Position paper

Excess Materials Exchange

Case study on a circular carpet industry in the Netherlands

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1. Introduction

1. This position paper was created by a collaboration between Stibbe Amsterdam and Utrecht University (Utrecht Centre for Water, Oceans and Sustainability Law – "UCWOSL") and produced for the Excess Materials Exchange ("**EME**"). This position paper makes concrete recommendations to the European Commission by means of a specific case study of EME.

2. EME has created a platform on which companies can offer and trade their secondary materials. As a matchmaker, EME identifies, evaluates and trades these material flows offered by companies.[1] However, experience gained by EME has shown that the trading of material flows is hindered or even prevented by Dutch and European legislation.

3. One of the material flows where EME encounters legal barriers is the pre- and post-consumer carpet waste. Carpet manufacturers such as Interface and Tarkett also face similar barriers and seek ambitious policies to remove barriers for the transition to a circular carpet industry.[2] Although there is support to overcome these limitations and stimulate circularity, there is a lack of concrete suggestions that focus on this material flow. This position paper will therefore provide specific suggestions to the European Commission to remove the barriers to the transition to a circular carpet industry (in the Netherlands), as these suggestions could lead to existing circular initiatives being scaled up and new circular initiatives being developed.[3] For the sake of completeness, it is noted that the solutions or some of the solutions put forward could serve as inspiration for the removal of similar barriers in sectors other than the carpet industry. This position paper may serve as a basis for further research into solutions for other sectors.

4. The authors are aware that legislative processes at national and European level can be time-consuming[4], and that the realisation of each solution is accompanied by an individual time frame. In view of both the national and European objectives[5] of achieving a circular economy by 2050, it is advisable to implement the proposed (amendments to) legislation as soon as possible. For these reasons, each solution is accompanied by a possible time frame.[6]

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[1] For more information on EME, see https://excessmaterialsexchange.com/.

[2] 'Joint statement: Carpet producers support mandatory action to make the sector go circular', *Zero Waste Europe* 5 December 2018, zerowasteeurope.eu.

[3] See, for example, the Niaga Carpet Manufacturing Technology of DSM-Niaga (https://www.dsm-niaga.com/) or the closing of the cycle of commercial carpet tiles in Europe through a partnership between Tarkett and Aquafil.

[4] Between 2014 and 2016, the co-decision procedure took 22 months on average. In addition, legislation needs to be translated, verified and implemented at national level. For example, Directive 2018/852 included a transitional period of six years, during which EU Member States had to introduce a national EPR scheme for packaging materials. See *Activity Report on the Ordinary Legislative Procedure 2017* (Report of the European Parliament), p. 12; Directive 2018/852/EU of the European Parliament and of the Council of 30 May 2018 amending Directive 94/62/EC on packaging and packaging waste (OJEU 2018, L 150/141).

[5] The vision of the Seventh Community Environment Action Programme ("**EAP**") defines the realisation of an innovative circular economy in 2050. The EAP serves as a guide for EU environmental policy. See Decision 1386/2013/EU of the European Parliament and of the Council of 20 November 2013 on a new comprehensive environmental action programme for the European Union for the period up to 2020 'Living well, within the limits of our planet' (OJEU 2013, L 354/171). Furthermore, the European Commission has developed a vision, which includes a climate-neutral economy in 2050. See 'Leading the way to a climate-neutral EU by 2050', *European Commission* 26 August 2019, ec.europa.eu. The Dutch government wants to have a fully circular economy by 2050, while the British government wants to have eliminated all forms of avoidable waste by 2050. See Ministry of Infrastructure and the Environment, *government-wide programme for a Circular Economy Programme: A Circular Economy in the Netherlands by 2050*, September 2016, p. 7; Department for Environment, Food and Rural Affairs, *Our Waste, Our Resources: A Strategy for England*, December 2018, p. 7.

[6] These possible time frames have been drawn up on the basis of the information we consulted. In this way the time frames give an indication of a possible legislative process for each solution. It is important to note that these time frames are only indicative.

5. Furthermore, it is noted that, according to the authors, it would also be advisable to extend the scope of the Ecodesign Directive (Directive 2009/125/EC) to non-energy-related products. This would make it possible to set requirements for the product design of non-energy-related products, such as carpets. Such an extension is particularly desirable as more than 80% of the environmental impact of a product is determined at the design stage[7] and is therefore endorsed by, inter alia, the European Parliament[8], the European Economic and Social Committee[9] and stakeholders in the carpet industry[10]. Although it was first stated that an extension of the scope to non-energy-related products is neither necessary nor feasible[11], the European Commission is currently investigating the extension of the Ecodesign Directive to other product groups.[12] The authors assume that an extension of the scope of the Ecodesign Directive will not be realised in the short term, which means that the extension of the Ecodesign Directive as a possible solution will not be considered further in this position paper.

6. In this position paper, Chapter 2 will set out the barriers to the development of a Dutch circular carpet industry. Then, in Chapters 3 to 7, solutions to the identified barriers will be presented. Of these, the most important solution is a European Extended Producer Responsibility scheme for the carpet industry (Chapter 3). On the basis of such a scheme, other suggested solutions, such as a mandatory resources passport and a sustainability label for carpets (Chapters 4 and 5), could be implemented as well. The supply and demand of recycled carpet should also be stimulated through, for example, information campaigns (Chapter 5) and green public procurement (Chapter 6). Chapter 7 contains the conclusion.

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[7] European Commission, 'Ecodesign Your Future - How Ecodesign can help the environment by making products smarter', 2012; Deloitte, Oeko-Institut and ERA Technology,' Preparatory Study to establish the Ecodesign Working Plan 2015-2017 implementing Directive 2009/125/EC - Task 1 Draft Final Report', 2014, p. 5. See also: T.J. de Römph, *The legal transition towards a Circular Economy - EU environmental law examined* (doctoral thesis KU Leuven & Hasselt University), p. 212.

[8] Report A8-0165/2018 of the European Parliament (7 May 2018), *Report on the implementation of the Ecodesign Directive (2009/125/EC) (2017/2087(INI))*, p. 5.

[9] European Economic and Social Committee, 'Opinion on the EU Action Plan for the circular economy', NAT/676, 2016, pp. 4, 10.

[10] See *Ecodesign and Energy Labelling for a circular economy* (Coolproducts Report January 2018), p. 11; W. Mosmuller, 'Time for an eco-design revolution on carpets and mattresses', *Euractiv.com* 25 April 2018; M. Hilton, 'Policy Toolkit for Carpet Circularity in EU Member States', Bristol: Eunomia Research & Consulting Ltd 2018, p. 41. See also: Tapijt detoxen - Wegen naar veilig en recyclebaar tapijt in een werkelijk circulaire economie (Report Recycling Network Benelux), p. 13.

[11] See: Commission Staff Working Document, *Sustainable Products in a Circular Economy - Towards an EU Product Policy Framework contributing to the Circular Economy*, SWD (2019) 91 final, p. 10; E. Molenbroek et al., Final technical report - 'Evaluation of the Energy Labelling Directive and specific aspects of the Ecodesign Directive', Ecofys 3 June 2014, p. 53-74; A. Zygierewicz, *The Ecodesign Directive (2009/125/EC) - European Implementation Assessment*, Study of the European Parliamentary Research Service, November 2017, pp. 19-20. A possible extension of the scope of the Ecodesign Directive is also not reflected in the European Commission's Ecodesign Working Plan 2016-2019, see: European Commission, *Ecodesign Working Plan 2016-2019*, COM (2016) 773 final.

[12] See: Commission Staff Working Document, *Sustainable Products in a Circular Economy - Towards an EU Product Policy Framework contributing to the Circular Economy*, SWD (2019) 91 final.

