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## **COVER NOTE**

From:	Secretary-General of the European Commission, signed by Mr Jordi AYET PUIGARNAU, Director
date of receipt:	3 July 2014
То:	Mr Uwe CORSEPIUS, Secretary-General of the Council of the European Union
No. Cion doc.:	SWD(2014) 207 final - Part 5/6
Subject:	COMMISSION STAFF WORKING DOCUMENT IMPACT ASSESSMENT Accompanying the document Proposal for a Directive of the European Parliament and of the Council amending Directives 2008/98/EC on waste, 94/62/EC on packaging and packaging waste, 1999/31/EC on the landfill of waste, 2000/53/EC on end-of-life vehicles, 2006/66/EC on batteries and accumulators and waste batteries and accumulators, and 2012/19/EU on waste electrical and electronic equipment

Delegations will find attached document SWD(2014) 207 final - Part 5/6.

Encl.: SWD(2014) 207 final - Part 5/6

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Brussels, 2.7.2014 SWD(2014) 207 final

**PART 5/6** 

#### COMMISSION STAFF WORKING DOCUMENT

### **IMPACT ASSESSMENT**

Accompanying the document

Proposal for a Directive of the European Parliament and of the Council

amending Directives 2008/98/EC on waste, 94/62/EC on packaging and packaging waste, 1999/31/EC on the landfill of waste, 2000/53/EC on end-of-life vehicles, 2006/66/EC on batteries and accumulators and waste batteries and accumulators, and 2012/19/EU on waste electrical and electronic equipment

{COM(2014) 397 final} {SWD(2014) 208 final} {SWD(2014) 209 final}

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# 1.0 Packaging and Packaging Waste Directive

As per the consultation this section is divided into two sections. The first presents a summary of the key issues that were identified by stakeholders that were not already identified within the consultation (see Appendix A1.0). The second looks at possible options for revising and/or improving the targets.

# 1.1 Key Issues

A number of issues were identified in the consultation and respondents were asked to succinctly list up to three additional issues that had not been listed in the consultation. As described in Section Error! Reference source not found. these open ended responses were coded to identify common themes and allow the data to be subjected to more detailed analysis. The feedback on issues received by respondents was intended to provide additional context to the issues already identified in the consultation. In many instances stakeholders chose to provide solutions to problems instead of listing additional problems related to the existing targets that had not already been identified within the consultation. Some of the issues that were reported were also not directly related to the Packaging Waste Directive targets or were repeats, albeit in different words, of the issues that had already been listed in the consultation. Some of the more commonly identified issues included the following:

- Packaging Waste Directive does not include any targets for beverage and food cartons made of composite materials;
- The weight based targets do not reflect the environmental impacts associated with recycling different materials (e.g. glass vs. aluminium);
- There are no waste prevention or preparation for reuse targets in the Directive; and
- The targets are not ambitious enough and could be extended for some materials.

# 1.2 Suggestions for Revision

A number of suggested options for changes to the Directive targets were identified in the consultation. The following options were included in the consultation as part of a scoring matrix:

- 1. The methodology for calculating recycling rates should be standardised so that data (and hence performance levels) are comparable across Member States.
- 2. Remove from the Packaging Directive the target for packaging waste from municipal sources and include it into the Waste Framework Directive to ensure full consistency with the existing target on municipal waste recycling.
- 3. Bring the recycling targets for different materials closer together to ensure a more level playing field.
- 4. Incorporate "weightings" for materials recycled based on environmental benefits derived from recycling the material.



- 5. The targets for some packaging materials could be subdivided into subcategories; for example, metals could be divided into non-ferrous and ferrous metals. The same could apply for plastic; for example, separate targets could be set for PET, LDPE, and HDPE.
- 6. Set specific targets for recycling of packaging waste from households to encourage further recycling of household packaging.
- 7. Remove from the Directive the maximum limit of 80% that stipulates how much packaging waste a Member State is allowed to recycle.
- 8. Introduce a target for prevention of packaging waste (the development of waste prevention targets is covered in a broader manner in a later section of this consultation).
- 9. Adjust the definitions for reuse and recycling in the Packaging Directive to be consistent with those contained in the Waste Framework Directive.
- 10. Expand the recycling target to include reuse, by allowing the reuse of packaging to be credited to the recycling target.
- 11. Introduce targets for reuse for commercial transit packaging.
- 12. Introduce targets for reuse for all packaging.

Respondents were asked to rank each of the above options on a scale of 1 to 5, where:

- 1 = poor idea, not worth consideration;
- > 3 = moderately good idea, may be worth further consideration; and
- > 5 = very good idea, definitely deserves further consideration.

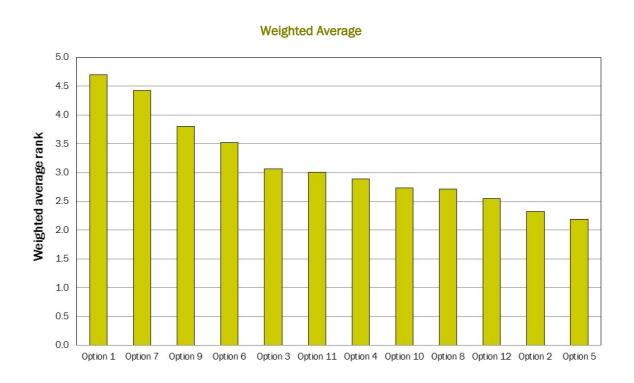
The results of the responses to this question are presented for all stakeholders in Figure 1-1 and for each stakeholder group in Figure 1-2 and Figure 1-3. In each of these figures the 12 options represent those listed above and the reader should refer back to this list in order to identify which options were most favoured by respondents. As described in Section Error! Reference source not found. the results of this ranking exercise are presented in two ways:

- 1. As a weighted average rank; and
- 2. As the difference in the number of respondents who ranked an option as '5' vs. those who ranked it as '1'.

In the pages below each figure contains two graphs which present the results of the above two analyses.



Figure 1-1: Scoring of Options by all Stakeholders



### Difference in the Number of Rank 5 vs. Rank 1 Responses

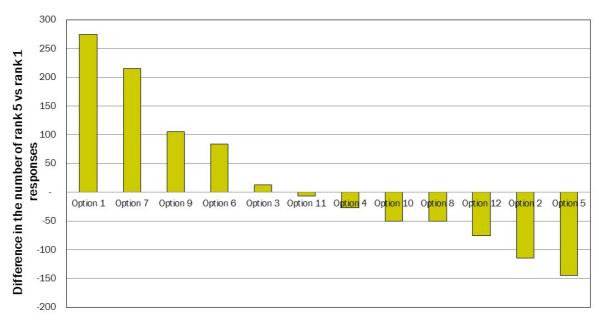
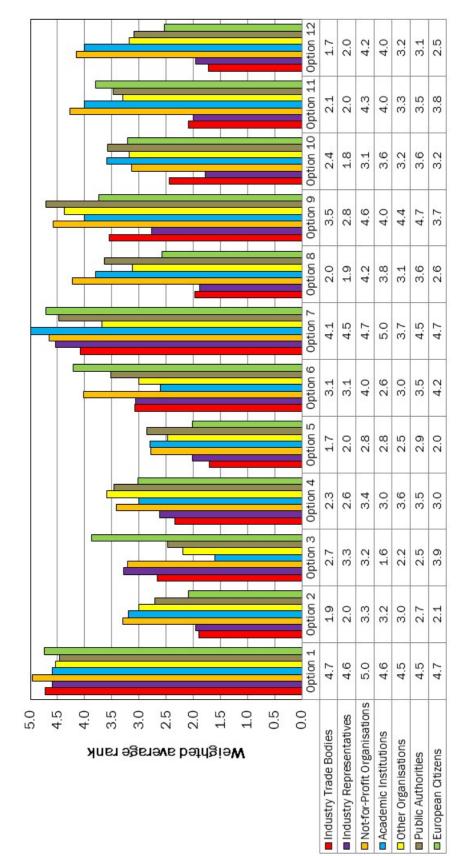


Figure 1-2: Scoring of Options by all Stakeholder Groups, Weighted Average Rank



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Targets Review Project: Appendix 2

Option 11 -36 -22 26 12 0 4 Option 10 -31 -35 4 D 0  $\forall$ 0 Option 9 36 33 13 1- $\infty$ 0 Option 8 -28 -18 27 11 H Option 7 40 36 29 2 3 Option 6 21 47 9  $\infty$ Option 5 -26 -57 -11 -39 ιÒ φ 4 Option 4 -11 φ 寸 9 1 Option 3 φ 33  $\infty$ 4 4  $\forall$ Option 2 -48 -31 -37 6 1 Ç φ Option 1 75 45 4 12 29 64 ■ Not-for-Profit Organisations 80.0 20.0 0.0 20.0 100.0 0.09 40.0 0.09-■ Industry Representatives ■ Industry Trade Bodies Academic Institutions Other Organisations ■ European Citizens rank5 vs rank1 responses ■ Public Authorities Difference in the number of

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Option 12 -56 -30 24

-22 0

0 4

Figure 1-3: Scoring of Options by all Stakeholder Groups, Rank 5 vs. Rank 1



In addition to the listed options which were scored as part of the closed-ended scoring matrix respondents were also asked to list any additional solutions that they felt had not already been identified and should potentially be considered. These open-ended responses were coded to identify the different themes that emerged from these responses. The range of additional solutions that were suggested by all stakeholders are presented in Table 1-1.

