 13 regions plus the city of Prague also responsible for the permitting/registration of installations [CZ WFD 2007-2009]. Monitoring, controls and inspections are in the responsibility of the Czech Environmental Inspectorates and 10 local inspection offices which can impose fines. Since 2006, practical implementation lies in the responsibility of the 6,251 municipalities and communal environmental offices/inspectorates [MoE 2012d]. As regards municipal waste collection, private industry is increasing (private market share >60 %), there exists some joint ventures/public private partnership (PPP), involvement of foreign companies (by associated companies). Treatment facilities were established in particular by private companies and investments [RETech 2009].

Waste generation and collection: According to [EUROSTAT 2012b], the total amount of municipal waste generated is 3,334 kt/y, which corresponds to 317 kg/y per capita. Taking into account data from the MoE which is the main data source for reporting to DG Environment including company waste similar to municipal waste, a realistic figure would be 5,362 kt/y and 510 kg/y per capita. All inhabitants are covered by door-to-door waste collection services for mixed unsorted municipal waste [EUROSTAT 2010]. So far, no door to door collection systems are in place for waste sorted at source. The system of source separation is growing and is regionally well established for packaging waste. According to [CZ WMP 2003-2013] and [CZ FoE 2012] 90 % of the population is involved in separate collection systems, civic amenity sites for the collection of all kinds of municipal waste streams provided by bring systems (containers), according to [CZ EKOKOM 2012] rate is 99 %. As the walking distance to containers has been reduced (average distance from households to nearest collection point is about 100m [CZ EKOKOM 2012]) and the number of containers has increased the total amount of recycled packaging waste has grown significantly and is at very high performance. Also the infrastructure of civic amenity sites is implemented and the annual waste fee includes this services, thus citizens can deliver special wastes (furniture, bulky waste, hazardous waste, WEEE etc. free of additional charge) [CZ CEI 2012]. Cost of separate collection is with 6 €/capita per year below EU average. Cost of collection including sorting and recycling is less than 100 €/t, even achieving more than 50 % plastic recycling rate.

EPR systems are well implemented. Especially paper/cardboard and glass collection seems to be successful. Limited collection is still provided for bio-waste, which consequently leads to low composting rates. However, it is under consideration that from 2014 on municipalities are obliged to provide separate collection systems for compostable municipal waste [CZ MoE 2012b]. However, details and enforcement schedule are not communicated yet [CZ FoE 2012]. Besides, it should be discussed whether limitations for metal and according to [CZ EKOKOM 2012] paper waste separation and recycling exists. Deposit-refund systems for glass bottles have been introduced already in 1950 [OECD/EEA 2012]. Further, the deposit on returnable packaging is set at a uniform amount for certain types of returnable packaging. Producer responsibility schemes (Green Dot systems) have been introduced for packaging waste which is based on a producer fee scheme. The fee contributes financially to the collection, sorting and reprocessing of packaging waste, however, no information is available whether all costs are covered.

Policy instruments applied to move up the waste hierarchy: Biodegradable and/or compostable waste can be landfilled only as a part of the mixed municipal waste. However, further restrictions or a ban for biodegradable waste or other waste fractions are not in place. A strategy on bio-waste reduction and quality standards for composted materials are in place [CZ MoE 2012b]. A landfill tax has been introduced in 1992 and is about 20 €/t. According to [CZ MoE 2012b], the gate fees currently range from 32 to 48€/t. PAYT systems are implemented on a municipal level, with the legal possibility for municipalities to establish PAYT as a part of the municipal waste management. According to the MoE, the exact number of municipalities providing PAYT systems is not known [CZ MoE 2012b], [EC 2012]. However, according to the information provided by [CZ FoE 2012], around 10-15 % of the municipalities are covered by PAYT.