2. Barriers for a circular carpet industry

1. Europe is the second largest carpeting market worldwide, with an expected annual growth rate of 2.7%.[13] 65% of the demand for carpet is answered by European producers, mainly from Belgium, the Netherlands and the United Kingdom.[14] There are 15 carpet producers active in the Dutch market, including Interface, Desso (part of Tarkett) and DSM-Niaga.[15] Although the European market for carpet is growing, the reuse of European post-consumer carpet waste is limited: 60% is landfilled, 37-39% incinerated and only 1-3% is reused.[16]

2. Several factors are currently hampering a higher reuse rate and thus the development of a circular carpet sector in the Netherlands and Europe. EME and Dutch carpet manufacturers, including Interface, Desso and DSM-Niaga, also recognise and identify these barriers. In this position paper, the factors are subdivided into product-related barriers and market-related barriers. These will be set out in more detail below.

3. The first category of barriers to a higher percentage of circular carpets are product-related and can be divided into two subcategories: barriers at the design stage and barriers at the installation stage. In the first place, barriers exist at the design stage. When designing carpets, circularity is rarely taken into account.[17] This results in complex carpets, which consist of several interwoven components.[18] These components, or the materials with which the components are interwoven, often contain materials that are non-renewable, non-reusable or even dangerous.[19] For example, carpets can contain more than 50 toxic substances, including carcinogenic and reprotoxic substances.[20] These substances, such as lead and mercury, can be released during use or processing, causing problems during the consumption phase and severely hampering the reuse of the carpet. Secondly, there are barriers in the installation phase. Carpets are often fixed to the ground with glue. This will damage the carpets when they are removed.[21]

4. The second category of barriers is market-related and can be divided into three subcategories: barriers at the waste stage, barriers due to a lack of transparency regarding the composition of

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[13] *Swept under the Carpet: The Big Waste Problem of the Carpet Industry in Germany* (Deutsche Umwelthilfe Report, February 2017), p. 35.

[14] *Smoke and Mirrors - Exposing the reality of carpet 'recycling' in the UK* (Changing Markets Foundation Report, November 2019), p. 13.

[15] P. Koppert & B. Römgens, *Visie tapijt 2030* (Roadmap from 2011 prepared for Modint and VNTF), Zeist: 2011, p. 2. Of the carpet produced in the Netherlands, 85% is exported, see: '*Nederland staat in de Top-10 van grootste tapijtproducenten ter wereld*', *Modint* 2019.

[16] *Swept under the Carpet: The Big Waste Problem of the Carpet Industry in Germany* (Deutsche Umwelthilfe Report, February 2017), pp. 32-33.

[17] For example, carpet tiles are easier to repair and replace than broadloom carpet, making carpet tiles more suitable for circularity than broadloom carpet. Despite this, current carpet production consists of 70% broadloom carpet and only 30% carpet tiles. See: *Swept under the Carpet - Recommendations for the carpet industry in France* (Report of February 2017 produced by Zero Waste France and Changing Markets), London: 2017, p. 48; 'Broadloom Vs. Carpet Tiles in Commercial Applications', *Source Floor & Specialties Inc*. June 28, 2013, Sourcefloor.com.

[18] M. Hilton, 'Policy Toolkit for Carpet Circularity in EU Member States', Bristol: Eunomia Research & Consulting Ltd 2018, p. 12; 'Plastics recycling, the indispensable link towards a circular economy', *NRK Recycling*, Nrk.nl.

[19] J. Onyshko & R. Hewlett, *Toxics in Carpets in the European Union* (Report of March 2018 by Anthesis Consulting Group for Changing Markets), Oxford*:* 2018, p. 5; *Testing for Toxics: How chemicals in European carpets are harming health and hindering circular economy* (Report of October 2018 published by Changing Markets), London: 2018, p. 42.

[20] *Smoke and Mirrors - Exposing the reality of carpet 'recycling' in the UK* (Changing Markets Foundation Report, November 2019), p. 7.

[21] J. Onyshko & R. Hewlett, *Toxics in Carpets in the European Union* (Report of March 2018 by Anthesis Consulting Group for Changing Markets), Oxford: 2018, p. 20.

carpets, and image problems. In the first place, there are barriers in the waste phase. First of all, it is important to note that carpet waste is currently not classified as a separate waste stream.[22] As a result, carpet waste is not collected or processed separately, but is mixed with other waste streams.[23] In addition, (hazardous) substances can end up in carpet waste during renovation and demolition, leading to contamination.[24] Lack of transparency is also a major obstacle to reuse.[25] After all, even with separately collected carpet waste there can be too much uncertainty about the exact composition, making (high-quality) reuse impossible. Carpet waste also has an image problem, since the negative image that clings to the concept of waste reflects badly on reusable carpet, as this qualifies as waste.[26] As a result of this obstacle, the demand from manufacturers for carpet waste and from consumers for recycled carpet remains limited. Consequently, carpet is only reused on a small scale and there is little incentive to increase scale.[27]

5. In short, the development of a circular carpet industry in the Netherlands is currently hampered by various factors. These barriers range from material selection to image problems and extend from the beginning of the production process (the design phase) to the end of the supply chain (the waste phase). In view of the variety of barriers, this position paper also proposes various solutions to remove the barriers. In the following chapters, Extended Producer Responsibility, the resources passport, the sustainability label and green public procurement are discussed successively. However, it should be noted that these explanations are not exhaustive.

3. Extended Producer Responsibility

1. Extended Producer Responsibility ("**EPR**") is an existing legal and economic policy measure that extends producer responsibility for their products to the post-consumer phase: producers become responsible for e.g. waste management and reuse of a post-consumer discarded product.[28] EPR can serve a variety of purposes, including efficient waste collection and disposal, reuse of products and ecodesign.[29] The European Economic and Social

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[22] *Swept under the Carpet: The Big Waste Problem of the Carpet Industry in Germany* (Deutsche Umwelthilfe Report, February 2017), p. 28.

[23] Idem.

[24] J. Onyshko & R. Hewlett, *Toxics in Carpets in the European Union* (Report of March 2018 by Anthesis Consulting Group for Changing Markets), Oxford: 2018, pp. 20-21.

[25] Ibid, pp. 36, 71-72, 83-84; M. Hilton, 'Policy Toolkit for Carpet Circularity in EU Member States', Bristol: Eunomia Research & Consulting Ltd 2018, p. 4.

[26] C. W. Backes, *Law for a Circular Economy* (inaugural lecture in Utrecht), The Hague (NL): Eleven International Publishing 2017, p. 23.

[27] S. Van Ewijk, *Resource efficiency and the circular economy: Concepts, economic benefits, barriers, and policies* (Report of January 2018 for the UK Department for Environment, Food & Rural Affairs), London: UCL Institute for Sustainable Resources, p. 13; *Swept under the Carpet: The Big Waste Problem of the Carpet Industry in Germany* (Report of Deutsche Umwelthilfe, February 2017), pp. 32-33.

[28] T.J. de Römph, *The legal transition towards a Circular Economy - EU environmental law examined* (doctoral thesis KU Leuven & Hasselt University), p. 189.

[29] Guidance manual of the Organisation for Economic Cooperation and Development (March 20, 2001), *Extended Producer Responsibility: A Guidance Manual for Governments*, pp. 18-19.

Committee[30], Recycling Network Benelux[31], Changing Markets Foundation[32] and producers in the carpet sector[33] argue that (mandatory) EPR should be used to increase circularity in the supply chain. The various arguments in favour of introducing such an EPR scheme for carpets are discussed in more detail below.