Table 1-1: Additional Suggestions for Revision Provided by Stakeholders

Solution	Number of Times Solution Identified by Respondents
Introduce a 60% minimum target per member state for each packaging material by 2020	42
A prevention target for packaging should not be considered (e.g. because packaging helps to prevent food waste, issues with health and safety)	27
Different types of recycling should be differentiated in the directive (e.g. closed- vs. open-loop recycling)	27
Introduce an incremental ban on the landfilling and/or incineration of packaging waste	24
The use of Extended Producer Responsibility, Eco-design, and other fiscal instruments should be extended/enhanced	23
Target should set minimum levels for use of recycled materials in packaging	22
Make source segregation of packaging materials mandatory	20
Place greater emphasis on the European CEN standards	19
Resource efficiency/environmental impacts should be the most important consideration when setting targets	17
Set targets to limit the use of packaging that cannot easily be recycled	13
Targets for reusable packaging should be the same for all materials and apply across all Member States	9
The recycling target should be based on the actual amount of material that is reprocessed and not on what is collected	6
Packaging manufacturers who use recycled materials in their products should be incentivised by having reduced recycling obligations	5
The rates achieved in the best performing Member States should serve as a target for all other Member States	4
Introduce targets for deposit refund schemes for certain packaging materials	4
Impacts on quality must be taken into account when setting targets	4
Introduce requirements to report on the end destinations of packaging waste	3
Targets should consider biodegradable plastic packaging	3
Set separate targets for ferrous and non-ferrous metals	3
Set separate targets for secondary and tertiary packaging	3
Reported recycling rates for exported materials should reflect the actual % of material recycled rather than the amount exported	2
Introduce one single target comprising reuse, recycling and recovery of packaging waste	2
Using life cycle analysis to determine targets for different materials is not cost effective	2

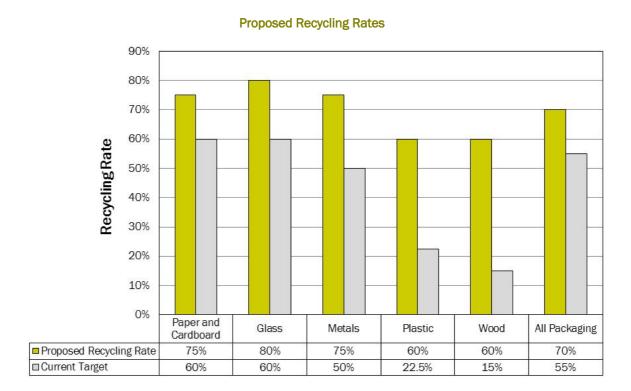


Better regulation of the output and operation of MRFs (e.g. the MRF Code of Practice introduced in the UK)	2
There is no need to bring the recycling targets for different materials closer together	1
Material treated/recycled outside of the EU28 should not count towards the targets	1
Remove the recovery targets from the Directive	1
Introduce consistent minimum thresholds for companies that have no reporting/recycling obligations	1
Remove the target for recycling wood packaging from Directive	1
Targets for packaging should be separate from the target contained in the WFD	1
Introduce a 'front runner' scheme whereby packaging standards are set by the best performing manufacturer	1
Introduce more ambitious targets	1
Targets should be simplified and differentiated by material	1
Response was a comment on proposed solutions / Solution was already listed in the consultation	139
Non-target related solution	89
Stakeholder response was an issue, not a solution	3

The Commission is keen to encourage higher rates of recycling. It recognises, however, the need to maintain the quality of recycled material so that it can be used profitably and with losses kept to a minimum between the collection and recycling stages. Keeping in mind the need to maintain quality, respondents were asked what they believed the highest level of recycling could reasonably be for the materials included in the current targets. The weighted average recycling rate for the different materials, and the proposed year in which stakeholders believed the reported recycling rates could realistically be achieved, are presented for all stakeholders in Figure 1-4 and for each stakeholder group in Figure 1-5 and Figure 1-6.



Figure 1-4: Weighted Average Recycling Rate Reported by all Stakeholders and Year in Which Proposed Recycling Rate May be Achieved



## Year in Which Proposed Recycling Rate Could be Achieved

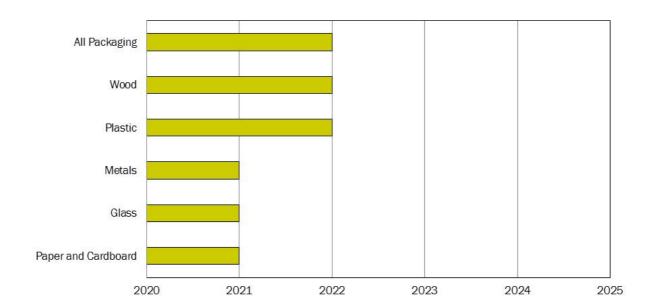






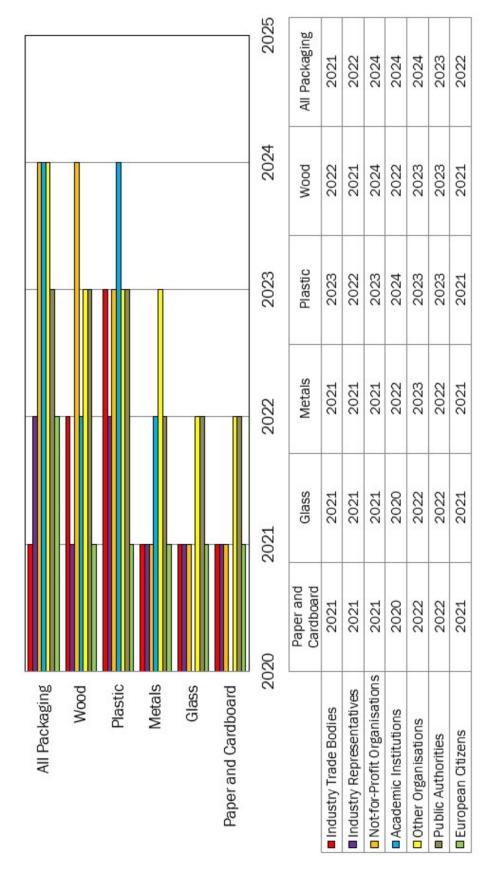
Figure 1-5: Weighted Average Recycling Rate Reported by all Stakeholder Groups

	All Packaging	55%	65%	%02	80%	%02	%02	75%	%02
	Wood	15%	%09	%09	%59	40%	%09	20%	65%
	Plastic	22.5%	25%	%09	75%	45%	%09	55%	65%
	Metals	20%	%02	75%	%06	75%	80%	75%	%02
	Glass	%09	75%	75%	%06	80%	85%	85%	75%
	Paper and Cardboard	%09	75%	75%	85%	75%	80%	80%	%02
Recycling Rate 70% 40% 40% 40% 40% 40% 40% 40% 40% 40% 4	80	□ Current Target	■ Industry Trade Bodies	Industry Representatives	□ Not-for-Profit Organisations	Academic Institutions	□ Other Organisations	■ Public Authorities	■ European Gitizens

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Figure 1-6: Year in which Proposed Recycling Rate Could be Achieved Reported by all Stakeholder Groups



In addition to the materials already included in the existing targets, stakeholders were asked to identify further packaging materials which they believed should be include in any revised version of the target. The range of additional materials suggested is summarised for the main stakeholder groups in Table 1-2.

