

Extended producer responsibility as an environmental policy tool



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Recommended key principles of extended producer responsibility

Extended producer responsibility has been a key environmental policy tool in Norway since the mid-1990s. An important objective at the time was to promote environmentally friendly product design by imposing a responsibility on producers for their products when they are discarded as waste. In addition, extended producer responsibility aimed to ensure nationwide waste collection and to reduce the extent of littering, contribute to increased recycling of materials and to ensure that any handling of hazardous waste complied with regulations.

This memorandum is a contribution to further discussions around extended producer responsibility as an environmental policy tool in Norway, the EU and the OECD. The memorandum emphasises the main considerations and assessments that schemes for extended producer responsibility should be built on. Business organisations now have almost 30 years of experience with producer responsibility schemes. The following recommendations have been given regarding extended producer responsibility:

Recommendations for when extended producer responsibility may be a suitable policy tool:

- A socio-economic assessment of extended producer responsibility as an environmental policy tool compared to similar/alternative tools should be carried out. In particular, it is important to assess extended producer responsibility compared to environmental policy goals for a more circular economy, ensure future access to raw materials, and the contribution to innovation and the implementation of environmental initiatives in the business community.
- It should be assessed whether existing producer responsibility schemes that are not imposed through EU legislation should be phased out if environmental goals can be achieved more effectively through other tools. There is no need for new producer responsibility schemes unless they are imposed through EU rules.
- Extended producer responsibility can act as a stabilising market buffer by providing financial subsidies for recycling, particularly during periods where raw materials markets are weak.
 - The costs of financial subsidies must always be assessed against the social utility value. Extended producer responsibility schemes can hardly act as a driver of European raw materials markets.

Recommendations for key principles of extended producer responsibility where it is a suitable tool:

- Costs that will be covered by approved producer responsibility organisations must not exceed what is necessary to carry out the regulatory obligations in a cost-effective manner.
- Producers and importers that are subject to extended producer responsibility requirements must have a genuine opportunity to influence the financial contributions that need to be made to producer responsibility organisations. Measures that are financed through contributions must correlate with the extended producer responsibility and result in a genuine and measurable environmental impact beyond what will or could be achieved through other policy tools.
- The concept of “necessary costs” must be clarified by authorities at the EU level. In order to avoid a situation where costs have to be calculated and documented on a case-by-case basis, producer responsibility organisations should have the opportunity to incorporate waste management costs that need to be covered into a single fee, which could be offered to waste management companies that perform tasks on behalf of a producer responsibility organisation (private and municipal).
- Extended producer responsibility should not fully cover the costs of waste management, neither for households nor businesses. The existing financial incentives for the waste producer to reduce waste amounts and to sort out waste for separate collection and recycling must be maintained.

- Environmental authorities must strengthen supervision and monitoring of producers and importers that are obliged to participate in producer responsibility organisations. Supervision by environmental authorities must include smaller businesses and e-commerce.
- The Norwegian Environment Agency must strengthen follow-up of approved producer responsibility organisations to ensure that there are equal competitive conditions and a level playing field. The Agency can withdraw a producer responsibility organisation's approval if the organisation does not comply with regulatory requirements. In certain circumstances where supervision uncovers repeated or extensive breaches of regulatory requirements, the Agency must assess responding by withdrawing the producer responsibility organisation's approval.
- As a general rule, producer responsibility organisations should not be market actors and should be cautious in offering operational services related to, for example, waste management, consultancy and advisory services, etc. This is particularly important if there is a chance that they could end up in competition with their own subcontractors. Producer responsibility organisations' procurement of services must be based on non-discriminatory competitive tendering processes.

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1. Background and general introduction to the issue

Extended producer responsibility has been a key environmental policy tool in Norway since the mid-1990s. An important objective at the time was to promote environmentally friendly product design by imposing a responsibility on producers for their products when they are discarded as waste. In addition, extended producer responsibility aimed to ensure nationwide waste collection and to reduce the extent of littering, contribute to increased recycling of materials and to ensure that any handling of hazardous waste complied with regulations.