Waste treatment: The Czech Republic is self-sufficient in waste disposal [CZ WMP 2003-2013]; [BiPRO 2012b]. The main treatment option for municipal waste is still landfilling (67.9 % [EUROSTAT 2012b] 60 % [CZ MoE 2012b]). The

disposal rate is considerably higher than the EU-27 average (38.2 %). With 14.2 % [EUROSTAT 2012b] 24.3 % [CZ MoE 2012b] the recycling rate is notable. The target of the Landfill Directive related to biodegradable municipal waste going to landfills was achieved in 2010 [CZ MoE 2012]. All non-compliant landfills were closed by 2009. There are 148 compliant landfills for non-hazardous waste [CZ MoE 2012b]. Further, three incinerators for mixed municipal waste with energy recovery with a total capacity of 654 kt/y (20 % of municipal waste could be treated in these facilities) and several installations for recycling are available. Taking into account the municipal waste amount of 3,334 kt [EUROSTAT 2012b] or 5,362 kt [CZ MoE 2012a]; the treatment capacity other than landfilling needs to be expanded significantly. Regarding the treatment of bio-waste, there are 239 composting plants (mostly with low capacities), 52 community composting facilities and 10 biogas plants accepting waste [RETech 2009], [CZ MoE 2012b].

The main problems with regard to the municipal waste management and their reasons are summarised as follows.

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

No	Deficit/Problem	Description of the problem	Reasons
1	High share of bio-degradable waste going to landfills	<p>Following the EUROSTAT data in 2009, more or less the same amount of biodegradable waste has been landfilled compared to the 1995 data (98.2 %), [EC 2012a]. However, the fulfilment of the targets of the Landfill Directive was reached in 2010 which was the response of the MoE to the EC in December 2012. It is not satisfactory that the share of biodegradable waste disposed of in landfills is still quite high and the share of bio-waste composted is still a challenge (12 %), [CZ MoE 2012]. According to [Ernst & Young 2011], the quantity of which the 2010 target has been exceeded is 450 kt/y. This quantity is projected to be 800 kt/y in 2013 and 1,100 kt/y in 2020.</p> <p>According to the national legislation, biodegradable and/or compostable waste can be landfilled only as a part of mixed municipal waste. This means that separately collected bio-waste cannot be landfilled. However, further restrictions on the disposal of biodegradable/compostable waste fraction of mixed municipal waste or a ban is not in place. Further bans/restrictions are under discussion [CZ MoE 2012b], however, details on implementation and the probability to implement a further ban in the near future is unclear [CZ FoE 2012]. In addition, a strategy on the reduction of biodegradable waste going to landfills is included in the national and also regional WMPs and gradually introduced in connection with the requirements contained in the Czech WMP/the national legislation. However, the MoE experiences difficulties to exact this strategy [CZ FoE 2012]. Regarding the separate collection of bio-waste no obligation has been in place so far. There are hundreds of municipalities providing separate collection of bio-waste; but separation rate of bio-waste is not investigated [CZ FoE 2012]. From 2014 on it is planned by the Government that municipalities will be obliged by law to introduce separate collection of compostable municipal waste [CZ MoE 2012b]; however details of the obligation and the date of enforcement are not publicly known yet [CZ FoE 2012].</p> <p>In 2012, 239 compost facilities and 52 community composting facilities were available, particularly including low capacity plants and 10 biogas facilities existed in 2010 [CZ MoE 2012d]. Quality standards on composted bio-waste are in place; however, the market is still in the developing phase. Home-composting activity according to [CZ MoE 2012d] is common practice. However eventually activities are not sufficient in rural areas and together with insufficient capacity to collect/treat bio-waste, problems with illegal dumping of green (garden) waste exists [CZ CEI 2012]. There was no MBT in 2009 in Czech Republic. The same situation is in 2012 [CZ MoE 2012].</p>	<ul style="list-style-type: none"> • Limited obligations for separate bio-waste collection and limited collection infrastructure • Very high rate (compared to 1995) eventually based on reporting difficulties (changes of statistical bases) [EUROSTAT 2012b]; [Ernst & Young 2011] • Landfill ban in place but only covering separate collected bio-waste, but not for biodegradable fraction of mixed MW [CZ MoE 2012b] • Compost facilities and bio-gas plants in place, but more capacity is needed [CZ MoE 2012b]; [Ernst & Young 2011] • Limited measures in place to encourage separate collection of bio-waste (like PAYT schemes) • Lack of motivation/pressure for change on handling bio-waste on municipal level [CZ FoE 2012] • Limited financial support for separate collection of bio-waste, home and community composting, etc. [CZ FoE 2012] • Limited number of pilot projects (in advance to the implementation of schemes/systems) • Landfill tax is in place, however, still comparably low and planning to increase (double/triple) not yet agreed on /planning changed over last six years / transformed in legal obligation and not communicated to stakeholders [CZ FoE 2012] • Limited activities to promote home-composting activities in rural areas [CZ CEI 2012]