Table 1-2: Packaging Materials that could be Included in New Targets

Packaging Material	Number of Times Material Identified
Industry, Not-for-Profit, Academic and Other Organisations	
Composite packaging (e.g. beverage cartons)	28
Polystyrene and/or similar type of protective material	17
Textiles	7
Glass	1
Plastics	1
Aluminium cans	1
Beverage cans	1
Non-ferrous metal	1
Bio-plastics	1
Public Authorities	
Composite packaging (e.g. beverage cartons)	7
Polystyrene and/or similar type of protective material	1
Non-ferrous metal	1
Textiles	1
European Citizens	
Composite packaging (e.g. beverage cartons)	6
Textiles	5
Glass	1
Polystyrene and/or similar type of protective material	1
Non-ferrous metal	1
PET	1



# 2.0 Roadmap to a Resource Efficient Europe

In order to contribute to the development of resource efficiency within Europe the Commission has adopted aspirational targets for waste prevention and management in the Roadmap to a Resource Efficient Europe (the Roadmap). These aspirational targets were proposed in the Commission's proposal for a 7<sup>th</sup> Environmental Action Plan. In the Roadmap, the following aspirations are included within the overall Milestone for 2020:

- 1. Waste generated per capita is in absolute decline;
- 2. More materials, including materials having a significant impact on the environment and critical raw materials, are recycled;
- 3. Reuse and recycling are economically attractive options, with more material recycled and high quality recycling ensured;
- 4. Energy recovery is limited to non-recyclable materials (compostable materials are also considered to be recyclable); and
- 5. Landfilling is virtually eliminated.

This section of the consultation included questions on the application of the Roadmap on Resource Efficiency and its relation to the evolution of the main targets contained in legislation. We present here how respondents felt that the ambitions of the Roadmap should be implemented through the setting of targets in the context of this work.

## 2.1 Waste Prevention

The first question of this section asked respondents whether they agreed with the principle that there should be targets for waste prevention. Responses to this question are summarised in Table 2-1. Those stakeholders who responded that they felt that there should be no waste prevention targets were automatically directed to the next section of the consultation (see Section 1.1). The results presented below therefore come from those respondents who felt that the setting of new waste prevention targets would be a good idea.

<sup>&</sup>lt;sup>2</sup> See Communication from the Commission to the European Parliament and the Council (2012) Decision of the European Parliament and of the Council on a General Union Environment Action Programme to 2020 "Living Well, Within the Limits of our Planet", COM(2012) 710 final, <a href="http://ec.europa.eu/environment/newprg/pdf/7EAP">http://ec.europa.eu/environment/newprg/pdf/7EAP</a> Proposal/en.pdf



<sup>&</sup>lt;sup>1</sup> European Commission (2011) *Roadmap to a Resource Efficient Europe*, COM(2011) 571 final, http://ec.europa.eu/environment/resource\_efficiency/about/roadmap/index\_en.htm

Table 2-1: Should the Commission Set New Waste Prevention Targets?

					Sta	keholder G	roup		
Ans	wer	All Stakeholders	Industry Trade Bodies	Industry Representatives	Not-for-Profit Organisations	Academic Institutions	Other Organisations	Public Authorities	European Citizens
Yes	No.	256	57	35	42	4	12	41	65
	%	55%	42%	44%	78%	67%	60%	84%	56%
No	No.	206	79	45	12	2	8	8	52
	%	45%	58%	56%	22%	33%	40%	16%	44%
Total	No.	462	136	80	54	6	20	49	117
	%	100%	100%	100%	100%	100%	100%	100%	100%

Respondents in favour of waste prevention targets were asked which waste streams, materials, or products they thought should be targeted (respondents were allowed to identify up to four items). The range of materials identified by each of the three main stakeholder groups is presented in Table 2-2.

Table 2-2: List of Waste Streams, Materials or Products that could be the Focus of Waste Prevention Targets

Industry, Not-for-Profit, Academic and Other Organisations	ind Other	Public Authorities		European Citizens	
Waste Streams/Materials/Products	No. of	Waste Streams/Materials/Products	No. of	Waste Streams/Materials/Products	No. of
	Responses		Responses		Responses
Hazardous waste	28	Food	11	Packaging	2
"Total" waste	20	WEEE	7	Hazardous waste	4
Residual waste	16	Packaging	9	Biowastes	4
Industrial waste	15	Biowastes	Ŋ	Plastics	4
Food	12	Textiles	ις	Metals	3
Biowastes	11	Metals	5	Industrial waste	2
Plastics	11	Plastics	5	WEEE	2
Packaging	11	Composite materials	4	Batteries	2
Metals	8	Municipal waste	3	Aluminium cans	2
Composite materials	8	Industrial waste	3	Plastic bottles	2
Municipal waste	7	"Total" waste	3	"Total" waste	2
Household waste	2	Household waste	2	Residual waste	2
WEEE	2	C&D waste	2	Composite materials	2
C&D waste	4	Hazardous waste	2	Commercial waste	П
Commercial waste	3	Commercial waste	1	C&D waste	1
Textiles	3	Paper / Cardboard	1	Paper / Cardboard	1
Plastic packaging film	2	Glass	1	Textiles	1
Plastic packaging	2	Furniture	1	Food	1
Medicines and healthcare waste	3	Garden	1	Non-packaging paper	1
Batteries and/or accumulators	1	Plastic bottles	1	Other scrap metal	1
Composites	1	Other rigid plastic packaging	1	Non-packaging rigid plastics	1





Industry, Not-for-Profit, Academic and Other Organisations	nd Other	Public Authorities		European Citizens	
Waste Streams/Materials/Products	No. of	Waste Streams/Materials/Products	No. of	Waste Streams/Materials/Products	No. of
	Responses		Responses		Responses
Garden	1	Residual waste	1	Plastic packaging film	Т
Non-packaging paper	1	Single use carrier bags	1	Furniture	1
Other rigid plastic packaging	1	Paint	1	Household oil	1
Inert materials	1			Tyres	1
Critical materials	1			Pesticides	1
Beverage bottles and cans	1				
Asphalt	1				

Respondents were asked to rank a number of options for the introduction of waste prevention targets. As in other sections of the consultation this ranking was on a scale of 1 to 5, where:

- 1 = poor idea, not worth consideration;
- > 3 = moderately good idea, may be worth further consideration; and
- > 5 = very good idea, definitely deserves further consideration.

The five options that were put forward were:

- 1. In line with the proposal in the Roadmap, a requirement that waste generated per capita is in decline by 2020.
- 2. Targets for decoupling of municipal waste from economic growth in line with Article 9(c) of the Waste Framework Directive. For example, the difference between the annual change in municipal waste per capita (X%) and the annual change in GDP per capita (Y%) should demonstrate a decoupling tendency such that over comparable (e.g. four year) periods, the value of (Y X) is increasing in value.
- 3. Consistent reporting of household waste arisings across Member States would act to produce a level playing field for setting absolute targets on waste prevention (e.g. no greater than X kg per household per year). The targets could exhibit a declining trend over time.
- 4. New requirements could be set on Member States to incrementally increase the number of prevention measures in place and the overall coverage of these measures. For example, the number of households who have signed up to say "no" to unwanted mail, or the number of households covered by measures to reduce food wastage.
- 5. Introduce requirements for progressive coverage of households by pay-as-you throw schemes.

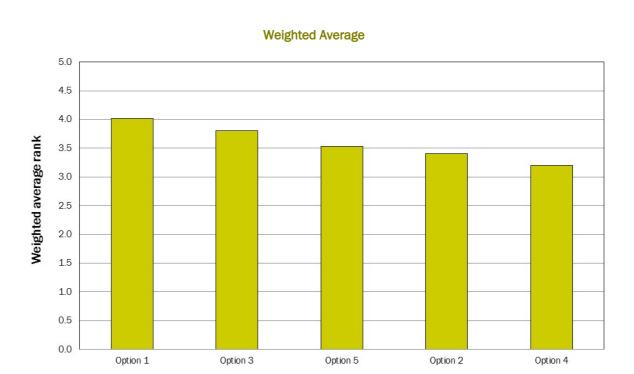
The results of the responses to this question are presented for all stakeholders in Figure 2-1 and for each stakeholder group in Figure 2-2 and Figure 2-3. In each of these figures the 5 options represent those listed above and the reader should refer back to this list in order to identify which options were most favoured by respondents. As described in Section **Error! Reference source not found.** the results of this ranking exercise are presented in two ways:

- 1. As a weighted average rank; and
- 2. As the difference in the number of respondents who ranked an option as '5' vs. those who ranked it as '1'.