Extended producer responsibility has been introduced for various products in a number of countries. It is also a key tool in many EU waste directives, the Directive on single-use plastics and in the OECD's efforts to promote cooperation and exchanges of experience regarding waste management legislation. The environmental policy targets related to this tool seem to be fairly similar, regardless of the country and product group. At the same time, the product groups covered by requirements for extended producer responsibility vary. For example, there are differences related to product life cycles, where waste primarily occurs and proximity to producers. Nevertheless, there are some key principles that should form the basis of these schemes. The Norwegian Environment Agency has also proposed that a basic model be introduced for all extended producer responsibility schemes.¹

This document proposes some key principles that could form the basis for these schemes.

Extended producer responsibility is normally funded through financial contributions, the cost of which is then passed on to the consumer when purchasing a product. Because consumers bear the costs, there should be assurances that extended producer responsibility is the tool that provides the most effective achievement of the environmental policy goals that have been set.

Increased focus on sustainability in businesses, expectations and preferences from users, requirements from Norwegian and European regulations, voluntary and mandatory reporting schemes, etc., are elements that contribute to strengthening work on environmentally friendly product design. Whether established producer responsibility schemes will help to promote environmentally friendly product design when viewed in isolation is less certain. It has not been documented that current producer responsibility schemes have had a significant impact on promoting environmentally friendly product design.

Many schemes in use today were set up when recycling markets were less mature. For many fractions, the recycling markets have changed considerably in recent decades. In addition, access to collection and processing solutions for various waste fractions has got significantly better. New tools have also been introduced that contribute to the same environmental goals as extended producer responsibility- It is expected that more tools will appear as a result of the EU's focus on the circular economy.

The schemes for extended producer responsibility may also be a source of competitive dilemmas.

This memorandum is a contribution to further discussions around extended producer responsibility as an environmental policy tool in Norway, the EU and the OECD. This memorandum aims to shed light on the following issues:

- What does a typical extended producer responsibility scheme as an environmental policy tool look like?

¹ The Norwegian Environment Agency, 2022: *Gjennomgang av utvidet produsentansvar i Norge* [Review of extended producer responsibility in Norway]. Report part 2 of 3. <https://www.miljodirektoratet.no/aktuelt/nyheter/2022/november-2022/produsenter-far-storre-ansvar-for-produktene-som-avfall/>

- The advantages and challenges of extended producer responsibility as a policy tool
- The driving force and tools that will have the greatest impact on environmental goals related to, for example, environmentally friendly product design, waste collection, litter prevention and promoting material recycling
- When is extended producer responsibility a suitable tool to achieve environmental policy goals?
- The key principles of extended producer responsibility, where this is regarded as a suitable policy tool

2. Recommendations: Key principles of producer responsibility schemes

Summary

- Below, the recommendations for when extended producer responsibility may be a suitable tool are presented, as are what the key principles of these schemes should be. In general, extended producer responsibility must contribute to achieving environmental policy goals in a cost-effective manner. The schemes must help to achieve the desired environmental measures that otherwise would not be implemented.
- In cases where extended producer responsibility is regarded as a suitable tool, recommendations are provided to ensure that the schemes are cost-effective, to provide incentives for waste reduction and separation at source, to avoid “free-riders”, to ensure equal competitive terms and to avoid commercial competition between producer responsibility organisations and other market actors.

2.1. When extended producer responsibility may be a suitable tool

Extended producer responsibility schemes should contribute to achieving environmental policy goals in a cost-effective manner. Extended producer responsibility should ensure funding for the collection and processing of waste that would otherwise not have been collected, or which was not previously processed in an environmentally sound manner. Extended producer responsibility can also contribute to creating a market where there previously was no market, or influence and change existing markets in the desired direction. Extended producer responsibility is, however, a complicated and intrusive tool. If other tools can achieve goals more effectively, extended producer responsibility should not be selected as a policy tool.

For example, extended producer responsibility will have a negligible effect on increasing recycling rates in cases where there is already a well-functioning recycling market. Questions can also be raised about whether extended producer responsibility is a suitable tool for creating new demand for recycled raw materials in a European or international market. However, there are circumstances where extended producer responsibility can act as a stabilising force and sustain financial incentives for various kinds of waste collection and material recycling, for example during periods of weak raw materials markets.