2. First of all, the EPR scheme will make producers legally, financially and/or operationally responsible for the waste processing of carpets.[34] This leads to a fairer distribution of costs.[35] After all, producers are responsible for marketing linear goods (such as carpets), but consumers and municipalities bear the costs at the end of the chain. For example, the landfill costs are paid by consumers, while the municipalities bear the additional costs of circular treatment (such as separate collection and recycling).[36] As the EPR scheme ensures that waste treatment costs are borne by producers and are thus internalised in the production process and sales price, producers receive an incentive to minimise these costs.[37] At present, the infrastructure for the reuse of carpets is small-scale, which means that only 1-3% of carpet waste can be processed for reuse and incineration and landfill costs need to be incurred for the remaining carpet waste landfill.[38] Producers are likely to scale up current reuse facilities, allowing economies of scale to be achieved and reducing reuse costs.[39] In this way producers will be able to reduce the increased cost price.

3. Secondly, the EPR scheme will lead to (more) ecologically designed products. After all, a product with a longer lifespan and better design for reuse will be easier to reuse, making waste disposal more efficient and reducing costs. EPR therefore also provides an incentive for the ecodesign of carpets, as such design can be financially advantageous for manufacturers in the long run. In addition, ecodesign makes it easier to close the cycle of carpets.[40]

4. Thirdly, the Organisation for Economic Co-operation and Development ("OECD") has established various criteria for assessing whether an EPR scheme will be efficient and effective for a given material flow.[41] Application of these criteria shows that carpets constitute a suitable material flow for an EPR scheme. For example, carpets constitute a waste stream of

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[30] European Economic and Social Committee, 'Opinion on the EU Action Plan for the circular economy', NAT/676, 2016, p. 4.

[31] *Tapijt detoxen - Wegen naar veilig en recyclebaar tapijt in een werkelijk circulaire economie* (Rapport Recycling Netwerk Benelux), p. 13.

[32] *Smoke and Mirrors - Exposing the reality of carpet 'recycling' in the UK* (Changing Markets Foundation Report, November 2019), pp. 12-13.

[33] Zero Waste Europe, 'Joint Statement - Carpet producers support mandatory action to make the sector go circular', Brussels December 2018.

[34] 'Besluit regeling voor uitgebreide producentenverantwoordbaarheid', *Ministry of Infrastructure and Water Management* 2019, internetconsultatie.nl.

[35] S. Van Ewijk, *Resource efficiency and the circular economy: Concepts, economic benefits, barriers, and policies* (Report of January 2018 for the UK Department for Environment, Food & Rural Affairs), London: UCL Institute for Sustainable Resources, p. 12.

[36] 'Plus-onderzoek: wat kost afvalverwerking?', *Erik Bogaards* 2018, plusonline.nl.

[37] *Smoke and Mirrors - Exposing the reality of carpet 'recycling' in the UK* (Changing Markets Foundation Report, November 2019), p. 12.

[38] *Swept under the Carpet: The Big Waste Problem of the Carpet Industry in Germany* (Deutsche Umwelthilfe Report, February 2017), p. 11.

[39] Ibid, p. 6.

[40] T.J. de Römph, *The legal transition towards a Circular Economy - EU environmental law examined* (doctoral thesis KU Leuven & Hasselt University), p. 189. This argument is also supported by the European Commission itself, see SWD (2018) 20 final, p. 11.

[41] *Exploration of the Role of Extended Producer Responsibility for the circular economy in the Netherlands* (EY report of June 2016 for the Ministry of Infrastructure and the Environment), p. 10.

sufficient size to justify an EPR scheme, since 1.6 million tonnes of carpet waste are generated in the EU each year.[42] In addition, sufficient control can be exercised over the disposal of discarded carpets. After all, given the size of carpets, it is difficult to dump or dispose of carpets via conventional garbage bags or containers.[43] At the same time, the number of producers in the EU is limited enough to achieve an effective EPR scheme: 40 producers from six Member States control around 90% of European carpet production.[44] It has also become apparent that an EPR scheme is supported by various (Dutch) stakeholders in the carpet industry, including carpet industry organisation Modint, government bodies such as the Directorate-General for Public Works and Water Management and the Ministry of Infrastructure and Water Management, and leading carpet manufacturers such as DSM-Niaga, Interface and Tarkett.[45] Finally, various initiatives concerning circular carpets in the Netherlands already exist.[46] The EPR system could support, complement or replace these initiatives.[47]

5. The potential success of an EPR scheme for carpets is also apparent from current EPR schemes in the US and the Netherlands. For example, an EPR scheme for carpets was introduced in California in 2010, which made it possible to prevent the dumping of post-consumer carpets. Although the recycling target of 16% for 2016 has not been met, the recycling rate of carpets in California (around 10%) is three times higher than in Europe.[48] Although the Netherlands does not have an EPR scheme for carpets, EPR schemes have already been introduced for other product and waste streams, including packaging, lighting and car tyres.[49] As a result of these EPR schemes in force, the recycling of packaging increased by 11.4% between 2013 and 2017, and the collection of car tyres increased by 17.7% between 2009 and 2018.[50] With regard to the success of these EPR schemes, it is of great importance that they were always compulsory EPR schemes. For example, Carpet Recycling UK, a voluntary organisation set up with the aim of reducing landfill of carpets, has had little success: ten years after the voluntary organisation was set up, only 1% of UK carpet waste is recycled.[51] This example shows that voluntary initiatives do not yet achieve

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[42] Ibid, p. 12.

[43] Ibid, p. 15.

[44] 'Carpet News', *European Carpet and Rug Association* 2018, ecra.eu.

[45] M. de Munck, *Rolling out the circular carpet* (Master thesis Utrecht), 2019, p. 48. See also Zero Waste Europe, 'Joint Statement - Carpet producers support mandatory action to make the sector go circular', Brussels December 2018.

[46] See, for example, the Niaga Carpet Manufacturing Technology of DSM-Niaga (https://www.dsm-niaga.com/), the closing of the cycle of commercial carpet tiles in Europe through a partnership between Tarkett and Aquafil (https://vloeren.projecten.tarkett.nl/nl_NL/node/tarkett-en-aquafil-zetten-met-kringloop-van-tapijttegels-een-belangrijke-stap-richting-circulaire-economie-8238) or the take-back programs of Interface and Tarkett (https://projectvloerenspecialist.nl/over-ons/misie-en-visie/recycling/).

[47] *Exploration of the Role of Extended Producer Responsibility for the circular economy in the Netherlands* (EY report of June 2016 for the Ministry of Infrastructure and the Environment), p. 13.

[48] *Swept under the Carpet: The Big Waste Problem of the Carpet Industry in Germany* (Deutsche Umwelthilfe Report February 2017), p. 26; 'Q4 2018 AB 2398 Summary & Recommendations for Approval', *CARE Sustainable Funding Oversight Committee* 19 June 2018, CalRecycle.ca.gov, p. 6.

[49] For a complete overview of the applicable EPR systems in the Netherlands, see 'Producentenverantwoordelijkheid', *Rijkswaterstaat* 2019, AfvalCirculair.nl.

[50] 'Doel & resultaat', *Recybem* 2019, recybem.nl; *Verpakkingen in de Circulaire Economie: Recycling verpakkingen Nederland 2017* (Afvalfonds Verpakkingen Report of October 2018), Leidschendam: 2018, p. 6; *Monitoring Verpakkingen Resultaten Inzameling en Recycling 2013* (Nevang Report of July 2014), Rotterdam: 2014, p. 4.