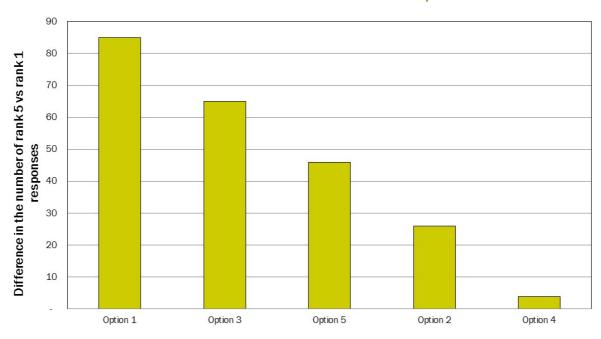
In the pages below each figure contains two graphs which present the results of the above two analyses.



Figure 2-1: Scoring of Options by all Stakeholders



## Difference in the Number of Rank 5 vs. Rank 1 Responses





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Figure 2-2: Scoring of Options by all Stakeholder Groups, Weighted Average Rank

3 8		option 5	3.2	2.8	4.1	4.0	4.1	3.3	3.8
		Option 4	2.6	3.4	3.1	2.3	2.9	3.3	3.9
		Option 3	3.4	3.2	4.4	4.0	4.0	3.9	3.9
		Option 2	3.0	3.1	3.6	3.8	3.1	3.6	3.6
		option 1	3.6	3.7	4.6	4.7	3.6	4.1	4.1
5.0	Weighted average rank  1.0  1.0  1.0  0.0  0.0		Industry Trade Bodies	■ Industry Representatives	□ Not-for-Profit Organisations	■ Academic Institutions	Other Organisations	■ Public Authorities	■ European Citizens

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Targets Review Project: Appendix 2

Option 5 188 16 ņ 4 4 4 Option 4 -12 4 Ç 2 4 ч Option 3 26 13 2 n Option 2 10  $\infty$  $\forall$ 1 Option 1 30 19 7 3 ■ Not-for-Profit Organisations 35.0 30.0 20.0 15.0 10.0 5.0 -10.0 -15.025.0 -5.0 Industry Representatives Industry Trade Bodies Academic Institutions Other Organisations European Citizens Lank 5 vs rank 1 responses ■ Public Authorities Difference in the number of

Figure 2-3: Scoring of Options by all Stakeholder Groups, Rank 5 vs. Rank 1



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# 2.2 Preparation for Reuse

Stakeholders were asked if they agreed with the principle that separate targets should be set for preparation for reuse. Responses to this question are summarised in Table 2-3. Those stakeholders who responded that they felt that there should be no such targets were automatically directed to the next section of the consultation (see Section 2.3).

Table 2-3: Should the Commission Set New Preparation for Reuse Targets?

					Sta	keholder G	roup		
Ans	wer	All Stakeholders	Industry Trade Bodies	Industry Representatives	Not-for-Profit Organisations	Academic Institutions	Other Organisations	Public Authorities	European Citizens
Yes	No.	211	38	20	39	3	10	31	70
	%	46%	28%	25%	72%	50%	50%	63%	60%
No	No.	251	98	60	15	3	10	18	47
	%	54%	72%	75%	28%	50%	50%	37%	40%
Total	No.	462	136	80	54	6	20	49	117
	%	100%	100%	100%	100%	100%	100%	100%	100%

Respondents in favour of setting new preparation for reuse targets were asked which waste streams, materials, or products they thought should be targeted (respondents were allowed to identify up to four items). The range of materials identified by each of the three main stakeholder groups is presented in Table 2-4.

Table 2-4: List of Waste Streams, Materials or Products that could be the Focus of Preparation for Reuse Targets

Industry, Not-for-Profit, Academic and Other Organisations	nd Other	Public Authorities		European Citizens	
Waste Streams/Materials/Products	No. of Responses	Waste Streams/Materials/Products	No. of Responses	Waste Streams/Materials/Products	No. of Responses
Textiles	35	Textiles	15	WEEE	10
WEEE	35	Furniture	13	Furniture	7
Furniture	34	WEEE	10	Textiles	Е
Beverage bottles	13	End-of-life vehicles	3	Glass	2
Toys	9	Construction & Demolition waste	2	Glass bottles	2
Glass bottles	4	Glass	2	End-of-life vehicles	2
End-of-life vehicles	3	Household waste	1	Toys	2
Bulky waste	2	Bulky waste	П	Household waste	1
Glass	2	Plastics	П	Wood	1
Plastics	2	Clothing	1	Plastics	1
Wood	1	Beverage bottles	1	Mobile Phones	1
Metals	1	Paint	П	Bicycles	1
Batteries and/or accumulators	1			Cans	1
Cans	1			Chemicals	1
Nappies	1				
Commercial transit packaging	1				
Specialty fibres such as aramides and carbon fibre	1				



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# 2.3 Recycling Rates

The European Commission is keen to see that more materials are recycled, especially critical raw materials and those that have a significant impact on the environment. In light of this, stakeholders were asked whether they thought that recycling rates should be increased and /or made to include more materials/waste streams. Responses to this question are summarised in Table 2-5. Those stakeholders who responded that they felt that there should be no such targets were automatically directed to the next section of the consultation (see Section 2.4).

Table 2-5: Should the Commission Increase or Expand Existing Recycling Targets?

					Sta	keholder G	roup		
Ans	wer	All Stakeholders	Industry Trade Bodies	Industry Representatives	Not-for-Profit Organisations	Academic Institutions	Other Organisations	Public Authorities	European Citizens
Yes	No.	390	101	66	44	5	17	42	115
	%	84%	74%	83%	81%	83%	85%	86%	98%
No.	No	72	35	14	10	1	3	7	2
	%	16%	26%	18%	19%	17%	15%	14%	2%
Total	No	462	136	80	54	6	20	49	117
	%	100%	100%	100%	100%	100%	100%	100%	100%

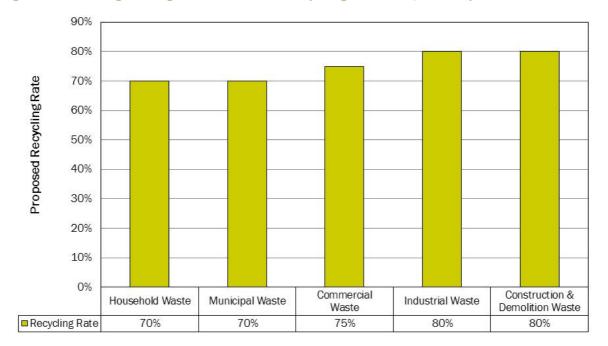
Stakeholders who believed that current recycling targets should be revised, were asked to define the highest level of recycling that they felt could reasonably be obtained for the following waste streams by 2025:

- Household waste;
- Municipal waste;
- Commercial waste;
- Industrial waste; and
- Construction and demolition waste.

The weighted average recycling rate reported are presented for all stakeholders in Figure 2-4 and for each stakeholder group in Figure 2-5.

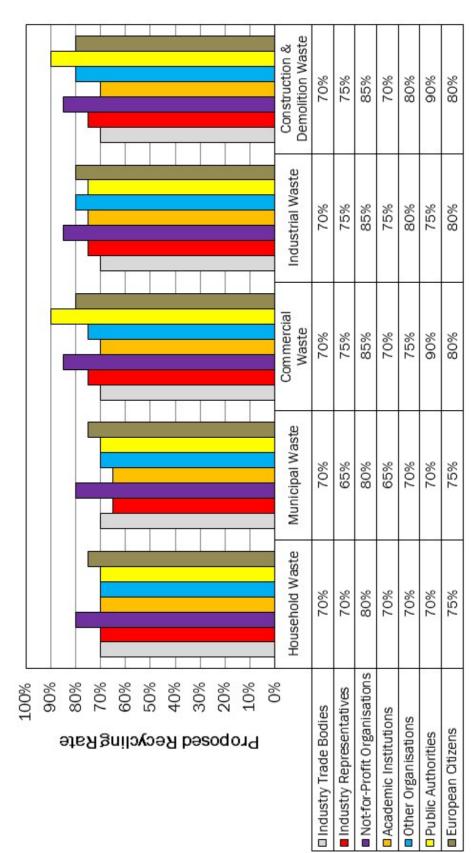


Figure 2-4: Average of Highest Achievable Recycling Rates Reported by all Stakeholders



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Figure 2-5: Average of Highest Achievable Recycling Rates Reported by all Stakeholder Groups



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In order to take into account the large differences between Member States' current recycling levels, stakeholders were asked whether they supported an approach which would set targets relative to the existing situation in each Member State (for example, setting recycling rates that increased by a given amount each year). Responses to this question are presented in Table 2-6.