Extended producer responsibility is funded through financial contributions, which are then passed on to the consumer when purchasing a product. Because consumers bear the costs, there should be assurance that extended producer responsibility is the tool that leads to the most cost-effective achievement of goals. This requires that extended producer responsibility as an environmental policy tool be continuously assessed against similar or alternative tools.

Recommendation 1:

- A socio-economic assessment of extended producer responsibility as an environmental policy tool compared to similar/alternative tools should be carried out. In particular, it is important to assess extended producer responsibility compared to environmental policy goals for a more circular economy, ensure future access to raw materials, and the contribution to innovation and the implementation of environmental initiatives in the business community.

Recommendation 2:

- It should be assessed whether existing producer responsibility schemes that are not imposed through EU legislation should be phased out if environmental goals can be achieved more effectively through other tools. There is no need for new producer responsibility schemes unless they are imposed through EU rules.

Recommendation 3:

- Extended producer responsibility can act as a stabilising market buffer by providing financial subsidies for recycling, particularly during periods where raw materials markets are weak.
 - The costs of financial subsidies must always be assessed against the social utility value. Extended producer responsibility schemes can hardly act as a driver of European raw materials markets.

2.2. The key principles of extended producer responsibility where it is a suitable tool

In Norway, there are currently seven statutory extended producer responsibility schemes. The schemes will help to achieve the environmental policy goals that have been set in conjunction with other environmental policy tools. The EU's Directive on single-use plastics requires that countries introduce extended producer responsibility for a number of product groups. The European Commission will also assess an extended producer responsibility requirement for certain types of textiles in accordance with the revisions to the Waste Framework Directive. Below, some of the proposed key principles for extended producer responsibility for cases where it is suitable tool are laid out.

Ensuring that the schemes are cost-effective

Extended producer responsibility should cover costs related to waste management where products covered by such schemes are discarded as waste. A debated topic for decades regarding the use of producer responsibility as a tool in environmental policy has been which types of waste management costs should be covered by producer responsibility organisations and what extent relevant costs should be covered.

This memorandum does not go into detail on the issue of which waste management costs it would make sense for extended producer responsibility to cover. The waste management costs covered by extended producer responsibility will depend on what sort of product needs to be dealt with. A key principle may, however, be that producers and imports should not be obliged to cover greater costs than necessary to perform the relevant waste management operations in a cost-effective manner.

In addition, a key principle must be that producers and importers have a genuine opportunity to influence the fees paid to producer responsibility organisations and that the costs of the schemes actually provide a genuine and measurable environmental impact beyond what is or can be achieved by using other tools.

This requires that caution be exercised by including obligations to cover costs for cleaning up litter in extended producer responsibility schemes. Waste management costs that should be covered through an extended producer responsibility must not exceed the amount necessary to carry out the obligations in a cost-effective manner. Municipalities and other actors that need to have some of their costs covered must be able to document this in a transparent manner and share the calculation basis.

Recommendation 4:

- Costs that will be covered by approved producer responsibility organisations must not exceed what is necessary to carry out the regulatory obligations in a cost-effective manner.

Recommendation 5:

- Producers and importers that are subject to extended producer responsibility requirements must have a genuine opportunity to influence the financial contributions that need to be made to producer responsibility organisations. Measures that are financed through contributions must correlate with the extended producer responsibility and result in a genuine and measurable environmental impact beyond what will or could be achieved through other policy tools.

Recommendation 6:

- The concept of “necessary costs” must be clarified by authorities at the EU level. In order to avoid a situation where costs have to be calculated and documented on a case-by-case basis, producer responsibility organisations should have the opportunity to incorporate waste management costs that need to be covered into a single fee, which could be offered to waste management companies that perform tasks on behalf of a producer responsibility organisation (private and municipal).

Ensuring incentives for waste producers to reduce waste and to sort waste at source

The provisions of the Norwegian Pollution Control Act on collecting commercial waste provide waste producers an incentive to reduce the amount of waste and sort out waste for separate collection and recycling. By differentiating municipal waste collection fees, municipalities can also promote waste reduction and good source separation of household waste. If extended producer responsibility covers a disproportionately large proportion of waste management costs, businesses' financial incentives for waste reduction and recycling of commercial waste will be reduced. The same applies to households. It is important that waste producers should still cover some waste management costs in order to maintain the financial incentives for waste reduction, source separation and recycling.