No	Deficit/Problem	Description of the problem	Reasons
2	Waste treatment largely diverting from the waste hierarchy	<p>Recycling and recovery are already a well-established treatment option in the Czech Republic. Around 14 % (according to the Czech Statistical Office and 24 % based CZ MoE 2012) of the municipal waste is recycled [EUROSTAT 2012b, compared to around 70 % in the most performing MS]) and about 15 % (according to the [CZ MoE 2012b], 9 %) is incinerated with energy recovery in the three existing incinerators. Thus, first promising investments in new waste infrastructures were made in the past. However, the effectiveness of some investments have been, as the main treatment option for municipal waste is still disposal in landfills with a current disposal rate of about 68 % (2010), [EUROSTAT 2012b], or 60 % according to the [CZ MoE 2012b]. Despite an encouraging increase in recycling rates (especially for paper and glass), it is unlikely that CZ will meet the recycling target of 50 % by 2020 without substantial investment [EC 2012f].</p> <p>CZ is self-sufficient for the treatment of municipal waste (sufficient capacity for landfills until 2050), [EC 2012b, CZ MoE 2012d]. However, in this context the problem of over-capacity might occur in the future, thus avoiding development of alternative waste management options, in particular recycling and energy recovery [CZ MoE 2012a]. Further, landfilling and incineration is comparably inexpensive (only a low tax is imposed on landfilling municipal waste, currently about 20 €/t and no incineration tax is in place). According to the [CZ MoE 1012b], the gate fees range 32 to 48 €/t. (compared to 120€/tons in the most performing MS and/or bans). Planning foresees to gradually increase the landfill tax: doubled in 2016, tripled in 2025 [CZ MoE 2012]; however exact conditions are not yet agreed nor communicated [CZ FoE 2012]. An incineration tax is currently not foreseen. CZ requires additional capacity for treatment of mixed waste, (incineration, etc.),[CZ FoE 2012],[Ernst & Young 2011].</p> <p>In this regard recycling/composting might not be an economic valuable option without introducing new economic instruments. Higher potential for recycling is in particular spotted for bio-waste (current composting rate of municipal waste is around 12 % [MoE 2012b]). It should be discussed whether shortcomings for metal packaging waste (not enough metal tins and cans used in CZ) and according to [CZ EKOKOM 2012] for household paper waste.</p> <p>For other packaging wastes (e.g. beverages) progress has been made in the last years: Deposit on returnable packaging pursuant to the Act on Packaging is set at a uniform amount for certain types of returnable packaging, deposit-refund systems for glass bottles have been introduced already in 1950 [OECD/EEA 2012] and commercial premises larger than 200 m² are required to offer beverages in reusable packaging if such packaging exists on the market. However, there are problems on the side of the market to abide this requirement [CZ FoE 2012]. For selected types of returnable packaging, the levels of deposits were harmonised by means of a decree. Reusable</p>	<ul style="list-style-type: none"> • Unreliable and constantly changing requirements in EUwaste legislation over the past six years; thus hindering investments [CZ FoE 2012] • Sufficient landfill capacity available and insufficient incineration capacity (urgent need for action to support EU funding of 2 incineration projects) – problems of overcapacity might occur [CZ MoE 2012a], [CZ WMP 2003-2013], [BiPRO 2012b] • Significant investments in waste infrastructure during the last years; however the effectiveness of those investments is still evaluated through OPE reports [CZ FoE 2012]; facing problems of over-capacity of landfilling and limited capacity for recycling and energy recovery (incineration) • Lack of economic motivation for recycling (still comparable low landfill fees, no incineration tax, etc.) • Landfill tax is in place, however, still comparably low and planning to increase (double/triple) not yet agreed on /planning changed over last six years / transformed in legal obligation and not communicated to stakeholders [CZ FoE 2012] • Limited alternative municipal waste treatment infrastructure as regards recycling for some waste streams and incineration with energy recovery [BiPRO WFD 2011] • Separate collection for bio-waste very limited – no obligation for municipalities (probably coming into force 2014 [CZ MoE 2012]; however details of obligation and schedule for enforcement are not communicated yet [CZ FoE 2012]) • Separate collection relying on bring systems (however very close distances); eventually further potential for metal packaging and for household paper waste [EKOKOM 2012] • PAYT schemes on municipal basis in hundreds out of 6200 municipalities (coverage about 10 %) [CZ FoE 2012] • Possibility but no obligation and no support for municipalities to