[51] *Smoke and Mirrors - Exposing the reality of carpet 'recycling' in the UK* (Changing Markets Foundation Report, November 2019), p. 4.

sufficient results,[52] which is therefore an argument in favour of the introduction of a mandatory scheme.[53]

6. As briefly discussed above, a choice should be made between a compulsory or a voluntary EPR scheme. A voluntary scheme is introduced by a coalition of producers, while a compulsory EPR scheme is imposed on producers by the European institutions. As a voluntary system depends on the willingness of producers and given the UK example, it is recommended to opt for a compulsory scheme. In addition, the introduction of a mandatory, EU-wide EPR scheme could ensure a level playing field between producers, avoiding unnecessary transaction costs, legal procedures and protectionist measures.[54] There is no doubt that the carpet industry itself can and should make an important contribution to the implementation of an EPR scheme, but by making such a system compulsory, freeriding is avoided and economies of scale can be achieved.

7. The European Commission may include various measures in the compulsory EPR scheme. For example, producers may be required to take back returned and discarded carpets, to provide information on the recyclability of the products or to comply with certain requirements regarding the design, traceability and recognisability of the products and materials.[55] Following the advice of the OECD, it is recommended to provide EPR schemes with clear obligations and objectives, to use ecodesign as an incentive, and to allow individual and collective participation.[56]

8. Finally, as regards the legal basis, it is preferable to establish the EPR scheme for carpets by means of a new, separate Directive, as was done for already existing EPR schemes at EU level[57]. The legal basis for this Directive may be provided by Articles 1 and 4 of Directive 2008/98/EC on waste (Waste Framework Directive, "**WFD**").[58] Reference can also be made to Article 8 WFD, which allows Member States to introduce EPR schemes.

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[52] Although the organisation itself argues that the landfill of carpet waste in the UK has declined from 98% in 2007 to 56% in 2018, it appears that 73% of this reduction is due to the fact that carpet waste is now incinerated rather than landfilled. See: Ibid, pp. 3, 7-8, 12.

[53] 'Report: Carpet experiencing lower UK recycling and reuse rates than plastics', *Edie* 2019, edie.net.

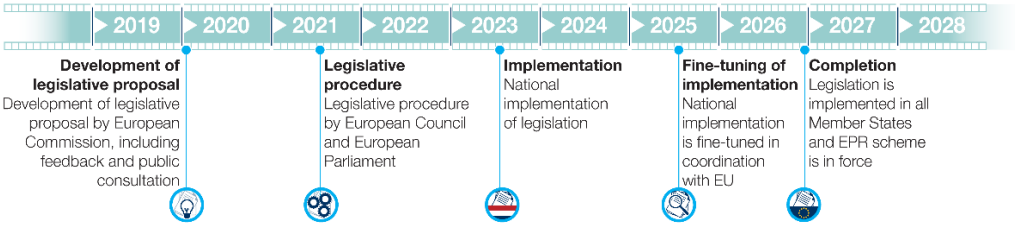
[54] G. Drake & A. Bayhaqi, *Reducing Trade Transaction Costs: Harmonization of Standards and Conformity Assessments in APEC* (Report of October 2011 produced for the Sub-Committee on Standards and Conformance), West Pymble/Singapore: 2011, pp. 30, 31.

[55] T.J. de Römph, The legal transition towards a Circular Economy - EU environmental law examined (doctoral thesis KU Leuven & Hasselt University), p. 190, 252. The Changing Markets Foundation also describes some essential elements of a mandatory EPR system, see: *Smoke and Mirrors - Exposing the reality of carpet 'recycling' in the UK* (Changing Markets Foundation Report, November 2019), p. 13.

[56] Report of the Organisation for Economic Cooperation and Development (2016), *Extended Producer Responsibility: Updated Guidance for Efficient Waste Management*, p. 16.

[57] As for electrical and electronic equipment (Directive 2012/19/EU of the European Parliament and of the Council of 4 July 2012 on waste electrical and electronic equipment (WEEE)), batteries and accumulators (Directive 2006/66/EC of the European Parliament and of the Council of 6 September 2006 on batteries and accumulators and waste batteries and accumulators and repealing Directive 91/157/EEC), end-of-life vehicles (Directive 2018/849/EU of the European Parliament and of the Council of 30 May 2018 amending Directives 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; Directive 2000/53/EC of the European Parliament and of the Council of 18 September 2000 on end-of-life vehicles) and packaging (Directive 2018/852/EU of the European Parliament and of the Council of 30 May 2018 amending Directive 94/62/EC on packaging and packaging waste).

[58] See Article 1 of the WEEE Directive, which establishes an EPR system for WEEE.



4. Resources passport

1. A potential way to stimulate administrative coherence and consistency is by introducing a resources passport. Such a passport documents the 'identity' of a product, making information about a product accessible in a clear and easy way.[60] There is not yet an obligation to draw up a resources passport for carpets. However, there are several arguments supporting the positive effects of a mandatory resources passport for carpets on the transition to a circular carpet sector. These will be set out below.

2. Firstly, a resources passport can contain information about the properties and components of both the individual materials in the carpet and the carpet as a whole. The information in the resources passport should be as comprehensive as possible: the more information included in the passport, the more recyclers will be provided with the information needed for recycling and the easier it will be to reuse the materials in the carpet.[61] In addition, the (extensive) information makes it possible to identify all the different materials in a carpet, enabling high-

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[59] It has sometimes happened that the European Parliament has asked the European Commission to propose a revision of a law within a year and a half. This time frame is therefore based on this possibility of a year and a half. The sources consulted show, on the one hand, that the legislative procedure in the European Parliament and the Council can take one to two years but, on the other hand, that it can also take five to six years. In this context, it is also important that there is the possibility of an accelerated procedure. In our opinion, it would be advisable to opt for a legislative procedure as soon as possible. Subsequently, national implementation by Member States is important, which in most cases lasts up to two years. It is important to note that the national implementation of a Directive takes longer than a Regulation, as Member States are free to decide for themselves how they will achieve the objectives set out in a Directive. Finally, it is noted that no information has been found in the literature about a possible time frame for the refinement of the execution. Sources used for the time frames of the EPR system, resources passport, sustainability label and green public procurement http://www.europarl.europa.eu/thenetherlands/nl/pers/het-eu-wetgevingsproces, https://www.ey.com/Publication/vwLUAssets/EY_Guide_to_EU_legislative_process/$FILE/EU%20_legislative_process.pdf, https://www.europa-nu.nl/id/vhn9getukgtg/van_europees_wetsvoorstel_tot_nationale

[60] T.J. de Römph, *The legal transition towards a Circular Economy - EU environmental law examined* (doctoral thesis KU Leuven & Hasselt University), p. 210. Compare also the concept of product tagging: a way to provide consumers with reliable information about a product. See: Commission Staff Working Document, *Sustainable Products in a Circular Economy - Towards an EU Product Policy Framework contributing to the Circular Economy*, SWD (2019) 91 final, p. 60.