Recommendation 7:

- Extended producer responsibility should not fully cover the costs of waste management, neither for households nor businesses. The existing financial incentives for the waste producer to reduce waste amounts and to sort out waste for separate collection and recycling must be maintained.

Avoiding free-riders

The Norwegian Environment Agency's evaluations show that the proportion of producers and importers that do not participate in producer responsibility schemes, so called “free-riders”, is too high. This weakens the legitimacy of the schemes. The most important measures for avoiding “free-riders” is increased supervision to ensure that producers and importers covered by extended producer responsibility fulfil the requirements to be a member of an approved producer responsibility organisation. This applies in particular to e-commerce as it is more difficult to identify these distributors.

Recommendation 8:

- Environmental authorities must strengthen supervision and monitoring of producers and importers that are obliged to participate in producer responsibility organisations. Supervision by environmental authorities must include smaller businesses and e-commerce.

Ensuring competition on equal terms between producer responsibility organisations

Some extended producer responsibility schemes involve competition between producer responsibility organisations. In cases where there is competition between producer responsibility organisations, regulatory requirements must ensure that the competition between producer responsibility organisations occurs on equal terms. Producer responsibility organisations that are not likely to fulfil fixed regulatory requirements should also not be approved. At the same time, the rules must not lead to insurmountable roadblocks to the establishment of such organisations.

Recommendation 9:

- The Norwegian Environment Agency must strengthen follow-up of approved producer responsibility organisations to ensure that there are equal competitive conditions and a level playing field. The Agency can withdraw a producer responsibility organisation's approval if the organisation does not comply with regulatory requirements. In certain circumstances where supervision uncovers repeated or extensive breaches of regulatory requirements, the Agency must assess responding by withdrawing the producer responsibility organisation's approval.

Avoiding commercial competition between producer responsibility organisations and other market actors

The OECD, competition authorities and the Norwegian Environment Agency have carried out assessments of competitive issues related to extended producer responsibility. These assessments are discussed in more detail in chapter 4.5. If producer responsibility organisations enter into commercial waste management markets, cases may arise where producer responsibility organisations end up in commercial competition with their recycling subcontractors. If a producer responsibility organisation uses capital from producer and importer contributions to invest in infrastructure or capacity that is used to offer services to a market, this may also trigger competitive issues. Therefore, there are good grounds for producer responsibility organisations to purchase all operational services from the market and be cautious in offering operational services.

Producer responsibility organisations administer significant resources and have significant purchasing power. Producer responsibility organisations' procurement of services should be based on transparent and competitive tendering processes and criteria.

Recommendation 10:

- As a general rule, producer responsibility organisations should not be market actors and should be cautious in offering operational services related to, for example, waste management, consultancy and advisory services, etc. This is particularly important if there is a chance that they could end up in competition with their own subcontractors. Producer responsibility organisations' procurement of services must be based on non-discriminatory competitive tendering processes.

3. How does extended producer responsibility work in practice?

Extended producer responsibility means that the business community (producers and importers) takes responsibility for products for their entire life cycle, including when products are discarded as waste. In practice, extended producer responsibility means that the costs of waste management are included in production costs.

Extended producer responsibility is ensured through producers and importers of a given product group being members of a producer responsibility organisation and through paying a financial contribution to the producer responsibility organisation.

Producer responsibility organisations use the contributions to fund waste management for products when they are discarded in order to achieve environmental goals for waste collection and recycling.

The financial contributions paid by producers and importers² that put products on Norwegian markets will be reflected in the retail price of the product. In theory, consumers will also bear all or part of these costs when purchasing a product, depending on the situation in the relevant market.

Figure 1 illustrates how extended producer responsibility could work for a given product group.