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		<p>packaging is deemed to be returned or recovered if at least 55 % by weight of the packaging placed on the market or put into circulation anew is reused [EC 2012c].</p> <p>Pay-as-you-throw systems are implemented on a municipal basis in hundreds out of 6200 municipalities. The systems applied are either volume or frequency based. There is the possibility in legislation for the municipalities to establish PAYT as a part of the municipal waste management [CZ MoE 2012b], however there is no support to do so [CZ FoE 2012]. There is no up-dated figure and overview on the coverage of the municipal waste collection system. According to the information provided by the [CZ FoE 2012] the application of PAYT is not the standard.</p> <p>There is a visible activity on informational and education level from take back system and on the promotion of recovery of certain waste streams (packaging, batteries, WEEE and others) involving schools, TV campaigns, etc.</p> <p>However, there is further potential for the recycling of other packaging waste as data basis to calculate recycling rates is problematic: Only the registered production of packaging waste is taken into account; actual production is higher. Thus, this leads to the situation that recycling ratio in some countries is higher than 100 % and that treatment of paper packaging waste (recycling, incineration, landfilling) sums up to 130 % in CZ. As a consequence, real recycling rates are probably lower [CZ FoE 2012]. Regarding the recycling rates for packaging waste [CZ FoE 2012] comments that the data basis for the calculation is based on the registered production of packaging waste (including all packaging covered under the Packaging Directive i.e. from commercial/industrial and household sources).</p> <p>The increase of recycling rates requires a higher rate of separately collected municipal waste and considerable investment into modern treatment infrastructure.</p>	<p>introduce PAYT [CZ MoE 2012b], [CZ FoE 2012]</p> <ul style="list-style-type: none"> • Focus is more on mixed municipal waste and its mass-burn waste incineration are seen as main solutions • Insufficient capacity of separation facilities to separate/sort mixed municipal waste (116 facilities, but further capacity is needed), [CZ MoE 2012b] • Data basis for calculation of recycling rates is based on registered and not on produced packaging waste, thus over-estimates recycling rates for packaging waste (general problem within the EU) [CZ FoE 2012] • Absence of real actions and targeted measures to implement programmes on prevention of packaging waste [CZ FoE 2012] • Missing initiatives on the promotion of reuse of packaging (e.g. carrier bags, beverage packaging) [CZ MoE 2012] • Deficits of markets to implement requirement of offering reusable packaging for beverages [CZ FoE 2012] • Available Cohesion Policy funds are not best possibly used [CZ FoE 2012],[EC 2012] • Limited cooperation between municipalities, etc. to set up alternative (to landfilling) waste treatment infrastructure including incineration with energy recovery
3	Non-harmonized waste data base and insufficient reporting system/routines in frequent data collection	<p>There are problems with the statistical data base as two methods/systems exist to evaluate data (one performed by the DG Environment/MoE and one performed by the Statistical office reporting under Regulation). The main difference is that the DG Environment system considers all municipal waste (incl. company waste similar to municipal waste) based on the definition in the EU Landfill Directive. As a consequence, figures (e.g. for total municipal waste generation) differ largely. Therefore, data reported by the Czech Statistical office under EUROSTAT often does not reflect realistic figures (i.e. waste generation is much lower than reported by MoE). Harmonized methodology of data collection is needed in order to evaluate targets or reporting. However the problem of two data stream is well known in both institutions and solutions will be agreed on in</p>	<ul style="list-style-type: none"> • Involvement of 13 regions (and the city of Prague) and more than 6,200 municipalities in practical implementation and enforcement • Systematic reporting system/data base (e.g. on pending/issued permits) for waste treatment plants in place, however space for improvement (e.g. internet based, reporting formats, other routines to transfer information into national level) • Existence of two statistical collection/interpretation systems

