

## 1.0 Summary of Recommendations

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Recommendations for Portugal can be summarised as follows:

1. Changes to charging systems and incentives
  - a. Undertake a review of charges currently paid by householders with a view to gradually increasing the overall contribution; removing the indexation to water bills with a view to making these charges fairer.
  - b. Increase the level of the waste management fee for landfill and incineration to ensure the full cost of treatment should be covered.
  - c. Consider the introduction of a residual waste tax to be applied to waste treated in residual waste treatment systems, set to gradually increase until it is at a level such that the introduction of improved recycling services will be driven by the market.
  - d. Increase the value of the waste management fee associated with non-compliance of the MSW management systems with targets
2. Changes to separate collection services and recycling
  - a. Integration of recycling and residual waste collection systems
  - b. Government could mandate the expansion of door to door source segregated collection systems for household waste, in a first stage at main urban areas and for the HORECA sector, to cover both organic waste as well as dry recyclables.
  - c. Introduce national standards for door to door collection systems on collection frequency, to ensure good take up of the recycling services.
  - d. Put in place a programme to upskill local and regional authorities, so that these can be informed on best practices from other Member States.
3. Undertake a review of treatment infrastructure requirements, taking into account the changes in waste collection. If additional infrastructure or conversion of existing infrastructures is required, the review should consider funding possibilities.
4. Undertake a comprehensive review of data quality. This should cover, in particular, regions other than the mainland, as well as investments in infrastructure, and collection quantities, as well as composition.
5. Updates to existing plans and targets
  - a. In addition to the expected approval of the waste management plan for the Azores (PEPGRA), the region of Madeira should revise the current plan (PERRAM), integrating information on the compliance of EU-targets with what will be done to ensure these are met. Coordination between all MSW management plans should be assured.
  - b. Consider the increase of recycling rate targets for waste management systems from big urban areas such as Valorsul (Lisbon) and Lipor (Oporto) by revising the targets presented in PERSU 2020.
6. Develop a programme aimed at raising the awareness householders and business in respect of the need for recycling and waste reduction, to be rolled out alongside any changes in collection systems.
7. Actions to increase re-use and waste prevention activity.

8. Introduce Pay as you Throw systems when the transition away from bring-site based collection systems is complete, and the door to door collection services (including biowaste collection systems) can be seen to be operating effectively.

## 2.0 Potential Issues with approach to Waste Management

Number	Potential issue	Description	Reasons for the issue
1	Deficiencies in the waste management charging system	<p>The significant use of charges indexed to the household water bill does not give space for the development of price incentives for waste reduction and recycling. Another problem is the deficit of local governments regarding waste management operations. Costs of waste management are high in comparison with the revenues obtained from the household bills as well as other sources of revenues (e.g. recycling). Moreover, the values of the Waste Management Tax (“Taxa de Gestão de Resíduos” - TGR) are likely to be too low to generate sufficient incentives. This still represents a point of concern even though a progressive increase of the tax is envisaged in the Green Tax Reform (“Fiscalidade Verde”) until 2020. The application of more substantial penalties to those systems not complying with targets should be considered, as well as the establishment of incentives, via the use of revenues from the tax, in the improvement of the sector.</p>	<ul style="list-style-type: none"> <li>- Few sources of income for municipalities in order to cover the high costs of waste management.</li> <li>- Low values of the Waste Management Tax (TGR) do not represent a real incentive to change the behaviour of waste management entities, even considering the escalator of this value towards 2020 (e.g. in the diversion of waste from landfill and incineration, and the compliance with EU targets). Although additional TGR payments are required to be paid in the event that MSW systems do not comply with the individual recycling targets, the additional payments envisaged are unlikely to be sufficient to drive substantive change.</li> </ul>

Number	Potential issue	Description	Reasons for the issue
2	Low levels of separate collection and recycling	<p>Despite the implementation of EPR schemes for MSW streams of packaging, batteries, and WEEE during the past two decades, and the higher coverage of this service (e.g. in terms of equipment, and geographical coverage), there is still a low quantity of separate collection of MSW (13% in 2013). Moreover, the separate collection of biodegradable waste (BMW) is far from being implemented at the national level. BMW is the most important fraction of MSW (in terms of weight), and could be an important contribution for the compliance with LFD target.</p>	<ul style="list-style-type: none"> <li>- Lack of recycling culture based on the low levels of separate collection over the total waste collected, and little consideration of waste as a resource.</li> <li>- Low incentives for separate collection and recycling.</li> <li>- For the majority of the country, separate collection for recycling, and the collection of residual waste, are operated by a different entity, under contracts arranged through different authorities. This acts as a barrier to further development of separate collection systems, as the benefits – in terms of reduced disposal costs – are not transferred through to those operating the separate collection system. It also results in constraints on the efficiency of the system as there are different routes, and separate fleets and workforce.</li> <li>- Separate collection system has given priority to bring systems (recycling points), which result in relatively high levels of contamination in comparison to door to door collection services, might not be so successful in capturing recyclables, and make it more difficult to apply incentives (such as PAYT). The situation is further exacerbated by the reliance on MBT systems to deliver against recycling targets.</li> </ul>