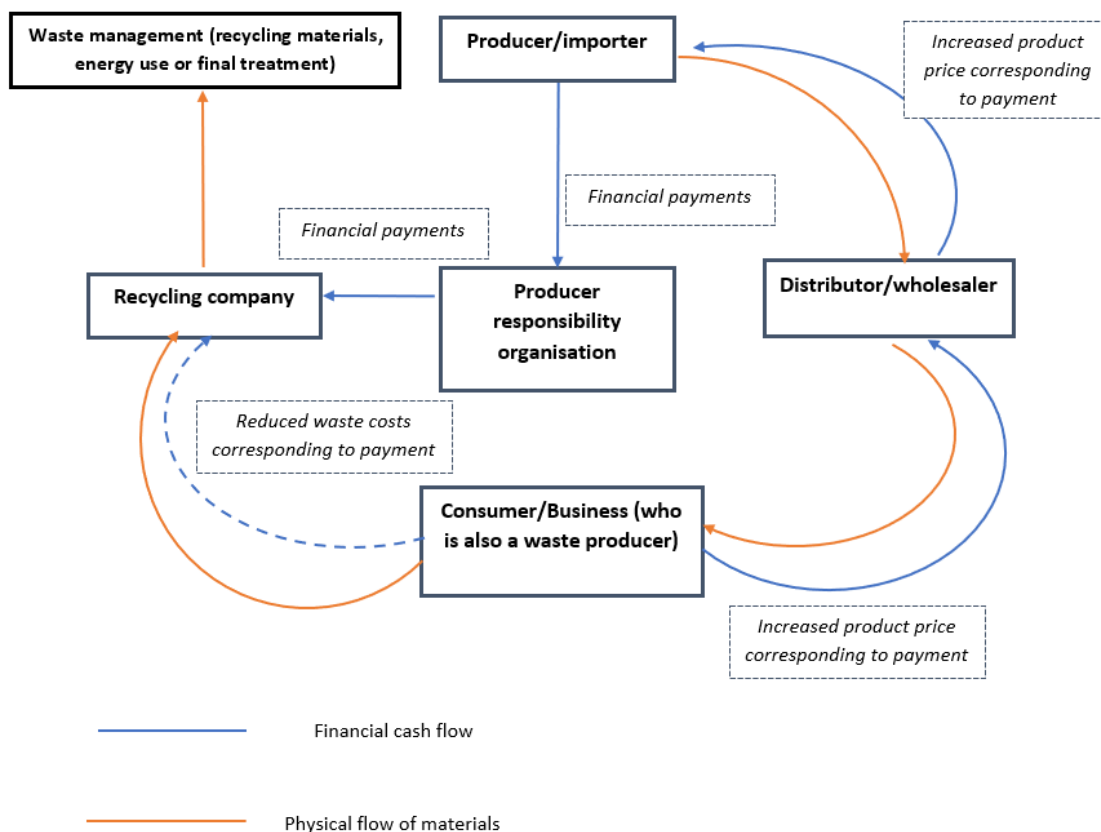


Figure 1: Principal outline of extended producer responsibility

² In accordance with Norwegian packaging returns schemes, users of packaging, i.e. those that produce packaged products for Norwegian markets (so called packers/fillers), can also be contributors, cf. section 7-3, letter (g) of the Norwegian Waste Regulations

As shown in figure 1, extended producer responsibility shows a redistribution of costs throughout a product's life cycle. In practice, consumers pay an increased product price when purchasing and correspondingly lower waste management costs when the product is discarded at the end of its life cycle. The total life cycle cost of the product may in theory be the same. However, this will be affected by whether an extended producer responsibility scheme works as intended, and by the model for waste collection, the choice of technology for waste management, competition in recycling markets and a number of other conditions.

It will not necessarily be a one-to-one relationship between the financial contributions to a producer responsibility organisation and the increases in product prices as increased costs will put pressure on margins for businesses that are in competition with others.

4. Development of extended producer responsibility as a tool

Summary of chapter 4:

- One important purpose of extended producer responsibility has been to provide incentives for environmentally friendly product design, waste reduction and design for recycling by integrating waste costs into the producer's costs. In addition, the tool has been aimed at ensuring good collection schemes, increased recycling rates and sound handling of waste.
- Strong, nationwide waste collection also contributes to reducing the amount of littering.
- It seems that there is little evidence to say that extended producer responsibility has impacted product design and production to a noticeable degree. On the other hand, extended producer responsibility schemes seem to impact waste sorting and management.
- Extended producer responsibility may lead to competitive issues and dilemmas, both in terms of competition between approved producer responsibility organisations and competition between producer responsibility organisations and other actors. Competitive challenges related to extended producer responsibility are described in OECD guidelines and guidance materials.
- European waste legislation currently sets requirements on introducing extended producer responsibility for a range of product groups, such as, for example, packaging, single-use plastic products, plastic fishing and marine products, electronics, vehicles and batteries.