No	Deficit/Problem	Description of the problem	Reasons
		<p>near future.</p> <p>In future, MoE and the Czech Statistical Office will be responsible to harmonize these methods and one of them will take over the only responsibility for collection/provision and interpretation of data. However, there are concerns that suitable and accurate data not only for planning of regional waste management but also for planning and carrying out inspections will be delivered in same quality [CZ CEI 2012].</p> <p>Further information transfer from regional/local level to national level might be improved. The MoE is currently collecting this data from the regions to prepare the new WMP [CZ MoE 2012a]; however, for more time-closely planning and for the purpose of control of implementation such data is needed on a regular reporting basis.</p>	<p>producing different data [CZ MoE 2012a]</p>
4	<p>Deficits in cooperation and supervision systems especially on municipal level</p>	<p>The competent regional authorities at the level of the 13 regions and the city of Prague draw up regional WMPs, which have to be compliant with the national WMP of the MoE. Further the regional authorities are responsible for permitting recovery and disposal facilities and for registration of establishments and undertakings [CZ WFD 2007-2009] and also for controlling of these facilities. Monitoring, controls and inspections are also within the responsibility of the Czech Environmental Inspectorates and 10 local inspection offices, able to impose fines and stipulate remedy measures for all provisions based in Waste Act. Cooperation and data bases for performing controls and inspections and detecting illegal activities by operators are according to [CZ CEI 2012] well established. In some areas there is a very good information exchange even on international level (e.g. waste shipments). Tools to detect illegal activities are provided by the Czech MoE and CENIA (Czech Environmental Agency). This regards permits database (facilities handling with waste) and waste production and handling data base in which the inspectorate can search for suitable facilities or waste producers to inspect. The tools allow focusing on and following up waste streams from production to final treatment. In 2011 the Waste Management Department of the Czech Environmental Inspectorate performed 2,891 inspections focusing on recovery and disposal facilities, waste collection, take back systems (WEEE, waste batteries, waste tyres, waste oils, packaging), waste generators (producers), waste shipments and chemical legislation obligations. In 869 cases they imposed the total fine of more than 48,000,000CZK (~1.9 Mio €; which is 2,220 average per fine) and stipulated 9 measures for ensuring a remedy. The most frequent breach/infringement was operating facility for recovery, disposal, collection or purchase of waste in discrepancy with the approved rules of operation (e.g. wrong classifying waste according to the European Waste Catalogue's types and categories, no safeguard waste against undesirable devaluation or theft or escape, no records of waste and the manner of its</p>	<ul style="list-style-type: none"> • Many small municipalities (more than 6,000 municipalities in practical implementation and enforcement) • In most cases only one person dealing with waste management and other issues, therefore no core competence in waste management and also waste management not as top priority ("one-man show") • Lack of co-operation and exchange between State and local authorities, lack of guidance, capacity building initiatives • Missing co-operation between municipalities/regions and between the authorities at different levels • Insufficient capacity building and training regarding general waste management • Missing overview on activities in municipalities by MoE

No	Deficit/Problem	Description of the problem	Reasons
		<p>management, breaking allowed capacity.) [CZ CEI 2012]</p> <p>Since 2006, practical implementation lies in the responsibility of the 6,254 municipalities and communal environmental offices/inspectorates [CZ MoE 2012b], (many of the municipalities with less than 2,000 inhabitants).The regional and the sub-regional authorities (from the municipalities – in total 228) can also perform inspection and controls, however they have limited possibilities to impose fines (regional authorities cannot, municipalities can in some cases as defined in the Waste Act [CZ CEI 2012].</p> <p>Typically, there is only one person per municipality responsible for waste management issues next to other issues. Further, the main focus is still on infrastructural issues (i.e. treatment facilities), whereas the organisational and controlling aspects are often neglected. In addition to the lack of technical capacity, the waste departments of the municipalities often have insufficient knowledge regarding waste management. There is a weak co-operation between municipalities and most municipalities have not joined waste management cooperation structures yet.</p> <p>To support decisions of the MoE, a Council of Waste Management is established, functioning as an advisory board to the Ministry, including the leading experts as well as the non-governmental sector, universities, professional association, [http://www.mzp.cz/en/waste]. However, according to the Members of the Council, information exchange and procedures can still be improved [CZ FoE 2012]. Networks and expertise centres are well established as e.g. the Union of Towns and Municipalities, the Regional competence centre of waste (CEHO), a network on biomass use, the Czech Waste Association (CAOH) and others (SCHP, SPD, STEO). However capacity building and support especially of municipalities is needed to ensure proper procurement procedures and implementation.</p>	

