European Economic and Social Committee

NAT/600
European Plastic Waste Strategy (Green Paper)

Brussels, 19 September 2013

OPINION

of the
European Economic and Social Committee
on the
Green Paper on a European Plastic Waste Strategy
COM(2013) 123 final

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Rapporteur: **Mr Zbořil**

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On 10 April 2013, the European Commission decided to consult the European Economic and Social Committee, under Article 304 of the Treaty on the Functioning of the European Union, on the

Green Paper on a European Plastic Waste Strategy
COM(2013) 123 final.

The Section for Agriculture, Rural Development and the Environment, which was responsible for preparing the Committee's work on the subject, adopted its opinion on 3 September 2013.

At its 492nd plenary session, held on 18 and 19 September 2013 (meeting of 19 September), the European Economic and Social Committee adopted the following opinion by 138 votes to 6 with 6 abstentions.

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1. Conclusions and recommendations

1.1 The problem of uncontrolled waste streams in general, and of plastic waste in particular, is grave, since they frequently end up in the environment, either in unregulated landfills or in the marine environment. Although plastic litter in the environment is a global problem, the solutions are obviously local, with specific approaches depending on local conditions and capabilities.

1.2 The Green Paper on a European plastic waste strategy provides a breadth of statistics from EEA and Eurostat sources, as well as references to further publications, books, academic reports, etc. We recommend that this data be categorised and analysed in order to make it easier to understand and to use for drawing conclusions on the appropriate treatment of plastic waste streams.

1.3 When it comes to aquatic and marine environments, plastic waste accounts for a large majority of visible floating pollutants. This problem is aggravated by the degradation of plastic materials causing them to become invisible and to enter the food-chain. It is vital to improve the accuracy of analyses of material and waste streams that contain plastics, including analysis of how this waste enters the marine environment. The violation of existing rules in terms of mismanaged landfilling should not be tolerated. Plastic waste in the marine environment is unacceptable.

1.4 The EESC highly appreciates the initiatives organised by various interests groups to alleviate this serious problem. The EU might propose an international initiative to organise the clearing up of the worst accumulations of floating plastic waste in the oceans. It should take what steps it can to prevent plastic waste originating in Europe from getting into the sea; and it should consider using development assistance programmes to promote and support more sustainable

waste management practices in developing countries, and in particular to reduce the building up of plastic waste from those countries in the oceans.

1.5 In line with the waste hierarchy, efforts should be made to ensure that less plastic waste is generated in the first place. Some uses of plastics could be banned if there are more environmentally friendly and feasible alternatives.

1.6 The Committee also notes that a prerequisite for successful recycling is the identification and separation of waste streams both at source – where they occur – and once collected. The EESC sees a need for a better overview of the whole process of household waste collection to identify and disseminate best practice. The Committee urges the Commission to look at the different waste collection systems adopted to find out whether their impact varies, especially with regard to plastic waste dispersal in the environment.

1.7 The Committee understands that the three key pieces of EU legislation related to plastic waste (the Waste Framework Directive, the Packaging and Packaging Waste Directive and the Waste Electrical and Electronic Equipment Directive) have not been properly enforced throughout the EU. The EESC therefore advocates improving their enforcement and updating them as necessary. Unintended consequences must be properly assessed and any loopholes identified must be fixed, following a thorough expert analysis of sufficient and relevant data and processes. Efforts towards more efficient recovery and recycling in general should help to solve also the plastic waste problems outlined in the Green Paper.

1.8 Lastly, the EESC highlights the growing role that consumers can play, and endorses the position of the Green Paper when it comes to empowering consumers to know what they buy: "Informed consumers can play a decisive role in promoting more sustainable production patterns for plastic and plastic products that also improve resource efficiency. In targeting consumer behaviour, clear, simple and concise information could be instrumental for informing consumers of the plastic content of a product and its potentially harmful additives/colours (...). Full consumer product information on the type of plastic and its recyclability could be provided beyond existing schemes, in order to enable consumers to make an informed choice when buying a plastic product."

1.9 Numerous stakeholders have been involved in the EU waste and plastic waste agenda. They have suggested initiatives to reduce plastic waste and recover these valuable resources as far as possible. Their knowledge and expertise are a good basis for fairly rapid progress towards phasing out plastic waste from landfilling. Civil society plays a crucial role in boosting thorough implementation and behavioural change.