4.1. Historic and previous studies

Producers' waste management responsibilities can be resolved both financially (i.e. the producer finances a proportion of the waste management costs) and operationally (i.e. the producer itself deals with aspects of waste management). The responsibility can be taken care of by the individual producer (individual producer responsibility) or through membership of a suitable producer responsibility organisation (collective producer responsibility).

The tool was introduced by the researchers Thomas Lindhqvist and Karl Lindgren of Lund University, in a report to the Swedish Ministry of the Environment in 1990.³ Various definitions of extended producer responsibility have been put forward. One definition was proposed by Lindhqvist and Lindgren in a report from 1991, and was then redefined in Lindhqvist's doctoral thesis in 2000:

- *Utvidet produsentansvar er et politisk prinsipp som brukes til å oppnå miljøforbedringer over produktens levetid, ved å utvide ansvaret til produsenter til ulike faser av produktens livssyklus, og særlig til innsamling, resirkulering og sluttbehandling av produktene når de kasseres som avfall. Utvidet produsentansvar implementeres gjennom administrative, økonomiske og informative virkemidler. Sammensetningen av disse virkemidlene og forpliktelsene bestemmer utformingen av en ordning for utvidet produsentansvar.⁴*

³ Lindhqvist, Thomas, 2000: *Extended Producer Responsibility in Cleaner Production*. PhD thesis at Lund University. Lindhqvist's PhD thesis refers to the original report on producer responsibility, i.e.: Lindhqvist, Thomas, & Lidgren, Karl, 1990: *Modeller för Förlängt producentansvar* [Models for Extended Producer Responsibility], which was published by the Swedish Ministry of the Environment under the title of *Från vaggan till graven – sex studier av varors miljöpåverkan* [From the Cradle to the Grave – six studies of the environmental impacts of products].

⁴ "Extended Producer Responsibility (EPR) is a policy principle to promote total life cycle environmental improvements of product systems by extending the responsibilities of the manufacturer of the product to various parts of the entire life cycle of the product, and especially to the take-back, recycling and final disposal of the product. Extended Producer Responsibility (EPR) is implemented through administrative, economic and informative policy instruments."

The EU's Waste Framework Directive defines producer responsibility as follows⁵:

- *'extended producer responsibility scheme' means a set of measures taken by Member States to ensure that producers of products bear financial responsibility or financial and organisational responsibility for the management of the waste stage of a product's life cycle.*

Extended producer responsibility was introduced as a tool in many EU member states in the 1990s, including Germany, Austria, the Netherlands, France, and the Scandinavian countries, as well as in Switzerland. The German Packaging Ordinance was introduced back in the early 1990s. In Norway, extended producer responsibility for packaging was introduced through negotiated environmental agreements in 1994/1995. The OECD took an active role in disseminating knowledge about this policy tool, and many OECD countries introduced extended producer responsibility schemes for various product groups in the 1990s.⁶

In Norway, the basis for introducing extended producer responsibility was laid out in the Report to the Storting 44 (1991-92), which formed the then strategy for environmentally friendly waste management. The Norwegian Ministry of Climate and Environment stated in the white paper that they would impose a responsibility on producers, importers and distributors to collect their respective products and associated packaging. The then government emphasised concluding voluntary agreements with businesses as a measure. At the same time, the government informed businesses that taxes would be assessed if it was not possible to come to voluntary agreements.⁷

The Report to the Storting built on Official Norwegian Report (NOU) 1990:28 on waste minimisation and recycling, which, among other things, proposed product taxes or product deposit or return schemes. The NOU also proposed assessing the introduction of a packaging tax/fee that would either be repealed on the approval of a returns scheme, or that the fees would be refunded upon documented return for approved recycling. It appears that the commission hoped that these tools would contribute to waste reduction (through environmentally friendly product design) and improve systems for recycling waste.