Action plan

Horizontal measures addressing several problems

Abbreviations: Ministry of Environment (MoE), Ministry of Finance (MoF), Ministry of Regional Development (MoRD), Ministry of Labour and Social Affairs (MoLSA), Ministry of Industry and Trade (MoIT), Ministry of Agriculture (MoA), Czech Statistical Office (CSO)

Measure	Type of the instrument	Responsibility	Indicative time scale	Estimated costs	Estimation of achievable result
MEASURE 1: Increase progressively as planned the current landfill tax (in combination with awareness raising)					
Progressive increase of the landfill tax is under consideration (probable doubled in 2016 / tripled in 2020) –Establish the exact conditions for the planned increase of landfill tax, set exact schedule/intervals for increase and measures to implement obligations and include obligation for municipalities to invest revenues from landfill tax in re-use and recycling infrastructure(on legal basis, being reliable on long term basis) and communicated to municipalities, investors and stakeholders (including expert meeting on procedures for implementation and management of landfill tax for local authorities/municipalities	Legal Administrative Informative	MoE/MoIT	Ad-hoc to short-term	Medium	<ul style="list-style-type: none"> - Reduced amount of untreated municipal waste going to landfills, making recycling an economic alternative - Increased acceptance of the increase of taxations, transparency, reliability for investors
MEASURE 2: Introduction of an incineration tax					
Survey the introduction of an incineration tax to prevent underdevelopment of recycling on long-term basis (agree on schedule), introduce restriction to incinerate recyclable waste	Economic/ Fiscal /Legal	MoE/MoF	Long-term	Low	<ul style="list-style-type: none"> - Support of recycling
MEASURE 3: Restrictions/Ban on landfilling certain municipal waste					
On long term basis discuss implementation on further restrictions/bans to support the obligation on separate collection, e.g. restrictions on landfilling of bio-waste collected also as mixed municipal waste,,) waste with high calorific value, waste not undergone sufficient pre-treatment, specific fractions as paper, plastic and metal wastes	Legal	MoE	Mid- to long-term	Medium to high	<ul style="list-style-type: none"> - Share of waste landfilled reduced, in particular share of biodegradable waste going to landfills reduced
MEASURE 4: Extend and enforce PAYT scheme					
Extend and financially support application of PAYT scheme (as soon as appropriate collection and treatment infrastructure in place, provide incentives for municipalities, e.g. by allocation of additional financial resources, awards, etc.)	Economic/Fiscal Informative	MoE/MoF	Short-term to mid-term	Low to medium	<ul style="list-style-type: none"> - Increase of separately collection, reduce landfilling - Incentives for municipalities - Increase economic incentives to enhance separate collection
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, awareness on benefits and costs	Informative	MoE	Ad-hoc to short-term	Low	
Make the application of PAYT scheme a legal obligation to municipalities (e.g. volume based/frequency based approach)	Administrative Legal	MoE	Mid-term to long-term	Low	

European Commission

Roadmap for Czech Republic

Support to Member States in improving waste management based on assessment of Member States' performance