Number	Potential issue	Description	Reasons for the issue
3	Deficiencies of waste management infrastructure	<p>This has to be considered for some systems strongly relying in incineration (e.g. Lipor in Oporto, Valorsul in Lisbon area) as well as those relying in landfill disposal (e.g. Region of Alentejo). Despite representing only around 2.9% and 2.5% of total MSW generated, the Azores and Madeira strongly rely in waste management treatment options at the bottom of the waste hierarchy. In 2013 around 90% of the MSW was treated through incineration (with energy recovery) in Madeira. With regard to the Azores, approximately 82% of MSW was sent to landfills during that year. The new strategy considered in the PEPGRA seems to give more importance to energy recovery, diverting waste from landfill to incineration in the Azores.</p>	<ul style="list-style-type: none"> <li>- Mechanisms to enforce the hierarchy in policy in law are inadequate.</li> <li>- Priority given in some cases to landfill and incineration. An example is the consideration of new investment in incineration facilities in the Azores.</li> <li>- Not clear if current infrastructure system is enough to manage an increase in separate collection and recycling of BMW and other materials, or if there is an overcapacity in some MSW management systems. There is an over-reliance on MBT facilities to comply with targets (which is supported by end of waste criteria allowing the use of compost from MBT facilities provided some quality criteria are met). Elsewhere, stakeholders have expressed concerns regarding the use of use of this material for agricultural purposes (indeed, it is predominantly used for viticulture, rather than agriculture, in Portugal). Other solutions such as developing separate collection of BMW and assure its treatment by adequate facilities have received less encouragement. This could represent a bottleneck for future improvement of the sector.</li> </ul>

Number	Potential issue	Description	Reasons for the issue
4	Problems with data quality and availability	<p>Some key indicators of the waste management sector are not available, difficult to access, or do not deliver the same values when different sources are consulted as a result of, <i>inter alia</i>, methodological differences. This includes: data on MSW composition and treatment; source of waste generated; waste likely to be shipped from, or to, the national territory; investments made in infrastructure and equipment (e.g. type, value of investment, and expected capacity); and composition of the sector (e.g. entities responsible for the collection of waste). Consistency between data sources (e.g. National Statistical Institute, Portuguese Environment Agency – APA, ERSAR) and transparency of methods, are important if the values presented are to be considered reliable.</p>	<ul style="list-style-type: none"> <li>- Different data sources and calculation methods.</li> <li>- MSW in Portugal corresponds to the waste generated by households, as well as small waste producers (daily production lower than 1,100 litres), and big waste producers (daily production equal or higher than 1,100 litres) from commerce, service and industry sectors. MSW data is only available for households (including some large producers collected on behalf of the municipalities) and small producers, with exception of the Azores which also has information about big producers.</li> </ul>

Number	Potential issue	Description	Reasons for the issue
5	Weak links between the various WMPs, problems with the report and delivery of EU targets	<p>Portugal has recently approved the National Plan for Waste Management (PNGR) and the Strategic Plan for Municipal Waste of the mainland territory (PERSU 2020). Moreover, the Autonomous region of Azores were due to approve the Waste Management and Prevention Strategic Plan (PEPGRA) during 2015, although this has not yet been confirmed. The Waste Management Plan for Madeira (PERRAM) was approved in 1999, and may be substituted during the mandate of the XII regional government elected in 2015, according to information provided by the Regional Government. The approval of PEPGRA and the revision of PERRAM are important steps in order to maintain consistency with the PNGR and PERSU 2020, both covering the exact period of EU targets.</p> <p>The fact that there are various WMPs covering different territorial scales and waste streams may enhance difficulties of coordination in terms of the data consistency and availability (e.g. characterization of waste management sector), policy coordination between plans, and report of the compliance with EU targets. For this latter point, it is important to note that the PERRAM does not have information on this matter, and it is not totally clear how PERSU 2020 includes the data for the Azores and Madeira.</p>	<ul style="list-style-type: none"> <li>- The fact that Portugal is divided in mainland area and two autonomous regions justifies the existence of different WMPs.</li> <li>- Development and approval of the PNGR and the WMPs for the main regions (mainland, Azores, Madeira) in different periods.</li> <li>- PERRAM is relatively outdated.</li> </ul>