According to an OECD report on producer responsibility from 2006, the primary purpose of extended producer responsibility is to promote environmentally friendly product design. By integrating costs related to waste collection and management into the producer's costs, the producer responsibility should provide a financial incentive to design products that lead to less waste and that are suitable to be reused and recycled.⁸ This also appears to be one of the main intentions behind the Norwegian schemes that were introduced in the 1990s, where it is stated in the Report to the Storting 44 (1991-92) that an increased responsibility for producers of goods would provide producers, importers and distributors with a solid basis to promote waste reduction and to develop products, including packaging, that promote reuse, recycling and energy consumption.⁹

Extended producer responsibility also provides opportunities to fund environmental improvements in systems for collecting and managing waste, such as by providing financial subsidies for recycling.

⁵ European Commission, 2018: *Waste Framework Directive*. Directive of the European Parliament and of the Council (EU) 2018/851 amending Directive 2008/98/EC on waste (the definition of extended producer responsibility is found in article 3, no. 21)

⁶ See the OECD website for further information: <https://www.oecd.org/environment/extended-producer-responsibility.htm>

⁷ Ministry of Climate and Environment, 1992: *Strategi for miljøvennlig avfallshåndtering* [Strategy for environmentally friendly waste management]. Report to the Storting 42 (1991-92)

⁸ OECD, 2006: *EPR Policies and Product Design: Economic Theory and Selected Case Studies*. The memorandum drawn up by the OECD's Working Party on Resource Productivity and Waste.

⁹ See Report to the Storting (white paper) 44 (1991-92) p. 38.

According to the OECD report from 2006, it is difficult to give evidence that extended producer responsibility actually provides sufficient financial incentives to have an influence on environmentally friendly product design. An Official Norwegian Report from 2002 (NOU 2002:19) came to the same conclusion, and the committee concluded that there is uncertainty as to whether producer responsibility schemes had led to products being designed in a way that reduces waste management costs. At the same time, the committee pointed out that producer responsibility agreements had been an important and well-functioning tool for increased recycling.¹⁰

In the OECD guidance on extended producer responsibility (2016), it states that even though there are examples of extended producer responsibility having contributed to a reduction in waste in certain countries and sectors, it is rare that extended producer responsibility has triggered changes in product design.¹¹ In a Norwegian research article from 2021, reference is made to the fact that it cannot be proven that extended producer responsibility has led to changes in product design or contributed to a reduction in waste. The article advocates introducing a new legal framework for marketing sustainable products.¹² In March 2022, the European Commission presented a separate report regarding making sustainable products the norm in Europe.¹³ The report was promoted as a part of a package of initiatives that will promote the circular economy and be followed up through concrete new and revised EU rules. For example, a proposal was put forward for a new ecodesign regulation that will apply to all products sold within the EEA.

Extended producer responsibility may have impacts related to increased collection and recycling of products when they are discarded. A Norwegian doctoral thesis from 2005 that looked at the Norwegian plastic packaging system concluded that an extended producer responsibility for plastic packaging had achieved positive results in terms of recycling, but was less successful in terms of its goals for waste reduction ("dematerialisation") and eco-design ("recycling-friendly design").¹⁴

None of the reports and articles referred to above investigated the effects that extended producer responsibility has on the total recycling rates in a broader European context. It appears that the assessments take their basis in waste sorting at a national level, i.e. how much waste occurs in Norway that is sorted out and sent to be recycled.

If the supply of recycled raw materials of a given quality exceeds the actual demand in a market, there is little use value in sorting waste for material recycling. The quality of the recycled raw materials was barely assessed in the mentioned previous reports, even though it is vital for demand.

¹⁰ NOU 2002:19. *Avfallsforebygging* [Waste Prevention]. <https://www.regjeringen.no/no/dokumenter/nou-2002-19/id145734/>

¹¹ OECD, 2016: *Extended Producer Responsibility. Updated Guidance for efficient waste management*. OECD Publishing, Paris. <http://dx.doi.org/10.1787/9789264256385-en>

¹² Maitre-Ekern, Eléonore, 2020: *Re-Thinking Producer Responsibility for a Sustainable Circular Economy: From extended producer responsibility to pre-market producer responsibility*. *Journal of Cleaner Production*. Volume 286. 1 March 2021.