Measure	Type of the instrument	Responsibility	Indicative time scale	Estimated costs	Estimation of achievable result
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; inform on impacts of illegal burning/littering	Informative	MoE, MoRD Municipalities	Ad-hoc to mid-term	Low	
Improve monitoring of development and implementation of municipally organized collection model (PAYT scheme) by the state institutions	Administrative	MoE, MoRD	Short-term to mid-term	Low to medium	
MEASURE 5: Improve EPR schemes for some waste streams					
Discuss possibility to improve the performance of existing EPR schemes for some waste flows by initiating in depth consultation with relevant sectors (i.e. fee for paper advertisement distributed free of charge to households)	Administrative	MoE/MoIT	Short to mid-term	Low	<ul style="list-style-type: none"> - Improved performance of EPR for particular waste streams - Improved performance of deposit refund systems
Improve the performance of deposit refund systems in particular for beverages (e.g. increase deposit and refunds; include plastic bottles)	Economic/ Fiscal	MoE/MoIT	Long-term	Low to medium	
MEASURE 6: Improve utilisation of EU funds					
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) with a priority on the first steps of the waste hierarchy (prevention and reuse initiatives, recycling facilities, waste-to-energy plants)	Administrative	MoE/MoRD	Short-term to mid-term	Low	<ul style="list-style-type: none"> - Better utilisation/allocation of the CP fund - Improved alternative waste treatment infrastructure

PROBLEM 1: 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: Implement and enforce bio-waste strategy / obligation for separate collection of bio-waste (in combination with awareness raising)							
A bio-waste strategy is in place, but exact requirements still under consideration – Exact reduction targets, schedule, implementation measures, investments, etc. have to be agreed on (being reliable on long term basis) and have to be communicated to investors and stakeholders	Legal Administrative	MoE, MoA	Ad-hoc	Medium to high	n.a.	Improve separate collection of bio-waste/ green garden waste, reduced amount of biodegradable waste going to landfills, reliability for investors of compost/digestion facilities	+++
Obligation for municipalities (and citizen through local regulations) to separate collect bio-waste (probably coming into force 2014) –Details of obligation, schedule and accompanied measures to support/enforce obligation have to be agreed on (being reliable on long term basis) and communicated to municipalities, investors and stakeholders	Legal Administrative	MoE, MoIT, Municipalities	Ad-hoc	Low	n.a.		
Establish and extent door-to-door collection systems for bio-waste , launch pilot projects covering specific regions	Infrastructural	MoE, MoF, Municipalities	Short- to mid-term	High	ERDF; CF		
Establish collection points for green garden waste at civic amenity sites or other bring systems	Infrastructural	MoE, MoRD, Municipalities	Short- to mid-term	Low to medium	ERDF; CF		
Introduce penalties for non-compliance with strategy/obligations (e.g. when municipalities continue to landfill biodegradable waste to large extent), amounts of fines to be defined taking into account target groups (households, waste management companies, municipalities)	Legal	MoE	Mid-term	Low	n.a.		
Introduce penalties for non-compliance to source separation of households (e.g. higher prices for waste collection, temporary termination of service provisions, “red cards” etc.)	Legal	MoE, Municipalities	Ad-hoc to short term	Low	n.a.		
Initiate awareness campaigns addressing households on separate collection of municipal waste (e.g. via leaflets and brochures , websites, TV spots) especially for bio-waste	Informative	MoE	Ad-hoc to mid-term	Low	LIFE		
PROPOSAL 2: Actions on food waste prevention							
Initiate a national awareness and information campaign on food waste prevention addressing households including	Informative	MoE	Mid- to long-term	Low	LIFE	Reduced food waste – reduced	+

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"> - 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 						biodegradable waste	
PROPOSAL 3: Support the creation of a market for compost							
Promote and implement voluntary certification systems for compost	Legal	MoE, MoA	Ad-hoc to short-term	Low to Medium	LIFE	Increased sales of compost due to clearly defined quality criteria for compost	++
Reduce VAT on compost to encourage sales	Legal Economic/Fiscal	MoE, MoF, MoA	Short-term	Low	n.a.	Increased sales of compost due to lower taxes	
Promote compost via provision of information on benefits, quality standards, etc. (e.g. via consumer organisations) and support alternative uses (e.g. in reclamation of coal opencast etc.	Informative	MoE, MoA	Short-term	Low to Medium	n.a.	Increased sales of compost as buyers know the benefits, quality standards, etc.	