[61] See among others: European Resource Efficiency Platform, 'Manifesto & Policy Recommendations', Brussels 2012, p. 7. See about this function of a resources passport, but with regard to the construction industry: L.M. Luscuere, 'Materials Passports: Optimising value recovery from materials', Waste and Resource Management Vol. 170/1; W. Debacker et al., 'Circular economy and design for change within the built environment: preparing the transition', HISER International Conference 2017, p. 114. On the importance of resources passports in the construction sector, see in more detail also W. Debacker & S. Manshoven, 'D1 Synthesis of the State-of-the-Art', BAMB 2016. M. Hilton, 'Policy Toolkit for Carpet Circularity in EU Member States', Bristol: Eunomia Research & Consulting Ltd 2018, p. iii, iv, 17; T.J. de Römph, The legal transition towards a Circular Economy - EU environmental law examined (doctoral thesis KU Leuven & Hasselt University), pp. 316, 341, 347, 371-372. For a possible way to contribute to the creation of a resources passport, see: N. Gligoric, 'SmartTags: IoT Product Passport for Circular Economy Based on Printed Sensors and unique Item-Level Identifiers', *Sensors* January 2019. For a successful example of tagging, see: McKinsey Center for Business and Environment, 'The circular economy: Moving from theory to practice', October 2016, p. 16.

quality recycling.[62] In this context, it is also relevant that, as already indicated by the European Parliament in 2017, a resources passport could address the lack of information regarding the presence of substances of very high concern in a given product.[63] While a more comprehensive resources passport would create more value than a less comprehensive one, it should be taken into account that producers may not wish to share competitively sensitive information about their products with other stakeholders (such as other producers and waste processors). When designing the resources passport, a balance must therefore be found between creating value on the one hand and safeguarding competitive interests on the other. In our opinion, a resources passport should consist of a minimum set of information and should remain attached to the product through the value chain. This can be achieved, for example, by a digital passport in combination with a QR code.[64]

3. Secondly, the introduction of a resources passport for carpets may result in a resources passport not only constituting one central document from which the information needed for recycling can be derived, but in which other information can also be included. For example, the criteria for European green public procurement and sustainability labels can build on the information contained in a resources passport. In addition, other obligations relating to the product, such as the obligation to draw up 'safety data sheets'[65] or 'declarations of performance'[66], may also be incorporated in a resources passport. Other instruments may also be incorporated, such as certificates or harmonised standards.[67]

4. In summary, it is advisable to introduce a mandatory resources passport.[68] More specifically with regard to the introduction of a mandatory resources passport in the carpet sector, legal research has shown that several stakeholders in the carpet industry consider such a resources passport desirable.[69] Eunomia[70], the Changing Markets Foundation and Zero Waste Europe[71] also support the introduction of such a passport. However, to establish such an obligation, a legal basis is required. This will be discussed in more detail in the following sections.

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[62] For more information about this, but with regard to ships, see: Ellen MacArthur Foundation, 'Maersk Line - Using Product Passports to improve the recovery and reuse of shipping steel, at https://www.ellenmacarthurfoundation.org/case-studies/using-product-passports-to-improve-the-recovery-and-reuse-of-shipping-steel, consulted on: 25 November 2019.

[63] European Parliament, Briefing of October 2017: Chemicals and the circular economy - Dealing with substances of concern, PE 608.725, p. 7; Commission document 32 of 2018, final version, p. 3 European Parliament resolution of 13 September 2018 on the implementation of the circular economy package: options to work at the interface between chemicals, product and waste legislation (2018/2589(RSP)), recital 29. See also: *Testing Carpet for Toxics* (Report from Changing Markets Foundation), December 2018, p. 50.

[64] See, for example, the circular shoes developed by Emma Safety Footwear, which are purchased by the Municipality of Rotterdam, at: https://rotterdamcirculair.nl/nieuws/rotterdam-stapt-op-100-procent-circulaire-schoen/

[65] As may be required in certain cases under the Biocidal Products Regulation and REACH.

[66] As required by the Construction Products Regulation.

[67] Another example is the 'Material Health Statement' of carpet manufacturer Tarkett. Not only does it contain all the ingredients of a carpet, but it also contains information relating to the composition of a product, the concentration of certain ingredients and their function in the product, and finally, the health and environmental risks if one comes into contact with these ingredients, see https://www.euractiv.com/section/energy-environment/opinion/how-can-the-industry-lead-in-the-circular-economy-material-and-product-passports-are-just-the-beginning/, consulted on: 14 November 2019.

[68] T.J. de Römph, *The legal transition towards a Circular Economy - EU environmental law examined* (doctoral thesis KU Leuven & Hasselt University, pp. 217, 371-372. See also: Tapijt detoxen - Wegen naar veilig en recyclebaar tapijt in een werkelijk circulaire economie (Report Recycling Network Benelux), pp. 12, 14.

[69] M. de Munck, *Rolling out the circular carpet* (Master thesis Utrecht), 2019, p. 45.

[70] M. Hilton, 'Policy Toolkit for Carpet Circularity in EU Member States', Bristol: Eunomia Research & Consulting Ltd 2018, p. 17.

[71] *Smoke and Mirrors - Exposing the reality of carpet 'recycling' in the UK* (Changing Markets Foundation Report, November 2019), p. 13.

5. In the first place, the obligation to draw up a resources passport could be included in waste legislation, for example in Article 8 WFD.[72] This provision allows Member States, with a view to encouraging reuse, prevention, recycling and recovery of waste, to take measures to ensure that operators in the supply chain bear Extended Producer Responsibility.[73]

6. The Ecodesign Directive could also be a possibility for the implementation of the obligation to produce a resources passport for carpets[74], provided that the scope of the Ecodesign Directive is extended to non-energy-related products as well.[75] This Directive may, in an implementing rule laying down generic ecodesign requirements,[76] require the manufacturer of a product to provide information which may affect the way in which the product is handled, used or recycled by other parties.[77] The fact that a broadened Ecodesign Directive would provide a suitable legal basis is also demonstrated by the fact that in 2015 the European Parliament urged the European Commission to include a mandatory resources passport in the Ecodesign Directive.[78]

7. Apart from the above legal bases, another possibility could be to build on Environmental Product Declarations ("**EPD**") for the implementation of the resources passport.[79] An EPD ensures that information relating to the environmental impact of the product life cycle is transparent, verified and comparable. In this way, an existing instrument can be used as a basis for the resources passport, as a resources passport can be based on EPDs of carpets and can be designed based on this information.[80]

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[72] In the literature a (voluntary) resources passport is also linked to Article 6 WFD, see: Making the Circular Economy Work - Guidance for regulators on enabling innovations for the circular economy (prevention and recycling of waste), February 2019, pp. 148-154.

[73] Article 8 paragraph 1, first sentence, WFD. It should be noted that this basis does require further investigation into what exactly can be understood by 'publicly available information (...) about the extent to which the product is reusable and recyclable', as referred to in Article 8, paragraph 1, third sentence, WFD. After all, the content of the resources passport will have to be limited to this information. In addition, it should be noted that if Article 8 WFD is used as a basis, the obligation to draw up a resources passport can only be set at Member State level. As it is preferable to establish the obligation to draw up a resources passport for carpets at European level, Article 8 WFD is less appropriate in this respect.

[74] See Recital 24 European Parliament, Resolution of 9 July 2015 on resource efficiency: the transition to a circular economy, 2014/2208(INI).

[75] However, see section 1.5.

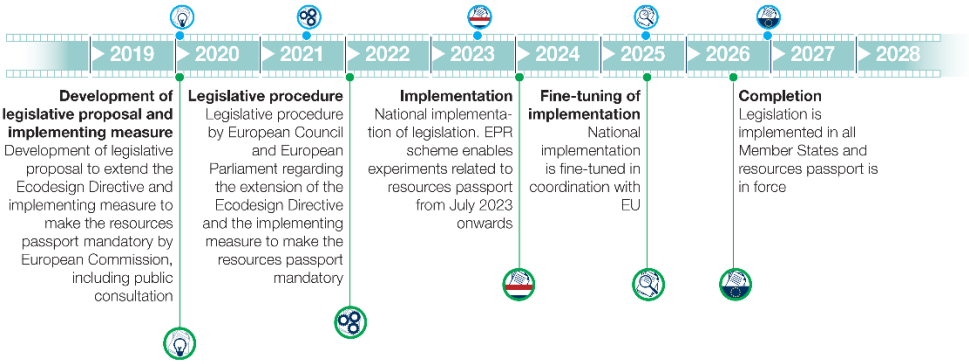
[76] Article 15(6) in conjunction with Annex I Directive 2009/125/EC amending Directive 2012/27/EU.