2. **Green Paper**

2.1 The purpose of the Green Paper is to launch a broad discussion on possible responses to the public policy challenges posed by plastic waste, which is not specifically addressed in EU waste legislation at present.

2.2 The inherent characteristics of plastics create specific challenges for waste management:

- Commonly used plastics are relatively cheap and versatile, with many industrial applications. This has led to a sharp increase in use over the past century and this is still continuing.
- Plastics are very durable materials which outlive the products made from them. As a result, the generation of plastic waste is growing worldwide.
- Their uncontrolled disposal is problematic, since plastic can persist in the environment for a very long time.
- It is particularly necessary to continue efforts to reduce the incidence and impacts of plastic in the marine environment.

2.3 Whatever the current difficulties, better management of plastic waste also offers new opportunities. Although, as a rule, thermoplastics are fully recyclable, only a small fraction of thermoplastic waste is actually recycled at present.

2.4 Improved recycling will contribute to the aims of the Roadmap to a Resource Efficient Europe[1] and to the reduction of greenhouse gas emissions, and imports of raw materials and fossil fuels. Appropriately designed measures to recycle plastics could also improve competitiveness and create new economic activities and jobs.

2.5 The Green Paper, which is said to be based on a lifecycle analysis (LCA) approach, should help reassess the environmental and human health risks of plastics in products when they become waste.

2.6 It should help to advance the internalisation of lifecycle impacts of plastics, from raw material extraction to the end of life phase, into the costs of plastic products.

3. General comments

3.1 The EESC sees a need for a better overview of the whole household waste collection process in order to identify what actually constitutes best practice – and what is appropriate for different GDP levels, climates, land availability, etc. Best practice should be adapted to the specific conditions of individual Member States and regions and then disseminated.

3.2 The problem of uncontrolled waste streams in general, and of plastic waste in particular, is grave, since they frequently end up in the environment, either in unregulated landfills, in the soil (e.g. due to the use of plastic films in agriculture), or in the marine environment. While plastic litter in the environment is a global problem, solutions are obviously very much local but should essentially be applied throughout the EU.

1 COM(2011) 571.

3.3 We should understand the importance of plastics in our daily life. It is not plastic as such that is a problem, but the way we mismanage our waste, including plastic waste. The measures adopted should primarily address this fact since prevention and gradual reduction of waste is a basic principle of sustainability.

3.4 In order to make it easier to understand and use the breadth of statistics provided in the Green Paper, we recommend categorising them in a way that allows data to be compared and trends identified so that options for addressing the problem can in turn be suggested.

3.5 To this end, a distinction has to be made between thermoplastics – i.e., those plastics that are assumed to be the core problem since they end up in the environment despite being recyclable and reusable – and thermosetting materials (resins), which are produced in far smaller quantity, are used in making technical equipment and are either completely non-recyclable or are very difficult to recycle today.

3.6 Most plastics are ideal as fuel stocks, but incineration is not the best solution for PVC. Burning plastics with other waste components may be the best approach in many cases, in order to avoid using fresh oil or gas to assist combustion. LCA analysis would provide the answer – however there is little reference to such an analysis in the Commission's Communication.

3.7 The Green Paper should primarily be concerned with thermoplastics, particularly plastic film (technical and packaging using PE, PP and PVC) and drinks containers (especially from PET), which have boomed globally, largely replacing glass or tin, and which also present a risk for the marine environment when their disposal is uncontrolled.

3.8 Synthetic fibres (PE, PP and polyamides) originating from various woven/textiles and non-woven industrial and consumer products; and foams used in packaging and cushions may also end up in the environment since worn textile products are not collected. This waste component is not mentioned in the Communication.

3.9 When it comes to marine pollution, plastic waste accounts for a large majority of visible floating pollutants, as well as invisible particles. This is a problem for marine fauna, including birds, mammals (dolphins, whales), tortoises and other animals. However, the light density of plastics may also facilitate clean-up measures.