Table 2-6: Should Recycling Targets be Set According to the Situation within Individual Member States?

					Sta	keholder G	iroup		
Ans	wer	All Stakeholders	Industry Trade Bodies	Industry Representatives	Not-for-Profit Organisations	Academic Institutions	Other Organisations	Public Authorities	European Citizens
Yes	No.	193	45	32	32	3	8	21	52
	%	60%	58%	70%	82%	60%	50%	58%	51%
No	No.	128	32	14	7	2	8	15	50
	%	40%	42%	30%	18%	40%	50%	42%	49%
Total	No.	321	77	46	39	5	16	36	102
	%	100%	100%	100%	100%	100%	100%	100%	100%

At present only municipal waste and construction and demolition waste are covered by specific recycling targets in the Waste Framework Directive, whilst other Directives cover packaging, WEEE, ELVs and batteries. The consultation asked whether stakeholders thought that there was a case for setting recycling targets on waste streams, materials, or products that are not already covered by targets in existing Directives. A range of answers were provided and each of these was coded to identify commonality across responses – the results of these responses are presented in Table 2-7 for the three main stakeholder groups.



Table 2-7: List of Waste Streams, Materials or Products that could be the Focus of New Recycling Targets

Industry, Not-for-Profit, Academic and Other Organisations	nd Other	Public Authorities		European Citizens	
Waste Streams/Materials/Products	No. of Responses	Waste Streams/Materials/Products	No. of Responses	Waste Streams/Materials/Products	No. of Responses
Biowastes	49	Biowastes	6	Biowastes	6
Textiles	28	Plastics	9	Beverage cartons	9
Commercial and industrial waste	18	Textiles	5	Industrial waste	е
Bulky waste	17	Commercial waste	3	Textiles	က
Commercial waste	15	Industrial waste	2	Plastics	8
Beverage cartons	15	Hazardous waste	2	Commercial waste	2
Plastics	14	Food	2	Tyres	2
Industrial waste	12	Critical materials	2	Commercial and industrial waste	2
Furniture	6	All waste streams	2	Household waste	П
Hazardous waste	5	Bulky waste	1	Bulky waste	1
Food	4	Furniture	1	Hazardous waste	П
All waste streams	4	Non-packaging rigid plastics	₽	Furniture	П
Wood	3	Household oil	₽	Other scrap metal	П
Glass	2	Tyres	1	Toys	1
Tyres	2	Commercial and industrial waste	1	All waste streams	П
Flat glass	2				
Household waste	1				
C&D waste	1				
Paper / Cardboard	1				
Metals	1				
Ships	1				





Industry, Not-for-Profit, Academic and Other Organisations	nd Other	Public Authorities		European Citizens	
Waste Streams/Materials/Products	No. of	Waste Streams/Materials/Products	No. of	Waste Streams/Materials/Products	No. of
	Responses		Responses		Responses
Bio-plastics	1				
Incinerator bottom ash	1				
Waste oils	1				
Mobile phones	1				
Autoclaved Aerated Concrete	1				
Packaging waste	1				
Floor coverings, matrasses	1				
Composite materials	1				
Sewage sludge	1				

# 2.4 Limiting Incineration of Waste Which Might Otherwise be Recycled

As stated above the Roadmap aims to ensure that energy recovery is limited to non-recyclable materials. In light of this, stakeholders were asked whether they supported the notation that a maximum level should be set for the amount of waste that can be incinerated for different waste streams. The responses to this question are presented for each group of stakeholders in Table 2-8. Those who stated that this would not be a good idea were not required to respond to the remaining questions in this section.

Table 2-8: Should the Commission Set Maximum Levels on the Amount of Waste that can be Incinerated?

					Sta	keholder G	roup		
Ans	wer	All Stakeholders	Industry Trade Bodies	Industry Representatives	Not-for-Profit Organisations	Academic Institutions	Other Organisations	Public Authorities	European Citizens
Yes	No.	264	58	48	33	3	9	19	94
	%	57%	43%	60%	61%	50%	45%	39%	80%
No	No.	198	78	32	21	3	11	30	23
	%	43%	57%	40%	39%	50%	55%	61%	20%
Total	No.	462	136	80	54	6	20	49	117
	%	100%	100%	100%	100%	100%	100%	100%	100%

Those in support of the idea that maximum levels of incineration should be set were asked more specifically which waste stream (or streams) this should apply to. The following options were provided:

- Household/municipal waste;
- Commercial waste;
- Industrial waste; and
- Construction and demolition waste.

The results of this question are presented in Table 2-9, which is broken down by waste stream and stakeholder group.

Table 2-9: Number of Stakeholders Who Do and Do Not Support Maximum Incineration Levels for Different Waste Streams

Waste Stream / Answer	е - Т	Stakeholder Group
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			Industry Trade Bodies	Industry Representatives	Not-for-Profit Organisations	Academic Institutions	Other Organisations	Public Authorities	European Citizens
Household/Municipal \	Naste								
Yes, introduce limits	No.	151	27	24	30	2	5	12	51
on incineration	%	89%	84%	89%	100%	67%	71%	75%	94%
No, do not introduce	No.	18	5	3	0	1	2	4	3
limits on incineration	%	11%	16%	11%	0%	33%	29%	25%	6%
Commercial Waste									
Yes, introduce limits	No.	135	25	14	30	2	6	11	47
on incineration	%	90%	86%	78%	100%	67%	75%	73%	100%
No, do not introduce	No.	15	4	4	0	1	2	4	0
limits on incineration	%	10%	14%	22%	0%	33%	25%	27%	0%
Industrial Waste									
Yes, introduce limits	No.	118	19	14	29	1	4	7	44
on incineration	%	81%	73%	74%	100%	33%	57%	50%	92%
No, do not introduce	No.	28	7	5	0	2	3	7	4
limits on incineration	%	19%	27%	26%	0%	67%	43%	50%	8%
Construction & Demoli	tion Wa	ste							
Yes, introduce limits	No.	110	16	13	27	0	4	9	41
on incineration	%	76%	64%	68%	93%	0%	50%	64%	89%
No, do not introduce	No.	34	9	6	2	3	4	5	5
limits on incineration	%	24%	36%	32%	7%	100%	50%	36%	11%

Respondents who supported the idea of applying maximum levels of incineration to either one or more of the above waste streams were asked to state what they believed was an appropriate maximum level (as a percentage of each waste stream). The results of this question are presented in Table 2-10, where the weighted average maximum incineration rate for each waste stream is presented for each group of stakeholders.



Table 2-10: Average Maximum Levels of Incineration Suggested by Stakeholders

				Stake	holder G	roup		
Waste Stream	All Stakeholders	Industry Trade Bodies	Industry Representatives	Not-for-Profit Organisations	Academic Institutions	Other Organisations	Public Authorities	European Citizens
Household/Municipal Waste	21%	28%	23%	14%	23%	32%	23%	23%
Commercial Waste	21%	27%	25%	12%	23%	30%	23%	23%
Industrial Waste	19%	24%	23%	12%	20%	29%	23%	20%
Construction & Demolition Waste	20%	20%	28%	14%	25%	15%	25%	20%

In addition to the above four waste streams stakeholders were asked to identify any other waste streams to which a maximum level of incineration should apply. These responses were coded to identify common responses and the results are presented in Table 2-11.