[77] This information may relate, for example, to the manufacturing process or disassembly of the product, see: Annex I, Part 2(a) and (d) Directive 2009/125/EC amending Directive 2012/27/EU.

[78] Recital 24 European Parliament, Resolution of 9 July 2015 on resource efficiency: the transition to a circular economy, 2014/2208(INI), which reads: *'The European Parliament urges the Commission to propose, before the end of 2016, a revision of the Ecodesign Directive based on an impact assessment, which includes the following main changes: broadening the scope of ecodesign requirements to cover all main product groups, not only energy-related products; gradually including all relevant resource-efficiency features in the mandatory requirements for product design; introducing a mandatory product passport based on these requirements; implementing self-monitoring and third-party auditing to ensure that products comply with these standards; and defining horizontal requirements on, inter alia, durability, reparability, reusability and recyclability.'*

[79] European Parliament, Briefing of October 2017: Chemicals and the circular economy - Dealing with substances of concern, PE 608.725, p. 7. With regard to EPDs, see also https://www.environdec.com/, consulted on: 6 December 2019.

[80] Although it would be preferable to tie in with existing instruments, a drawback of the SPD is that the drafting of an EPD is voluntary, which means that an EPD is not available for every type of carpet, see https://www.environdec.com/What-is-an-EPD/, consulted on: 6 December 2019. For example, an EPD currently exists for only two types of carpet products, namely the EPD for 'Carpet flooring Desso Ecobase backing, 100% recycled yarn - TARKETT' and 'Taskworkx - Shaw Contract (Shaw Europe Ltd)', see https://gryphon4.environdec.com/system/data/files/6/15544/S-P-01356%20EPD%20Carpet%20flooring.pdf and https://gryphon4.environdec.com/system/data/files/6/13824/S-P-01240%20EPD%20Taskworx.pdf. However, a resources passport for the carpet sector will nevertheless be able to be based on these two, and any future, EPDs and to be designed on the basis of the information contained in these EPDs.



5. Sustainability label

1. Regulation 2017/1369 establishing a framework for energy labelling (**"Energy Labelling Regulation"**) currently requires an energy label for 15 product groups within the EU, but not for carpets. The existing energy label enables consumers to make a quick and well-informed judgement about the energy consumption of products.[82] In addition, the energy label identifies products in an unambiguous way, making comparison of these products easier. Finally, the existing energy label is recognisable to consumers and contributes to environmentally conscious purchasing behaviour. Meanwhile, 85% of European consumers recognise the energy label and use it during the purchase process.[83]

2. The energy label not only stimulates the demand for more energy-efficient products, but also contributes to a larger supply of such products.[84] As research has shown that labelled products sell more, it can be concluded that the energy label stimulates innovation in the field of energy efficiency.[85] In addition, producers will be keen to develop new, more energy-efficient products to replace already existing, less energy-efficient variants.[86]

3. For the above reasons, it is desirable to also introduce an energy label for carpets. After all, the introduction of such a label could lead to more environmentally conscious purchasing

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[81] Developing the extension of the scope of the Ecodesign Directive together with the adoption of an implementing measure is likely to take longer. It is estimated that this will take two years, as two actions will have to be performed. Assuming that the legislative procedure will take as long as the legislative procedure relating to the EPR, it is estimated to take two years. National implementation should then not take long, possibly a year and a half. A year can then be calculated for refining the implementation.

[82] Regulation (EU) 2017/1369 of the European Parliament and of the Council of 4 July 2017 establishing a framework for energy labelling and repealing Directive 2010/30/EU *(OJEU* 2017, L 198/1), (10).

[83] 'New energy efficiency labels explained', *European Commission* 2019, ec.europa.eu.

[84] Regulation (EU) 2017/1369 of the European Parliament and of the Council of 4 July 2017 establishing a framework for energy labelling and repealing Directive 2010/30/EU *(OJEU* 2017, L 198/1), (2).

[85] 'New energy efficiency labels explained', *European Commission* 2019, ec.europa.eu.

[86] 'About the energy label and ecodesign', *European Commission* 2019, ec.europa.eu.

behaviour and an increase in sustainable innovation.[87] Existing circular carpet innovations will also be made more competitive through the associated, conducive label.[88]

4. In addition, it is recommended to extend the energy label to a sustainability label. The current design of the energy label ensures that purchasing behaviour and innovation are limited to energy efficiency. Extending the energy label to a sustainability label will ensure that purchasing behaviour and innovation will not only focus on energy efficiency, but also on circularity and other sustainability aspects, including the presence of sustainable and harmful materials in the product and the reusability of the product. For example, the sustainability label will encourage producers to phase out the toxic substances that are frequently present in carpets and that adversely affect the sustainability classification. The introduction of a sustainability label (for carpets) is supported by Eunomia[89], the Changing Markets Foundation and Zero Waste Europe[90].

5. However, the above extension would ensure that the existing energy label is modified in such a way that it would be a replacement rather than an extension. In view of the possible scope of the aspects that will be taken into account with regard to a sustainability label, it is therefore recommended to introduce a new regulation for the creation of the sustainability label in addition to the already existing Energy Labelling Regulation: a Sustainability Label Regulation.[91]

6. The existing energy label is characterised by simplicity, conciseness and recognisability. This design has borne fruit as the majority of European consumers trust, recognise and use the label.[92] It is therefore advisable to draw inspiration for the new sustainability label from the existing energy label and adopt the characteristics of the existing energy label. For example, the scale of the existing energy label – Class A (green) is the most efficient, Class G (red) the least – should continue to apply. In our opinion, a product should be classified according to several indicators, such as life span, reusability, choice of materials, consumption of raw materials and maintenance.[93] For inspiration, the circularity indicators of the European Commission[94] and the Material Circularity Indicator of the Ellen MacArthur Foundation[95] can be used. The information contained in the resources passport already mentioned, which contains information about the carpet in question, may also be relevant to this classification.[96] Finally, the introduction of a sustainability label could contribute to controlling the number of

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[87] F. Oosterhuis, F. Rubik & G. Scholl, *Product Policy in Europe: New Environmental Perspectives*, Dordrecht: Springer Netherlands 1996, p. 148.

[88] Regulation (EU) 2017/1369 of the European Parliament and of the Council of 4 July 2017 establishing a framework for energy labelling and repealing Directive 2010/30/EU *(OJEU* 2017, L 198/1), (8).

[89] M. Hilton, 'Policy Toolkit for Carpet Circularity in EU Member States', Bristol: Eunomia Research & Consulting Ltd 2018, p. 17.

[90] *Smoke and Mirrors - Exposing the reality of carpet 'recycling' in the UK* (Changing Markets Foundation Report, November 2019), p. 13.

[91] Regulation (EU) 2017/1369 of the European Parliament and of the Council of 4 July 2017 establishing a framework for energy labelling and repealing Directive 2010/30/EU *(OJEU* 2017, L 198/1), (6).

[92] 'EU Ecolabel', *European Environmental Bureau* 2019, eeb.org.

[93] For more examples of criteria, see: M.R. Van den Berg & C.A. Bakker*, A Product design framework for a circular economy* (Delft report), 2017, repository.tudelft.nl.

[94] 'Which indicators are used to monitor the progress towards a circular economy?', *Eurostat* 2019, ec.europa.eu.

[95] *Circularity Indicators: An Approach to Measuring Circularity - Methodology* (Report by Ellen MacArthur Foundation, Granta Design and LIFE, May 2015).