3.10 This is why it is vital, in the Committee's view, to improve the accuracy of analyses of materials and waste streams that contain plastics, including analysis of how this waste enters the marine environment. Attention should also be given to the main material streams and to taking an incremental approach that first tackles the most important streams.

3.11 There are two main land-based sources of marine debris:

- Beaches and rivers where people just dump their waste.
- Poorly managed landfills, which are sometimes even deliberately placed near the sea or rivers so that they do not fill up too quickly.

Another important source is the irresponsible (intentional or negligent) dumping of waste from ships and lost fishing nets. Unfortunately, at this stage, no analysis of these sources has been presented in order to facilitate reliable conclusions.

3.12 The Committee points out that, given the global character of the problem in the marine environment, it is also at the global level that remedial measures must be adopted and implemented. The Committee recommends taking measures to ensure that EU waste of any sort is not merely exported to other parts of the world for dumping (should such cases exist). If waste can be re-used, then it is no longer waste and should be treated as a useful stream of raw materials.

3.13 The Committee also notes that a prerequisite for successful recycling is the identification and separation of waste streams both at source – where they occur – and once collected. New sorting technologies should be introduced that can separate metals, plastics and cellulose fibres, for example, from the stream of mixed household waste. The Committee also points out that while these technologies come at a cost in terms of energy, it is undoubtedly worthwhile investing further in their development.

3.14 Numerous stakeholders have been involved in the waste and plastic waste agenda. They have suggested initiatives to reduce plastic waste and recover these valuable resources as far as possible. Their knowledge and expertise are a good basis for fairly rapid progress towards phasing out plastic landfill waste. Such initiatives deserve adequate support.

4. Specific comments – answers to questions in the Green Paper

4.1 *Policy options for improving management of plastic waste in Europe*

4.1.1 **Can plastic be appropriately dealt with in the existing legislative framework?** The current Waste Framework Directive requires 50% (by weight) of household waste to be recycled, thus implicitly creating an infrastructure for separate collection. The Packaging and Packaging Waste Directive provides the legal framework for extending the responsibility of manufacturers, as does the WEEE Directive (Directive on waste electrical and electronic equipment) for plastics in such products. The Committee understands that these three pieces of legislation have not been properly enforced throughout the EU. The EESC therefore advocates improving enforcement and updating them as necessary. Unintended consequences must be properly assessed and any loopholes identified must be fixed, following a thorough expert analysis of sufficient and relevant data and processes.

4.1.2 **How can measures to promote greater recycling of plastic best be designed?** All that is required in addition is to properly set the targets in these directives. However, this involves

respecting a balance between the goals of recycling and energy use, in order to both spare the consumer huge costs and to avoid diminishing the environmental efficacy. For example, while the recycling of the widespread PE and PET plastics is both economically affordable and environmentally effective, that of less common plastics would require costly transport to the few places where, because of the low demand for their recycling, specialised plants are located. This transportation over long distances would also make recycling less environmentally sound than energy recovery. The problem is to get a steady stream in a constant quality in a required volume. LCA guidelines should help here.

4.1.3 **Would full and effective implementation of the waste treatment requirements in the existing landfill legislation reduce sufficiently current landfilling?** One particular problem is the conflict between the aim of source reduction of packaging waste by weight and the requirement of more recycling. This is because the efforts to reduce weight, while maintaining the required barrier properties, involve using multi-layered packaging composed of a variety of plastics, which is practically non-recyclable. The "design for recycling" concept should be used instead of trying to make it lighter. The rules on this should be amended but kept as simple as possible.

4.1.4 Another useful approach would be to stimulate, e.g. by means of prizes or other support, innovative solutions to specific packaging problems – for instance a fully and economically recyclable laminate container for milk or juices would be a market winner (and may even be available).

4.1.5 **What measures would be appropriate and effective to promote plastic re-use and recovery over landfilling?** One very important element is rigorous and effective compliance with the waste treatment requirements in the current landfill legislation: consistent implementation of the rules is an absolute prerequisite for increasing both recycling and the properly controlled disposal of plastic waste. Obviously, gradually phasing out the landfilling of plastic waste could enhance recovery and recycling, nonetheless, the development of adequate infrastructure is a prerequisite.