## 3.0 Recommended Measures

Measure	Type of instrument	Responsibility	Estimated costs	Available EU funding	Anticipated impact
<b>1. Revision of the charging system and incentive schemes</b>					
1.1 Review the charges currently paid by householders. Consider a gradual substitution of charges indexed to the household water bill by other charging mechanisms. The aim should be to make household charges fairer and (in due course) more directly linked to amounts of waste produced.	Fiscal	APA, ERSAR, high and low systems	Low cost to Government, although costs may rise for some householders	n/a	Increase in the funding available for separate collection systems. This will allow for improved collection systems to be funded.
1.2 Review the level of the waste management fee for landfill and incineration. At a minimum, the fees should be set at a level to ensure that the full costs of treatment are covered (including landfill aftercare).					
1.3 Consider the introduction of a residual waste tax to be applied to waste sent for residual waste treatment. The tax should be set at a level such that improved recycling services are driven by concerns to reduce costs. For example, Portugal could consider setting the fee at a similar level to the proposed landfill tax escalator in Greece which will gradually rise from €30 in 2014 in annual increments of €5 until it reaches €60. The tax should apply to incineration (including exports), with a reduced level applicable to stabilised outputs from MBT facilities.	Fiscal	APA, ERSAR	Low cost to government, although costs will rise to producers	n/a	Introduction of a greater financial incentive that will drive future increases in recycling. This should make improved recycling systems more financially viable. If fee is set at the right level, it may not be necessary to mandate separate collection, as this could be driven by the market.

Measure	Type of instrument	Responsibility	Estimated costs	Available EU funding	Anticipated impact
1.4 Increase in the value of the Waste Management Fee associated with the non-compliance of MSW management systems with EU targets.	Fiscal	APA, ERSAR	Low cost to government, although costs will rise to producers	n/a	
<b>2. Improvement of the separate collection service and recycling</b>					
2.1 Undertake a review of contractual arrangements for waste collection at a local level with a view to establishing the best method for ensuring that responsibility for contracting both residual and recycling collection systems lies with the same entity in each area across the country. Ideally recycling targets would also be set at this level.	Legal, administrative	APA, ERSAR	Potential to mitigate some of the costs of measure 2.2	Unknown	Benefits resulting from increased recycling associated with reduced residual collection and treatment are more clearly identified. Increased opportunities for improving collection system efficiency.
2.2 Government could mandate the introduction of door to door source segregated collection systems for waste from households for – at a minimum – the bigger urban areas, above a certain population density, and for the HORECA sector at the national level. This should cover organic waste (food / garden) as well as the core dry recyclables.	Legal, administrative	APA	Potential high cost	EU funding available for at least the capital elements, as well as	Recycling rates will improve without the necessity to rely on MBT to meet the Directive targets. This will also result in better quality recyclate and compost / digestate. Source segregated organic collection systems are also a key element in ensuring the effective performance of PAYT systems.
2.3 Introduce national standards for the door to door waste collection for household waste collections covering collection frequency. Residual collections should be less frequent than the dry recycling and food waste collections to encourage the take-up of these systems by residents and small businesses.	Legal, administrative	APA, ERSAR	Potential to mitigate some of the costs of measure 2.2	Unknown	Although collection costs may increase, treatment costs will be reduced – this will be more clearly seen once measure 2.1 is undertaken.

Measure	Type of instrument	Responsibility	Estimated costs	Available EU funding	Anticipated impact
2.4 Building on the national standards, put in place a programme to upskill municipal and local authorities with regard to good practices in respect of minimising collection costs. Programme to be informed by information gained from experiences of other member states with high recycling rates (e.g. using existing guidance documents on how to extend separate collection, optimising collection frequencies).	Informative	APA	Medium cost	Structural Funds or ERDF funding may be available	
<b>3. Improvement of waste management infrastructure</b>					
3.1 Alongside agreeing proposals for improved collection systems have been agreed, undertake a review of treatment infrastructure requirements. This should take into account the increased recycling rate resulting from the improved systems. A particular focus of the review should be on ensuring there is sufficient treatment capacity to cover the increase in source segregated biowaste. This could consider the conversion of existing MBT facilities to those treating solely source segregated biowaste.	Administrative , informative	APA, waste management systems	Low cost	n/a	Ensure there is sufficient infrastructure available to treat the additional biowaste that will result from the separate collection. Ensure compliance with Malagrotta ruling (if required). Ensure there is not overcapacity of residual treatment, which would tend to act against future increases in recycling
3.2 Evaluation of funding possibilities in the event that further treatment facilities or conversion of the current ones are required.	Administrative	APA, waste management systems	Low cost	n/a	