Table 2-11: List of Waste Streams to which it was Suggested Maximum Incineration Levels Should Apply

Industry, Not-for-Profit, Academic and Other Organisations	nd Other	Public Authorities		European Citizens	
Waste Streams/Materials/Products	No. of	Waste Streams/Materials/Products	No. of	Waste Streams/Materials/Products	No. of
	Responses		Responses		Responses
Packaging	18	Tyres	2	Packaging	9
Biowastes and/or Biomass	14	Biowastes and/or Biomass	1	Biowastes and/or Biomass	5
Medical waste	13	Plastics	П	Medical waste	2
Plastics	10	Waste oils	1	Not a relevant response	1
Paper and card	7	Medical waste	П	Hazardous waste	1
Wood	æ	PVC	П	Batteries	1
WEEE	က	Non-toxic waste streams that can easily be recycled (e.g. paper)	1	Wood	1
Packaging waste	2			Plastics	1
Metals	2			WEEE	1
Bulky waste	1			Paper and card	1
Hazardous waste	П				
Tyres	П				
Waste oils	П				
End-of-life vehicles	П				
Food waste	П				
Refuse derived fuel (RDF)	1				
Textiles	1				
Furniture	1				
Biodegradable waste	1				



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## 2.5 Landfill

There are a number of possible ways in which the Commission's aspirational target that landfill should be 'virtually eliminated' could be implemented. Several options for achieving this were presented in the consultation:

- 1. Landfilling should be limited to residues from a specified range (to be determined) of waste treatment operations.
- 2. Landfilling should be limited to a certain percentage of waste generated (for instance 5%) from a particular date.
- 3. Landfilling of recyclable/compostable waste (to be defined) should be banned.
- 4. Landfilling of waste that is combustible should be banned.
- 5. Landfilling of waste should be banned if it has not been pre-treated to a level where the potential to lead to methane emissions from landfills has been virtually eliminated.

As described above, respondents were asked to rank the above options on a scale of 1 to 5, where:

- 1 = poor idea, not worth consideration;
- > 3 = moderately good idea, may be worth further consideration; and
- > 5 = very good idea, definitely deserves further consideration.

The results of the responses to this question are presented for all stakeholders in Figure 2-6 and for each stakeholder group in Figure 2-7 and Figure 2-8. In each of these figures the 5 options represent those listed above and the reader should refer back to this list in order to identify which options were most favoured by respondents. As described in Section **Error! Reference source not found.** the results of this ranking exercise are presented in two ways:

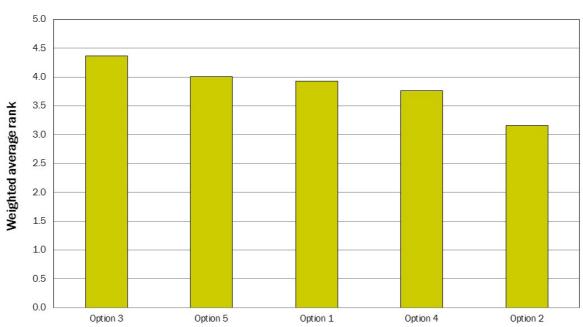
- 1. As a weighted average rank; and
- 2. As the difference in the number of respondents who ranked an option as '5' vs. those who ranked it as '1'.

In the pages below each figure contains two graphs which present the results of the above two analyses.

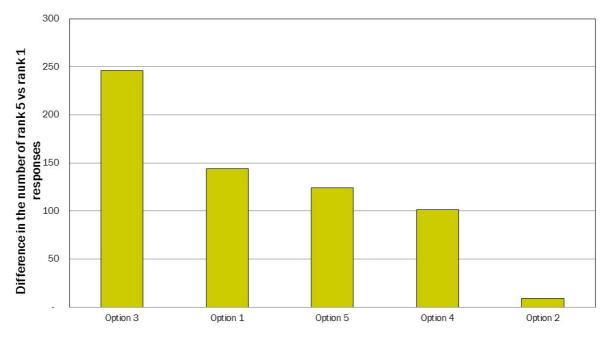


Figure 2-6: Scoring of Options by all Stakeholders





## Difference in the Number of Rank 5 vs Rank 1 Responses



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Figure 2-7: Scoring of Options by all Stakeholder Groups, Weighted Average Rank

				Ontion 3:	3.7	3.7	5	4.7	3.8	4.0	4.2
				Ontion 4	3.9	4.2	3	3.8	3.4	3.7	3.8
				Ontion 3	4.2	4.4	5	4.2	3.9	4.0	4.7
				Ontion 2	2.7	3.1	4	2.5	3.5	2.9	3.5
				Option 1	3.6	3.9	4	3.7	3.1	3.4	4.4
<b>K</b> 4.5	age ran	ted aven	1.0	0.0	■ Industry Trade Bodies	■ Industry Representatives	■ Not-for-Profit Organisations	■ Academic Institutions	Other Organisations	■ Public Authorities	■ European Citizens

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Option 5 Option 4 36 φ 14 2 Option 3 9 32 88 3 9 Option 2 22 2 2 ιĊ 9 6 Option 1 26 24 7 寸  $\infty$ ■ Not-for-Profit Organisations 100.0 80.0 0.09 40.0 20.0 -20.0 0.0 ■Industry Representatives Industry Trade Bodies Academic Institutions Other Organisations ■ European Citizens Lank 5 vs rank 1 responses ■ Public Authorities Difference in the number of

24

33

0

30

2 4

Figure 2-8: Scoring of Options by all Stakeholder Groups, Rank 5 vs. Rank 1



In addition to the listed options which were scored as part of the closed-ended scoring matrix stakeholders were also asked to list any additional solutions that they felt had not already been identified and should potentially be considered. These open-ended responses were coded to identify the different themes that emerged from these responses. The additional solutions that were suggested by all stakeholder groups are presented in Table 2-12.

Table 2-12: Additional Suggestions Proposed by Stakeholders

Suggested Solution	Number of Times Solution Identified by Respondents
Introduction of targets should be staged or reduced by a given percentage each year	13
Set landfilling and incineration rates as a maximum amount of pre-treated waste per capita which decreases over time	11
Feasible alternatives must exist before landfill bans are implemented	10
Outright bans are inappropriate - some landfilling will always be necessary	7
The target should focus on distinct waste streams that can easily be monitored/identified (e.g. C&I waste and municipal waste)	6
Targets and/or bans should not be set, Member States should use other instruments to achieve objectives	6
Introduce mandatory landfill taxes	5
Introduce a requirement that all waste should be sorted prior to land filling and/or incineration	5
European Commission funding must enforce the waste hierarchy	4
Implement a complete landfill ban as a future target	3
Legislative efforts should focus on landfill taxes rather than bans	3
Progressive increases in landfill taxes for member states	3
Member State which landfill more than X% of its waste should be required to agree an	3
Action Plan of national measures to reduce the amount of waste sent to landfill	
Ban sorted wastes from landfill	3
Targets should be based on persistence of pollutants as well as toxicity of waste being landfilled	2
Targets must be backed up by strict enforcement strategy	2
Reduction in landfilling must be linked to a reduction in incineration	2
Increase existing Landfill Directive targets on biodegradable waste	2
Maintain existing landfill targets which focus on biodegradable waste only	2
Disposal of waste in landfills should be restricted to residues of certain waste treatment processes	2
Landfilling rate could be set as a maximum amount of waste per capita decreasing over a period of time	1
The targets need to take into account the specific situation on islands and take this into account	1
Member States should have the freedom to voluntary negotiate appropriate targets with the European Commission	1



Suggested Solution	Number of Times Solution Identified by Respondents
Ban single use plastics from landfill (e.g. single use plastic bags)	1
Need better data before setting targets	1
Strict acceptance criteria for landfills should be established for distinct waste streams	1
Ban biodegradable waste from landfill	1
Ban recyclable wood from landfill	1
Ban certain critical materials from landfill	1
Response was not relevant to this section	66
Solution was already listed in the consultation / Response was a comment on proposed solutions	28
Response highlighted an issue	7

In order to take into account the large differences between Member States' current levels of landfilling, respondents were asked whether they supported an approach which would set targets relative to the existing situation in each Member State (for example, setting a landfilling reduction percentage per year). Responses to this question are presented in Table 2-13.

Table 2-13: Should Landfilling Targets be Set According to the Situation within Individual Member States?