[96] For more details about the resources passport, see section 4 of this position paper.

hazardous substances in carpets[97] and could be integrated as a standard in (green) public procurement policy.[98]

7. Examples can also be taken from existing initiatives when giving substance to the sustainability label. For example, in 2009 the European Commission adopted a number of requirements for eco-labelling of carpets.[99] These requirements focused on the use of materials, the production and addition of components (such as flame retardants and plasticisers), associated emissions and the provision of information to consumers and other stakeholders.[100] However, these requirements and the associated EU Ecolabel are no longer applied to carpets. The international GUT label, managed by the European Carpet and Rug Association[101], is still in force and guarantees that a carpet does not contain any harmful substances, such as certain dyes, heavy metals, flame retardants and active biocides.[102] However, the label restricts only 22% of the potential substances of very high concern discovered in carpets.[103]

8. The introduction of the Sustainability Label Regulation and the interpretation of the sustainability label itself can be inspired by various sources. On the one hand, the design of the existing energy label should be used, as that design has been successful so far. On the other hand, for the circularity indicators, one can look at the European Commission's requirements for carpets from 2009, the current GUT international label and the general circularity indicators formulated by the Ellen MacArthur Foundation and the European Commission.

9. It is also important that the introduction of a sustainability label be accompanied by an information campaign. After all, new eco-labels, such as a sustainability label, accompanied by an awareness-raising campaign, will be more quickly recognised and used by consumers.[104] At the same time, this could also lead to higher sales of products with the new sustainability label. As an example, several campaigns have been conducted in Denmark for the Nordic Swan label and the EU Ecolabel.[105] These campaigns ensured that more consumers recognised the label and that sales of products with these labels increased by 600%.[106] This in turn may make it interesting for producers to introduce a new sustainability

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97 *Tapijt detoxen - Wegen naar veilig en recyclebaar tapijt in een werkelijk circulaire economie* (Rapport Recycling Netwerk Benelux), p. 13.

98 Idem.

99 'EU eco-label criteria agreed for carpets', *ChemicalWatch* 2009, chemicalwatch.com.

100 Commission Decision of 30 November 2009 establishing the ecological criteria for the award of the Community Ecolabel for textile floor coverings (2009/967/EC) *(OJEU* 2009 L 332/1), Annex.

101 'Tapijten en vloerbekleding: GUT', *LabelInfo* 2019, labelinfo.be.

102 'GUT Producttest – Criteria en grenswaarden', *PRODIS* 2009, pro-dis.info.

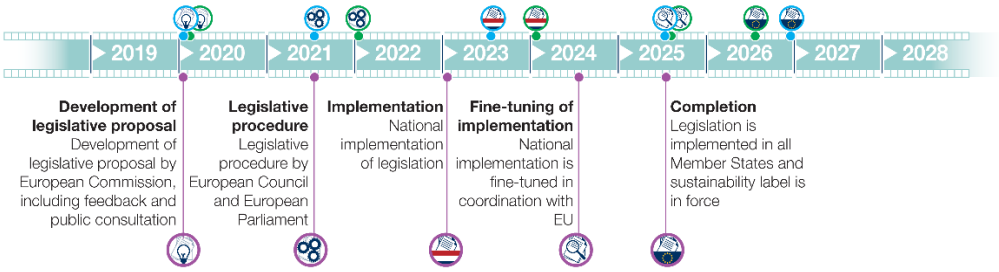
103 J. Onyshko & R. Hewlett, *Toxics in Carpets in the European Union* (Report of March 2018 by Anthesis Consulting Group for Changing Markets), Oxford: 2018, p. 5.

104 F. Rubik & P. Frankl, *The Future of Eco-labelling: Making Environmental Product Information Systems Effective*, Abingdon-on-Thames: Routledge 2005, p. 315.

105 *Successful Marketing of the Swan Label - A project aimed at further developing the marketing of eco-labels in Nordic societies* (2007 Report of the Nordic Council of Ministers), Copenhagen: 2007, p. 50.

106 *Marketing-Guide for EU Ecolabel companies - How to make the EU flower visible in your marketing* (Guide of 2007 produced by Energon/G&L on behalf of the European Commission), 2007, p. 4.

label. In short, for the above reasons, it is recommended to combine the introduction of a sustainability label with an information campaign.[107]



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6. Green public procurement

1. One way in which the transition to a circular carpet sector can be indirectly influenced is through public procurement. Indeed, public procurement accounts for 14% of the EU gross national product,[109] making this instrument an important way to stimulate the market.[110] Particular attention should be paid to green public procurement. The process of green public procurement can be defined as: "*...a process whereby public authorities seek to procure goods, services and works which, throughout their life-cycle, have a less damaging environmental impact than comparable goods, services and works having the same primary function.*"[111]

2. The "circular public procurement" is a variant of green public procurement. Circular public procurement can be defined as the process by which public authorities purchase works, goods or services that seek to contribute to closed energy and material loops within supply chains, whilst minimizing, and in the best case avoiding, negative environmental impacts and waste creation across their whole life-cycle.[112] In other words, circular standards and requirements

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[107] Oosterhuis, Rubik and Scholl also advocate eco-labels combined with information campaigns. Consultancy firm Ernst & Young is also an advocate of information campaigns. See: F. Oosterhuis, F. Rubik & G. Scholl, *Product Policy in Europe: New Environmental Perspectives*, Dordrecht: Springer Netherlands 1996, p. 148; *Exploration of the Role of Extended Producer Responsibility for the circular economy in the Netherlands* (EY Report of June 2016 for the Ministry of Infrastructure and the Environment), p. 31.

[108] The bill will probably be able to be developed in the same amount of time as the EPR bill, i.e. in a year and a half. Indeed, the bill for a new sustainability label will be able to build on existing European regulations. The legislative procedure should also be able to take place in about a year and a half, as should national implementation. As regards the fine-tuning of national implementation, it is envisaged that this could take place within one year.

[109] C. Neubauer et al., Green Public Procurement and the EU Action Plan for the Circular Economy, June 2017, p. 15; Buying Green! A handbook on green public procurement (Handbook of the European Commission), 2016, p. 4.

[110] C. Neubauer et al., Green Public Procurement and the EU Action Plan for the Circular Economy, June 2017, p. 15. See also: Ellen MacArthur Foundation, Growth Within: A circular economy vision for a competitive Europe, June 2015, p. 41; Ellen MacArthur Foundation, Delivering the circular economy - A toolkit for policymakers, June 2015, p. 14; Ellen MacArthur Foundation, Towards the circular economy - Economic and business rationale for an accelerated transition, January 2012; Buying Green! A handbook on green public procurement (Handbook of the European Commission), 2016, p. 4; European Commission, Closing the loop - An EU action plan for the Circular Economy, COM (2015) 614 final, p. 15.

[111] European Commission, *Public procurement for a better environment*, COM (2008) 400, p. 6.

[112] Public procurement for a circular economy - Good practice and guidance, European Commission Brochure, 2017, p. 5.

are incorporated into public procurement.[113] Making public procurement circular can make an important contribution to stimulating the transition to a circular economy.[114] This will make it possible to boost demand for circular products, since the entire public sector will be obliged to make a circular choice in the event of a tender,[115] but production and consumption trends may also be influenced indirectly.[116]

3. One of the ways in which the circular economy can be stimulated through public procurement is by including circular aspects in green procurement criteria.[117] These are criteria laid down at European level by product or by sector, which are applied by Member States when a product or service is put out to tender.[118] Such criteria can be used to set requirements for the product to be put out to tender. By integrating circular aspects into these criteria, requirements can be set during the tender process, for example with regard to the recyclability of a certain product.[119] However, such specific EU procurement criteria do not currently exist for carpets.[120]

4. It is recommended that green, circular procurement criteria for carpets be drawn up at European level. In the first place, such tendering criteria could include requirements that will encourage the recyclability of carpets, and thus the transition to a circular carpet sector. This could include requirements relating to the method of installation and the fact that carpet tiles should be the starting point, as they are easier to replace.[121] In addition, it is recommended that the criteria include a reference to the possible Ecolabel or (future) sustainability label[122] for carpets, so that a requirement can be set in the call for tenders that the carpet has at least a certain level of Ecolabel.[123]

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[113] Ellen MacArthur Foundation, Delivering the circular economy - A toolkit for policymakers, June 2015, p. 70; C. Neubauer et al., Green Public Procurement and the EU Action Plan for the Circular Economy, June 2017, p. 20. See also: Commission Staff Working Document, Report on the implementation of the Circular Economy Action Plan, SWD (2019) 90 final, p. 6.