Measure	Type of instrument	Responsibility	Estimated costs	Available EU funding	Anticipated impact
<b>4. Improve of data quality and availability</b>					
4.1 Better data about the different sources of MSW, including waste coming from households, and small and big producers of similar waste; about the waste composition of the of Madeira and Azores; and about waste shipments from Portuguese geographical territories.	Administrative , informative	National and regional waste authorities, National Statistical Institute , high and low systems	Low cost	n/a	<ul style="list-style-type: none"> <li>- MSW is generated by households, and small and big producers from commerce, service, and industry sectors. Although it will be difficult to disentangle the part of waste corresponding to household and other sectors that use the same waste containers (e.g. service, commerce), a better knowledge of the parte of waste generated by these will allow defining specific policies according to the source.</li> <li>- Better knowledge of specific waste streams, allowing developing better prevention and management policies.</li> <li>- Better traceability of imported and exported waste, with benefits for a better management of specific waste streams.</li> </ul>
4.2 Better data on the types of investments made and planned in waste infrastructure and equipment, including the entities responsible for investment, the amount, and capacities of the infrastructure.	Administrative , informative	National and regional waste authorities, National Statistical Institute , and high and low systems	Low cost	n/a	<p>Reduces the risk of overcapacity, which would tend to act against future increases in recycling. Depending on funding method for infrastructure, reduced need for government spending on this</p>

Measure	Type of instrument	Responsibility	Estimated costs	Available EU funding	Anticipated impact
<b>5. Approval and revision of waste management plans of Madeira and Azores/coordination between WMPs</b>					
5.1 Revision of the target of preparation for re-use and recycling for waste management systems included in PERSU 2020 and covering the urban areas of Lisbon and Oporto.	Administrative , legal	APA, waste management systems	Low cost	n/a	
5.2 Approval of PEPGRA (Azores) and revision of the PERRAM (Madeira), integrating information about EU targets as well as the coordination with the PNGR and PERSU 2020.	Administrative	For the Regional Government of Madeira: Environmental and Spatial Planning Regional Directorate ("Direção Regional do Ordenamento do Território e Ambiente" – DROTA	Low to medium cost	n/a	Compliance with EU legislation and targets, and coordination and consistency with the remaining WMPs.
<b>6. Education campaigns aimed at householders and businesses</b>					
Develop a programme aimed at raising the level of awareness of householders and businesses in respect of the need for recycling and waste reduction. This could be based on examples of campaigns undertaken in other countries with good recycling performance. The programme should be launched alongside the changes to collection systems.	Informative	APA, waste management systems	Medium cost	Potentially, such as that from the ENPI CBCMED Programme.	Alongside improvements in recycling collection system, will improve recycling rates.

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<b>7. Actions to increase reuse and waste prevention activity</b>					
Government should consider integrating re-use activities into the existing EPR scheme. Other activities that should be reflected in the forthcoming waste prevention plan include actions tackling plastic bottles and food waste. Portugal could also consider developing re-use centres – such as those introduced in Slovenia, supported by developing a system of re-use credits helping to finance the activities of the third sector.	Administrative / fiscal	APA	Moderate cost to government	Funding available for capital items	Will assist in the achievement of future targets, as well as contribution to landfill directive and waste framework directive targets.
<b>8. Introduce PAYT systems</b>					
Pay-as-you-throw for household waste should be introduced but only once high performing collection systems (including biowaste collection systems) are in place alongside effective enforcement mechanisms: in particular, once a move away from bring-bank systems has taken place. These systems should build on the good practice in areas such as Maia.	Fiscal	ERSAR	Dependent on the system to be implemented.	May be able to use structural Funds	To be considered but not introduced until waste collection and management systems further developed, so as to avoid fly tipping and associated issues.

### 3.1 Timeline for introducing the Proposed Measures

	2015	2016	2017	2018	2019	2020
Review householder charges and update as required		Announcement				
Gradual increase in landfill and incineration fees		Announcement				
Integration of recycling and residual collections systems		Announcement				
Introduce more door to door source segregated collections		Announcement				
Introduce door to door collection standards (frequency)						
Upskilling of local authorities						
Review of treatment infrastructure requirements						
Review of data quality						
Updates to existing plans and targets						
Programme of waste producer awareness						
<b>Actions to increase re-use / prevention</b>		Announcement			In place	
Introduction of PAYT systems				Announcement		In place