_				Stakeholder Group								
Answer		All Stakeholders	Industry Trade Bodies	Industry Representatives	Not-for-Profit Organisations	Academic Institutions	Other Organisations	Public Authorities	European Citizens			
Yes	No.	176	49	30	31	3	6	23	34			
	%	68%	60%	67%	78%	75%	46%	64%	83%			
No	No.	84	32	15	9	1	7	13	7			
	%	32%	40%	33%	23%	25%	54%	36%	17%			
Total	No.	260	81	45	40	4	13	36	41			
	%	100%	100%	100%	100%	100%	100%	100%	100%			



## 3.0 Targets as a Tool in Waste Legislation

The first question in this section of the consultation asked whether stakeholders thought that the Commission should go further than simply setting targets for Member States to achieve. The responses received to this question are summarised in Table 3-1.

Table 3-1: Should the Commission go Further than Simply Setting Targets?

				Stakeholder Group								
Answer		All Stakeholders	Industry Trade Bodies	Industry Representatives	Not-for-Profit Organisations	Academic Institutions	Other Organisations	Public Authorities	European Citizens			
Yes	No.	394	116	61	48	3	18	41	107			
	%	85%	85%	76%	89%	50%	90%	84%	91%			
No	No.	68	20	19	6	3	2	8	10			
	%	15%	15%	24%	11%	50%	10%	16%	9%			
Total	No.	462	136	80	54	6	20	49	117			
	%	100%	100%	100%	100%	100%	100%	100%	100%			

Those who felt that setting targets was insufficient for achieving the objectives set out in the Roadmap were asked to state, by simply entering 'yes' or 'no', whether they believed the following options would be appropriate:

- 1. Develop guidance on the implementation of effective producer responsibility schemes to improve the transparency of the systems as well as their cost effectiveness.
- 2. Develop guidance on the proper implementation of the waste hierarchy.
- 3. Ensure a closer monitoring by the Commission of progress accomplished by Member States in applying the waste hierarchy. For those Member States moving too slowly to meet the legally binding targets, develop mechanisms to ensure that key instruments such as a combination of economic and legal instruments (landfill/incineration taxes/bans, EPR schemes, incentives for municipalities and citizens, etc) are applied.
- 4. Develop criteria for municipalities to implement services of a minimum standard to enable sorting of a range of waste materials for recycling and composting/anaerobic digestion.



5. Improve the consistency of the definitions used in the legislation and ensure proper monitoring by improved data collection and systematic reliability and validity checks of data reported.

The responses received to these options were analysed for each group of stakeholders and the results have been summarised in

Table 3-2.

Table 3-2: Number of Stakeholders Who Stated that Proposed 'Non-target' Options were either Appropriate or Inappropriate

				Stak	eholder G	roup				
Waste Stream / Answer		All Stakeholders	Industry Trade Bodies	Industry Representatives	Not-for-Profit Organisations	Academic Institutions	Other Organisations	Public Authorities	European Citizens	
<b>Option 1:</b> Develop guid improve the transpare		· ·			•	•	nsibility so	chemes to		
Appropriate	No.	314	85	37	44	3	14	35	96	
	%	85%	79%	64%	98%	100%	82%	90%	94%	
Inappropriate	No.	57	22	21	1	0	3	4	6	
	%	15%	21%	36%	2%	0%	18%	10%	6%	
Option 2: Develop guid	Option 2: Develop guidance on the proper implementation of the waste hierarchy.									
Appropriate	No.	302	100	53	39	2	16	36	56	
	%	93%	95%	93%	87%	100%	89%	95%	92%	
Inappropriate	No.	24	5	4	6	0	2	2	5	
	%	7%	5%	7%	13%	0%	11%	5%	8%	
<b>Option 3:</b> Ensure a clos applying the waste hie		oring by t	he Comm	ission of p	rogress a	ccomplish	ied by Me	mber Stat	es in	
Appropriate	No.	339	98	51	45	2	14	29	100	
	%	92%	91%	89%	98%	67%	88%	81%	97%	
Inappropriate	No.	30	10	6	1	1	2	7	3	
	%	8%	9%	11%	2%	33%	13%	19%	3%	
Option 4: Develop criteria for municipalities to implement services of a minimum standard to enable sorting of a range of waste materials for recycling and composting/anaerobic digestion.										
Appropriate	No.	255	69	41	43	2	10	27	63	
	%	85%	79%	85%	96%	100%	63%	73%	95%	
Inappropriate	No.	46	18	7	2	0	6	10	3	
	%	15%	21%	15%	4%	0%	38%	27%	5%	



<b>Option 5:</b> Improve the consistency of the definitions used in the legislation and ensure proper monitoring									
by improved data collection and systematic reliability and validity checks of data reported.									
Appropriate	No.	366	109	57	46	3	16	35	100
	%	98%	98%	97%	100%	100%	94%	95%	98%
Inappropriate	No.	9	2	2	0	0	1	2	2
	%	2%	2%	3%	0%	0%	6%	5%	2%

In addition to the listed options which were scored as part of the closed-ended scoring matrix stakeholders were also asked to list any additional solutions that they felt had not already been identified and should potentially be considered. These open-ended responses were coded to identify the different themes that emerged from these responses. The additional solutions that were suggested by all stakeholder groups are summarised in Table 3-3.

Table 3-3: Additional Suggestions for Revision Provided by all Stakeholders

	Number of Times
Suggested Solution	Solution Identified
	by Respondents
Make separate glass collections mandatory	24
Make separate collections of certain waste streams mandatory	16
The EC should no longer fund incineration facilities	16
Encourage application of economic instruments to promote resource efficiency	13
Create a register of EU approved facilities for recycling exports outside the EU	10
Provide guidance on how to targets can be achieved	9
Set up a platform to enable the exchange of good practices between Member States.	8
Introduce extended producer warranties (e.g. extend from 2 to 10 years)	8
Assess resource use with life cycle approaches	6
Ensure that local NGOs have a say in the definition of waste plans	6
Make separate biowaste and/or textile collections mandatory	6
European Commission funding must enforce the waste hierarchy	6
Member States should do more to raise public awareness of waste related issues (e.g. recycling and waste prevention)	4
Strict enforcement of the targets and Directives	3
All national, regional and local waste plans must explain how they are planning to fulfil EU legislation	2
Measures should be taken to prevent incineration overcapacity	2
Introduce a single overarching reuse, recycling, and recovery target	2
Promote the implementation of voluntary initiatives/agreements with relevant stakeholders	2
Need greater focus on eco-design and extended producer responsibility to improve recycling and reduce arisings	2



Suggested Solution	Number of Times Solution Identified
	by Respondents
Apply standardised methods to assess 'decoupling'	1
More measures to minimize excessive packaging	1
Charge companies for the cost of disposal/recycling of their products	1
Ban planned obsolescence	1
Guidance must not interfere with appropriate national and local decision making processes	1
Place a tax proportional to total environmental impact on products sold	1
Remove any waste regulation barriers to private sector recycling	1
Improve Extended Producer Responsibility schemes for C&D materials/products	1
Establish fiscal control measures for extended producer responsibility schemes	1
Make an EU wide requirement for free public waste recycling centres	1
Tiered levels of enforcement action to lift performance of the lowest achievers	1
more quickly  Set technical and environmental standards for landfills	1
Monitoring the reuse and recycling initiatives should be the basis for future	1
proposals	1
There should be a greater focus on Extended Producer Responsibility	1
Clamp down on the export of illegal waste	1
Develop a Blueprint on Waste as has been produced for water	1
Promote incentive schemes to encourage innovation and behaviour change	1
European Commission funding should be conditional on pre-defined objectives/criteria	1
Reduce burden of waste legislation on SMEs	1
Provide clarification on the application of the waste hierarchy in relation to hazardous waste	1
More focus is required on end of waste criteria	1
The EC should provide guidance on stimulating and incentivising a circular	
economy	1
Introduce quality standards for recyclates	1
Not a relevant response for this section/ response is an issue rather than a proposal	66
Response was a comment on proposed solutions / Solution was already listed in the consultation	32



## 4.0 Citizen Consultation

It will be evident from the results presented in the above sections that European citizens were given the option of responding to the more technical consultation that was open to all stakeholders. In addition, the Commission developed a number of standalone questions to which citizens could respond if they did not wish to respond to the longer consultation that was open to all stakeholders. Citizens were able to express their views in one of three ways:

- 1. Through the shorter citizen consultation;
- 2. Via the technical consultation that was open to all stakeholders; or
- 3. Through both the shorter citizen consultation and the longer technical consultation.

The results of those citizens who responded to the technical consultation have already been presented in the sections above. This section presents the results of the responses which were received to the shorter citizen specific consultation. The number of responses received for each of the above three options is presented in Table 4-1.