[114] European Commission, EU Action Plan, COM (2015) 614 final, pp. 8-9.

[115] M. Hilton, 'Policy Toolkit for Carpet Circularity in EU Member States', Bristol: Eunomia Research & Consulting Ltd 2018, p. 21.

[116] European Commission, Public Procurement for a Better Environment, COM (2008) 400, p. 3; C. Neubauer et al., Green Public Procurement and the EU Action Plan for the Circular Economy, June 2017, pp. 16, 20.

[117] See also: C. Backes, Law for a circular economy (inaugural lecture UU), p. 60 https://europadecentraal.nl/onderwerp/aanbestedingen/duurzaam-aanbesteden/, consulted on 9 December 2019.

[118] C. Neubauer et al., Green Public Procurement and the EU Action Plan for the Circular Economy, June 2017, pp. 8-9. See also: Green Public Procurement and the EU Action Plan for the Circular Economy (Study for the ENVI Committee), 2017, p. 8.

[119] European Commission, Circular Economy Action Plan, COM (2015) 614 final, p. 9; C. Neubauer et al., Green Public Procurement and the EU Action Plan for the Circular Economy, June 2017, pp. 28, 32-34.

[120] GPP criteria do exist for textile products. However, wall to wall floor covering falls outside the scope of these criteria. See: N. Dodd & M. Gama Caldas, Revision of the EU Green Public Procurement (GPP) Criteria for Textile Products and Services, JRC Sciency for Policy Report, June 2017, p. 6. There are also GPP criteria for furniture. However, floor covering falls outside the scope of these criteria. See: S. Donatello et al., Revision of the EU Green Public Procurement (GPP) criteria for Furniture, JRC Science for Policy Report, August 2017, p. 15.

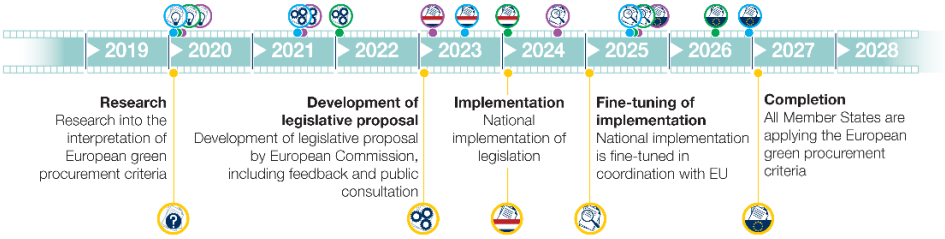
[121] See also M. Hilton, 'Policy Toolkit for Carpet Circularity in EU Member States', Bristol: Eunomia Research & Consulting Ltd 2018, pp. 21-22.

[122] For more details about the sustainability label, see section 5 of this position paper.

[123] In San Francisco, such requirements have already entered into force when carpets were put out to tender, see above: https://www.c2ccertified.org/news/article/new-san-francisco-regulation-requires-cradle-to-cradle-certified-silver-or, consulted on: 9 December 2019. M. Hilton, 'Policy Toolkit for Carpet Circularity in EU Member States', Bristol: Eunomia Research & Consulting Ltd 2018, p. 21-22; Smoke and Mirrors - Exposing the reality of carpet 'recycling' in the UK, Report by Changing Markets Foundation, November 2019, p. 13. On the relationship between procurement and Ecolabels, see also: Commission Staff Working Document, Report on the implementation of the Circular Economy Action Plan, SWD (2019) 90 final, p. 5.

5. Secondly, the criteria should be drawn up at European level and not at national level, as this would prevent the internal market from being distorted by incompatible criteria at Member State level and limit competition at EU level. In addition, EU-wide criteria can reduce the administrative burden on businesses and public authorities.[124] It is also important to note that research has shown that 21 out of 28 Member States use European green procurement criteria, either by directly applying them or by using them to develop national criteria. This shows that European green procurement criteria have a significant impact on national procurement criteria.[125]

6. In short, green or circular public procurement could play an important role in making the carpet sector circular. Establishing European green, circular procurement criteria for carpets, which can incorporate circular aspects, will in particular encourage and facilitate the use of public procurement for carpets.[126]



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7. Conclusion

In summary, based on a case study of EME concerning the carpet industry, this position paper makes various recommendations to the European Commission. It is argued that the implementation of these recommendations is necessary to remove several barriers to the development of a circular carpet industry. Today's carpet industry is not very circular: only 1-3% of European carpet waste is recycled. Circularity in the Dutch carpet industry is limited by various product-related and market-related barriers, which extend from the design to the reuse phase. The recommendations of this position paper aim to contribute to the removal of the described barriers and to achieve more circularity in the (Dutch) carpet industry. The most important aspects of the recommendations made are summarised below:

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[124] European Commission, Public procurement for a better environment, COM (2008) 400, p. 4. See also: Green Paper on the modernisation of EU public procurement policy - Towards a more efficient European Procurement Market, COM (2011) 15 final, p. 47.

[125] C. Neubauer et al., Green Public Procurement and the EU Action Plan for the Circular Economy, June 2017, p. 31.

[126] Encouraging green, circular public procurement for carpets is supported by several parties, such as Eunomia, the Changing Markets Foundation and Zero Waste Europe. See: M. Hilton, 'Policy Toolkit for Carpet Circularity in EU Member States', Bristol: Eunomia Research & Consulting Ltd 2018, p. 17; *Smoke and Mirrors - Exposing the reality of carpet 'recycling' in the UK* (Changing Markets Foundation Report, November 2019), p. 13.

[127] The research into (the interpretation of) European green procurement criteria can be realised in the short term, i.e. in less than four years, see: C. Neubauer et al., Green Public Procurement and the EU Action Plan for the Circular Economy, June 2017, pp. 88-89. It may be possible to develop the bill at the same time and it will not take much extra time after the above-mentioned research, possibly one year. National implementation will then also be able to take place quickly, i.e. within the same year. For the refinement of the implementation it is estimated that a longer period of time will be needed, possibly around two years.

- The most important recommendation is to introduce a (mandatory) EPR scheme. There are several arguments in favour of an EPR scheme: it will bring about a fairer distribution of costs and responsibilities and lead to a more ecological design of carpets. Carpets also appear to be a suitable material flow for an EPR scheme and the introduction of such a scheme is supported by various organisations and carpet producers. Finally, the introduction of (mandatory) EPR schemes in other countries has been successful.

- A resources passport will lead to more transparency by providing stakeholders with the information they need for reuse. The passport can also be used to support other initiatives, such as European green procurement and sustainability labels, and to implement other measures, such as certificates and safety data sheets.

- The introduction of a sustainability label will lead to products being assessed on the basis of various sustainability indicators. This will stimulate circular innovation and consumption, as producers and consumers will, among other things, assess the product on its circularity from now on. A parallel information campaign will contribute to the success of a sustainability label.

- Public procurement is an important component of national consumption, allowing green (and specifically circular) public procurement to make an important contribution to sustainable consumption and innovation. Therefore, making public procurement circular is an important stimulus for the transition to a circular carpet industry.