4.1.6 **What further measures might be appropriate to move plastic waste recovery higher up the waste hierarchy?** An actual landfill ban or prohibitive taxing of sites will only lead to a massive expansion in energy recovery from mixed waste, including plastics. Phasing out the landfilling of plastics has to be managed carefully to ensure that it does not simply result in extensive incineration. Incineration is nevertheless preferable to dumping, especially uncontrolled illegal dumping.

4.1.7 If a tax on energy recovery is to have the desired effects, it has to be very carefully thought out and seen in the broader picture, i.e. consideration must be given to the impact on alternative streams and, for example, on the possible use of a practically pure hydrocarbon element from polyolefin plastics for making liquid alternative fuels.

4.1.8 Should separate doorstep collection of all plastic waste combined with pay-as-you-throw schemes for residual waste be promoted in Europe? The separation of plastics from other material streams is desirable, and penalties should be established in order to discourage bad practices, but we should not underestimate some of the difficulties involved. These include the fundamental economic and environmental problems that make recycling plastics more difficult, i.e. the demanding transportation of large (albeit light) amounts over long distances. There could be exceptions to the imposition of separate collection on every waste producer when the benefits of recycling risk being outweighed by transport costs in cases where there is little plastic to separate.

4.1.9 **Are specific plastic waste recycling targets necessary in order to increase plastic waste recycling?** While it would be possible to incorporate a specific target in the Waste Framework Directive, it would be expedient to do so afterevaluating the efficacy of the present directive.

4.1.10 **Is it necessary to introduce measures to avoid substandard recycling or dumping of recyclable plastic waste exported to third countries?** Plastic waste for recycling has become a globally traded commodity. Landfilling in third countries is very unlikely, since foreign entities will not buy plastic waste for this purpose. Transportation costs for plastic packaging are very high, making any export for landfill improbable. Defining "substandard recycling" is extremely difficult, as is monitoring the implementation of corresponding regulation, so measures to curb this are more or less unenforceable and easy to circumvent.

4.1.11 **Would further voluntary action, in particular by producers and retailers, be a suitable and effective instrument?** Voluntary action, in particular by producers and retailers, could be a suitable and effective instrument for achieving better resource efficiency in the lifecycle of plastic products, especially in relation to agreements on the use of plastic packaging with elements (combination of materials, colour, etc.) that facilitate recycling.

4.2 *Targeting consumer behaviour*

4.2.1 **Is there scope to develop deposit and return or lease systems for specific categories of plastic products?** It is necessary to target personal and voluntary behaviour – of consumers without affecting the provision of more focused waste collection and recycling processes, which are mostly dependent upon the availability of local authority funding, unless they are truly commercially profitable for the operators. Given that almost all authorities, even in Germany, are now short of funds, it would make sense to propose solutions that do not require high subsidies – and therefore leave more money for education, health, social care or policing etc.

4.2.2 There is little scope for deposit-refund and similar systems. However, such systems already exist in business-to-business dealings and do not require special support. One area where it could be used would be for drinks packaging. Separating a stream of deposit-refund waste from the rest could be somewhat confusing for consumers, making the collection of non-

deposit items less effective and sorting less economical. Good information based on reliable analyses must therefore go hand in hand with the implementation of such systems.

4.2.3 What type of information would you consider necessary to empower consumers to make a direct contribution to resource efficiency when choosing a plastic product? Getting consumers directly involved is far from easy. In order to effectively change consumer behaviour, we need not only awareness raising but most of all user-friendly products and systems that make it easy for consumers to make the right choices, both when buying a product and when disposing of the waste. Consumer information concerning the correct handling of plastics in the separated collection of household waste – i.e. the labelling of items or instructions for sorting – is highly relevant. Mandatory information on the chemical content of recyclable waste should be formulated clearly and comprehensibly so that consumers can make an informed decision.

4.2.4 **How could information on the chemical content of plastics be made available to all actors in the waste recycling chain?** Information about the chemical composition of plastics or products from plastic is readily available up to the moment of sale. The value of such information to the customer is questionable: the only way to do this would be by means of understandable and easy-to-read texts, alongside the use of substances in the manufacture of plastics or other packaging materials, the safety of which has been checked on the basis of exposure and impact tests (REACH).