PROBLEM 2: 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: Further extend legal obligations and set reliability of requirements to enhance recycling and recovery							
Approve legislation and set (on long-time basis) reliable provisions and requirements	Legal	MoE	Ad-hoc to short-term	Low	n.a.	Higher commitment of municipalities to achieve higher recycling shares	+++
PROPOSAL 2: Implement supplementary measures and infrastructure to foster other treatment options than landfilling							
Establish a waste prevention programme as required by the WFD including precise measures and schedule to improve prevention and reuse and Intensify actions to prevent waste – make targeting actions/information campaigns for most promising waste streams (e.g. food waste, packaging waste)	Administrative Informative	MoE	Ad-hoc to short-term	Low to medium	LIFE	Fostering waste prevention	
Promote the re-use of products and packaging (e.g. EEE, furniture, carrier bags, beverage packaging) and introduce levies (e.g. for single use plastic bags), in combination with awareness raising	Legal Economic/Fiscal Informative	MoE	Short- to mid-term	Low to medium	ERDF; CF	Fostering waste prevention	
Committing local authorities in promoting recycling and mobilise municipalities towards the achievement of 2020 50 % recycling target	Administrative Legal	MoE, Municipalities	Short- to mid-term	Medium to High	n.a.	Increase of recycling	
Provide guidance and manuals to regional authorities and municipalities how to set up and manage infrastructure and provide standards/guidance on common tender procedures for municipalities	Informative	MoE	Ad-hoc to short-term	Low	n.a.	Regional waste management in line with national planning and targets	

PROBLEM 3: Non-harmonized waste data base and insufficient reporting system/routines in frequent data 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
PROPOSAL 1: Improve statistical data base							
Harmonise statistical data collection and calculation methods (Existence of two statistical collection/interpretation systems producing different data so far) in order to produce reliable data suitable for future planning and enable the evaluation of targets	Administrative Legal	MoE, CSO	Ad-hoc to short-term	Low to Medium	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	MoE	Ad-hoc to short-term	Low to Medium	n.a.	National overview on waste management related data; enable coordinated implementation and planning activities	
Include/improve the forecast and judgment on future municipal waste generation and treatment capacities	Administrative	MoE	Short- to mid-term	Low	n.a.	Improved national/regional WMPs; Improved waste management planning in the future (e.g. required treatment capacities)	
Ensure that change of responsibilities to statistical office delivers same quality of data on waste facilities not only suitable for planning of regional waste management but also for planning and realising inspections (by the Inspectorates)	Administrative	MoE, Czech Statistical Office	Short to Medium term	Medium	n.a.	Ensure/ improve data quality to plan and realise inspections	
PROPOSAL 2: Obtain reliable data on municipal waste collection systems and treatment infrastructure							
Provide for harmonised reporting (e.g. by harmonising procedures, internet based reporting)	Administrative Legal	MoE	Short-term	Low to Medium	n.a.	National overview on waste management related data; enable coordinated implementation and planning activities	++

PROBLEM 4: Deficits in cooperation and supervision systems especially on municipal level

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: Increase resources allocated to local competent authorities and enhance cooperation between them							
Provide sufficient human resources to local authorities to properly undertake planning, management and control/inspection activities (technical experts, define/share responsibilities)	Administrative	MoE, Municipalities	Short- to mid-term	Medium	LIFE; ESF	Improve capacities and knowledge on regional level	+++
Enhance inter-municipal waste management associations to bundle capacities and improve cooperation, define/share responsibilities(e.g. to the Union of towns and municipalities)	Administrative	MoE, Municipalities	Short- to mid-term	Low	ESF	Bundling of capacities, improved competence, better communication	
Establish a joint platform for exchange of experiences and waste management related problems, organise trainings and expert knowledge exchange programmes , conferences using available networks (e.g. the Union of towns and municipalities)	Informative	MoE, Municipalities	Short- to mid-term	Low	n.a.	Improved knowledge basis through information/experience exchange	
Improve cooperation between the Environmental Inspectorate and local structures involved in supervision (especially municipalities) best possibly via the Union of towns and municipalities	Administrative	Inspectorate, Municipalities	Ad-hoc to short-term	Low	n.a.	Exchange, improved supervision	