Table 4-1: Number of Responses Received From European Citizens

Question	Number of Responses	% Based on Number of Responses to Question
I would like to express my views through the shorter citizen consultation.	208	64%
I would like to respond to the technical consultation that is open to all stakeholders.	47	14%
I would like to express my views through both the shorter citizen consultation and the longer technical consultation.	70	22%
Total	325	100%

The first question asked of citizens was whether they made efforts to reduce the amount of household waste that they produce. The responses to this question are presented in Table 4-2.

Table 4-2: Number of Citizens Who Reported Making Efforts to Reduce the Amount of Waste that They Produce

Answer	Number of Responses to Question	% Based on Number of Responses to Question	
Yes, make efforts to reduce waste arisings	269	97%	
No, make no efforts to reduce waste arisings	9	3%	
Total	278	100%	

Those citizens who reported that they were making efforts to reduce the amount of waste that they



produced were asked what steps they were taking to do so from a list of predefined options (respondents could choose one or more options). This list is reproduced in Table 4-3 which also provides a summary of which actions were most popular.

Table 4-3: Types of Actions Taken by Citizens to Reduce Waste Arisings

Answer	Number of Responses to Question	% Based on Number of Citizens Who Make Efforts to Reduce their Waste Arisings
I avoid food and other waste by buying exactly what I need.	219	81%
I avoid buying 'over packaged' goods.	184	68%
I have taken efforts to stop receiving unwanted mail.	159	59%
I undertake home composting.	120	45%
I use rechargeable batteries as far as possible.	176	65%
I drink tap water to avoid packaging waste.	188	70%
I use reusable nappies on my children.	19	7%
I donate/sell items for reuse.	197	73%
I make efforts to get broken appliances repaired before buying new ones.	179	67%
Other actions	82	30%
Total	1,523	-

Those citizens who reported that they made no efforts to reduce the amount of waste that they produced were asked what the main reasons were for this. Again, respondents were given the option of choosing one or more answers from a predefined list. The list of possible answers and the results are presented in Table 4-4.

Table 4-4: Reasons for Citizens Not Acting to Reduce Waste Arisings

Answer	Number of Responses to Question	% Based on Number of Citizens Who do not Make Efforts to Reduce their Waste Arisings
Reducing waste is not important.	1	11%
There is no public incentive to produce less waste.	3	33%
I do not know how I can reduce waste (for example, through home composting).	5	56%
It is the responsibility of the product producer to reduce waste, not mine.	2	22%
Other reasons.	3	33%
Total	14	-



Moving on from waste prevention to recycling, citizens were asked if they sort their waste material out for recycling. The number of 'Yes'/'No' responses received to this question are shown in Table 4-5. Citizens who reported making efforts to sort materials out for recycling were asked what encouraged them to do this. The listed closed-ended answers which were provided and the responses to these are shown in Table 4-6. In a similar vein, citizens who stated that they did not sort out materials for recycling were asked why this was the case. The responses to this question are reported in Table 4-7.

Table 4-5: Number of Citizens Who Reported Making Efforts to Sort Materials Out for Recycling

Answer	Number of Responses to Question	% Based on Number of Responses to Question
Yes, I currently sort my waste out for recycling	273	98%
No, I do not sort my waste out for recycling	5	2%
Total	278	100%

Table 4-6: Reasons for Citizens Acting to Sort Waste Out for Recycling

Answer	Number of Responses to Question	% Based on Number of Citizens Who Make Efforts to Sort Waste Out for Recycling
Sorting waste is compulsory in my municipality.	131	48%
I pay less if I sort my waste for recycling.	41	15%
I think recycling is good for the environment.	259	95%
I need to sort my waste so that my refuse bin does not become too full.	54	20%
It is something that the public authorities recommend I do.	72	26%
All my neighbours are sorting their waste.	33	12%
Other reasons.	42	15%
Total	632	-

Table 4-7: Reasons for Citizens Not Acting to Sort Waste Out for Recycling

Answer	Number of Responses to Question	% Based on Number of Citizens Who do not sort Waste out for Recycling
There is no separate collection service available in the area where I live.	3	60%
The recycling collection service is not convenient (e.g. I have to travel too far to reach the nearest facilities).	1	20%



There is not enough space in the recycling containers.	1	20%
The waste that is sorted for recycling is not collected often enough.	1	20%
It takes too much time to sort my waste.	3	60%
Organic wastes are not collected regularly enough.	1	20%
I have no place to store the sorted waste.	2	40%
Recycling is not my responsibility and should be done by the public authorities.	3	60%
There is no point in recycling as all the materials are burnt or landfilled anyway.	2	40%
I don't understand the sorting instructions that are required for me to separate my waste.	1	20%
Other reasons.	1	20%
Total	19	-

Citizens who reported that they made efforts to sort out materials for recycling were asked which wastes they regularly sorted out. A predefined list of wastes was provided and the responses to this list are presented in Table 4-8.

Table 4-8: Materials Regularly Sorted by Citizens

Answer	Number of Responses to Question	% Based on Number of Citizens Who Make Efforts to Sort Waste Out for Recycling
Paper	268	98%
Card	170	62%
Glass	258	95%
Metals	193	71%
Beverage cartons	212	78%
Aluminium	178	65%
Plastic bottles	256	94%
Other plastics	163	60%
Textiles (clothing)	162	59%
Garden waste	145	53%
Food waste	135	49%
Batteries	229	84%
Households hazardous waste (paint, chemicals, etc.)	146	53%
Electric and electronic waste equipment	195	71%
Other	31	11%
Total	2,741	100%

Citizens were also asked if they would sort out more wastes for recycling if the option to do so was made available to them. The number of 'Yes'/'No' responses to this questions can be seen in Table 4-9. Those citizens reported that they would like to sort out more wastes were asked to identify



which materials they would like to see collected in a manner which was convenient to them. The responses to this question are shown in Table 4-10.

Table 4-9: Number of Citizens Who Would Sort Out More Wastes for Recycling if the Option Was Available

Answer	Number of Responses to Question	% Based on Number of Responses to Question
Yes, I would sort out more wastes for recycling	240	88%
No, I would not sort out more wastes for recycling	33	12%
Total	273	100%

Table 4-10: Additional Wastes that Citizens Would Like to Sort Out for Recycling if it were Made Convenient to do so

Answer	Number of Responses to Question	% Based on Number of Citizens Who Make Efforts to Sort Waste Out for Recycling
Paper	26	11%
Card	40	17%
Glass	27	11%
Metals	63	26%
Beverage cartons	35	15%
Aluminium	62	26%
Plastic bottles	28	12%
Other plastics	80	33%
Textiles (clothing)	77	32%
Garden waste	59	25%
Food waste	91	38%
Batteries	44	18%
Households hazardous waste (paint, chemicals, etc.)	87	36%
Electric and electronic waste equipment	67	28%
Other	61	25%
Total	847	-

It is recognised that municipal waste management represents a cost for the public authorities. Citizens were therefore asked to select one of five options to demonstrate how they felt that these costs should be covered. The five options and the number of responses received for each are summarised in Table 4-11.



Table 4-11: How Should the Cost of Municipal Waste Collections be Covered?

Answer	Number of Responses to Question	% Based on Number of Responses to Question
General taxes paid by all citizens.	19	7%
Partly by general taxes, and partly by those placing products on the markets (such as producers of electronic goods, companies whose products are sold in packaging, etc.).  Partly by general taxes, and partly by charges linked to the	37	13%
amount of unsorted waste produced by the household (so that those households producing less waste, or making greater efforts to recycle, are paying less than the others).	29	10%
By a combination of general taxes, contributions from companies selling goods whose packaging may end up as waste, and charges linked to the amount of unsorted waste produced by the household.	179	64%
Other.	14	5%
Total	278	100%

Where citizens reported on 'other' means whereby the costs of municipal waste collections should be recovered, the following was identified:<sup>3</sup>

- Four citizens stated that the costs of collection should be paid by a combination of pay-as-you-throw and companies who contribute household waste arisings;
- Three respondents the costs should be covered entirely by pay-as-you-throw schemes; and
- Three citizens felt that the costs should be covered entirely be the companies who sell products which contribute to household waste arisings.

<sup>&</sup>lt;sup>3</sup> One response was unrelated to the questions, while three of the suggestions listed under the option 'other' were already identified in the consultation question.