4.2.5 **How can challenges arising from the use of micro plastics in products or industrial processes and of nano-particles in plastics be best addressed?** The question of micro plastics and nano-particles in plastics requires an analysis of the extent to which these – for the most part inert constituents used in small concentrations – can enter the environment in quantities that pose a risk. There are, in fact, two separate issues: micro plastics, or better, plastic debris and nano-particles. Both should be treated individually because of their origin and effects. Still, too little is known about their effects on the environment, the potential risks for human health and their impact on marine life. Proper waste management in general would help to solve a good part of this problem. The occurrence of plastic debris has presumably been the case over the last 50 years – and is significant where it is shown to present or increase risks to human life and the environment.

4.3 *Durability of plastics and plastic products*

4.3.1 **Should product design policy tackle planned obsolescence of plastic products and aim at enhancing re-use and modular design in order to minimize plastic waste?** Plastic waste from some products arises as a result of obsolescence in the face of technical innovation. For others – window frames, car components, furniture, household goods, medical equipment, building materials,, electrical and heating insulation, shoes, clothing … and many other applications, durability is critical. These products do not account for a significant share in the total volumes of plastic waste and normally they are not part of household waste. Policy measures to address the durability of products would not have any major impact on the

quantity of waste, but it could harm the competitiveness of EU products. Ecodesign criteria will not in the main affect this area, since they primarily concern the function and environmental efficiency of the basic product, and not its plastic components.

4.3.2 Should market-based instruments be introduced in order to more accurately reflect environmental costs from plastic production to final disposal? Given the great diversity of products, it is necessary to study in detail the internalisation of external factors for plastic product components, as well as other raw materials, thereby avoiding in reality an excessive administrative burden, a curbing of competitiveness and, at the same time, a favouring of imports. The necessary lifecycle analyses would have to be applied to all rival materials to plastics and their application to goods imported from third countries would also have to be effectively secured.

4.3.3 **How can the waste burden posed by short-lived and single-use disposable plastic products best be addressed?** The waste burden posed by short-lived and single-use disposable plastic products can best be addressed through separate collection by plastic type and corresponding sorting. Some countries do it with success others do not because of the higher costs.

4.4 *Biodegradable plastics*

4.4.1 **What are the applications for which biodegradable plastics deserve to be promoted?** It is hard at present to identify an area in which biodegradable plastics are a proven benefit without side effects. Biodegradable plastics are preferable to applications where recycling is out of the question, such as cases where the plastic article is mixed with food and other waste, primarily intended for composting. In any event, it must be ensured that these plastics are clearly distinguishable and separable in order to avoid contamination of recycling processes. Lifecycle analysis should underpin their environmental and economic credibility before they are offered for larger-scale use.

4.4.2 **Would it be appropriate to reinforce existing legal requirements by making a clear distinction between naturally compostable and technically biodegradable plastics?** Such problems need to be discussed at the expert level, based on relevant information and data. Knowledge on this subject needs to be expanded.

4.4.3 **Would the use of oxo-degradable plastic require any kind of intervention with a view to safeguarding recycling processes?** The EESC does not have sufficient information to support or reject the use of oxo-degradable plastics.

4.4.4 **How should bio-based plastics be considered in relation to plastic waste management and resource conservation?** If the use of bio-based plastics is to be promoted, this should be based on a thorough lifecycle analysis. It must be realised that "bio" is not necessarily anything new (plastics based on casein, for example, have been used in the past) and past experience needs to be very critically assessed. Bio-based plastics are not bio-degradable; bio-

degradability is an intrinsic material property related to the molecular structure of the polymer.

4.5 *EU initiatives dealing with marine litter including plastic waste; international measures*

4.5.1 **What actions other than those described in this Green Paper could be envisaged to reduce marine litter?** Analyses of how plastic waste reaches the marine environment – whether through accidents or systemic processes – should be verified and expanded at international and European level. Consideration should be given, on the basis of this, to the possibility of a complete ban on discharging waste, including plastics, into the sea. Needless to say, sustained work to inform and incentivise the public – including cleaning of beaches and other activities – is desirable to effect a general change in public attitudes.

4.5.2 **How can setting the EU-wide quantitative reduction target for marine litter provide added value to measures that reduce plastic waste generally?** Setting quantitative targets for reducing waste in the oceans will do nothing to limit actual plastic waste, since this is in fact waste that has not been channelled as such and so it has never, legally speaking, been treated as waste in the first place. The goal here would have to be framed as one to curb the inappropriate behaviour of people dumping waste where it does not belong. This is really about incentivising the public at the national level and, first and foremost, at the local level – including when they are on holiday elsewhere; "ownership" and responsibility go together. Good experiences and practices should be disseminated.

4.5.3 **How could the EU promote more effectively international action to improve plastic waste management worldwide?** In terms of proposing possible international measures to manage the marine environment and coasts, we need to embark on studies to evaluate the situation where none have yet been conducted – and to propose solutions to the problems as they are identified in bilateral and multilateral negotiations with third countries and regions.

4.5.4 The EESC highly appreciates the initiatives organised by various interest groups to alleviate this serious problem. The EU might propose an international initiative to organise the clearing up of the worst accumulations of floating plastic waste in the oceans. It should take what steps it can to prevent plastic waste originating in Europe from getting into the sea; and it should consider using development assistance programmes to promote and support more sustainable waste management practices in developing countries, and in particular to reduce the building up of plastic waste from those countries in the oceans.

Brussels, 19 September 2013.

The President
of the
European Economic and Social Committee

Henri Malosse

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N.B.: Appendix I overleaf.

APPENDIX I
to the Committee opinion

The following paragraphs of the section opinion were altered to reflect amendments adopted by the Assembly but received more than one quarter of the votes cast (Rule 54(4) of the Rules of Procedure):

Point 4.1.8

> ***Should separate doorstep collection of all plastic waste combined with pay-as-you-throw schemes for residual waste be promoted in Europe?*** *The separation of plastics from other material streams is desirable but we should not underestimate some of the difficulties involved. These include the fundamental economic and environmental problems that make recycling plastics more difficult, i.e. the demanding transportation of large (albeit light) amounts over long distances. Imposing separate collection on every waste producer could risk the benefits of recycling being outweighed by transport costs in cases where there is little plastic to separate. As a result, this should not be a blanket EU-wide requirement and the details must be left to the Member States, in line with the principle of subsidiarity.*

Result of the vote on the amendment

For:	74
Against:	50
Abstentions :	22

Point 4.1.11

> ***Would further voluntary action, in particular by producers and retailers, be a suitable and effective instrument?*** *Voluntary action, in particular by producers and retailers, could be a suitable and effective instrument for achieving better resource efficiency in the lifecycle of plastic products, especially in relation to agreements on the use of plastic packaging with elements (combination of materials, colour, etc.) that facilitate recycling. It could, however, run up against competition rules, since it presupposes agreements coordinating marketing practices. It could further increase public resentment at EU interference in areas of day-to-day life that are already difficult. A reality check is needed before suggesting solutions that could eventually fail.*

Result of the vote on the amendment

For:	77
Against:	57
Abstentions :	15

Point 4.2.3

What type of information would you consider necessary to empower consumers to make a direct contribution to resource efficiency when choosing a plastic product? *Getting consumers directly involved is far from easy. In order to effectively change consumer behaviour, we need not only awareness raising but most of all user-friendly products and systems that make it easy for consumers to make the right choices, both when buying a product and when disposing of the waste. The only piece of information that is relevant for consumers concerns the correct handling of plastics in the separated collection of household waste – i.e. the labelling of items or instructions for sorting. Mandatory information on the chemical content of recyclable waste would be counterproductive, since consumers may not make an informed decision on the actions required.*

Result of the vote on the amendment

For:	74
Against:	66
Abstentions :	13

Point 4.2.4

How could information on the chemical content of plastics be made available to all actors in the waste recycling chain? *Information about the chemical composition of plastics or products from plastic is readily available up to the moment of sale. It would certainly be unrealistic to expect it to be retained in the phase of recycling and processing of the waste. The value of such information to the customer is questionable: it is more effective to use substances in the manufacture of plastics or other packaging materials, the safety of which has been checked on the basis of exposure and impact tests (REACH).*

Result of the vote on the amendment

For:	86
Against:	51
Abstentions :	6