¹³ <https://www.regjeringen.no/no/sub/eos-notatbasen/notatene/2022/mai/eus-initiativ-om-a-gjore-barekraftige-produkter-til-normen/id2948736/>

¹⁴ Røine, Kjetil, 2005: *Industrial implementation of extended producer responsibility in an industrial ecology perspective*. PhD thesis presented at NTNU (2005:237)

Fact box 1: Supply and demand – plastic waste recycling in Europe^{15,16,17}

In 2018, 29 million tonnes of plastic waste were collected in the EEA, of which approximately 30% was sent to be recycled (9.4 million tonnes). Approximately 80% of plastic waste that was sent to be recycled was further processed in Europe to produce around 5 million tonnes of recycled raw materials. Around 4 million tonnes of recycled plastics were used as an input factor in European production (some recycled plastic was also exported out of Europe). The amount of plastic waste that was sorted and sent to be recycled in the EEA increased to 10.2 million tonnes in 2020. For increasing the sorting of plastic waste for recycling to make sense, the demand for recycled plastic materials for new production must increase correspondingly. The quality of the recycled raw materials must meet the specifications of the European plastics industry. The European initiative Circular Plastic Alliance aims to increase demand for recycled plastic raw materials in the EU to 10 million tonnes in 2025 based on voluntary measures.

Fact box 2: Deposit schemes for beverage packaging^{18,19,20}

Producers and importers of beverages are obliged to join an approved returns system for discarded beverage packaging. The returns systems may be organised with or without a deposit scheme. Deposit schemes should provide incentives to collect beverage packaging, something which also reduces the issue of littering. In addition, two types of fees have been introduced on beverage packaging: an environmental tax and a basic fee. Beverage packaging that is part of an approved returns scheme may lead to reduced environmental fees depending on the proportion of returns. If the proportion is 95% or higher, the environmental tax is discounted. If the packaging is reused in its original form, the basic fee is not paid. Retail outlets are obliged to accept depositable beverage packaging that they sell themselves. Overall, the framework provides strong incentives for collecting beverage packaging. Moreover, the deposit system results in a homogeneous flow of waste that is easy to recycle. There is therefore a high level of collection and recycling of beverage packaging. On the whole, reusable packaging has been phased out in Norway with the exception of two returns systems for reusable packaging of glass that is cleaned and refilled by the producer.

4.2. The role of businesses in producer responsibility schemes

Extended producer responsibility is an environmental policy tool that imposes certain obligations on companies that produce, import or sell products. These obligations can be met either collectively through participation in a producer responsibility organisation or by the individual business itself. In Norway, the most common approach has been that businesses attend to their obligations through membership of a producer responsibility organisation, i.e. that companies pay a financial contribution to a producer responsibility organisation that then attends to their obligations.

¹⁵ Plastics Europe, 2019: *The Circular Economy for Plastics – A European Overview*. <https://plasticseurope.org/knowledge-hub/the-circular-economy-for-plastics-a-european-overview/>

¹⁶ Plastics Europe, 2021: *Plastics, the facts 2021*. <https://plasticseurope.org/knowledge-hub/plastics-the-facts-2021/>
https://ec.europa.eu/growth/industry/strategy/industrial-alliances/circular-plastics-alliance_en

¹⁸ The Norwegian Environment Agency, 2021: *Gjennomgang av utvidet produsentansvar i Norge* [Review of extended producer responsibility in Norway]. Report part 1 of 3. <https://www.miljodirektoratet.no/aktuelt/fagmeldinger/2021/mars-2021/vi-utreder-behovet-for-endringer-av-produsentansvaret/>

¹⁹ <https://www.skatteetaten.no/bedrift-og-organisasjon/avgifter/saravgifter/om/drikkevareemballasje/>

²⁰ <https://infinitem.no/>

In Norway, it has been normal to tackle certain national tasks by entering into negotiated environmental agreements between the state and businesses. The advantages of entering into such agreements may be a more cost-effective achievement of environmental goals and targets that involves and motivates companies to implement measures instead of detailed statutory requirements that are difficult for businesses and the administration to follow up on.

In Norway, extended producer responsibility was originally implemented through negotiated agreements, such as for packaging or electronics. Trade associations and employer organisations normally represented businesses in the agreements, and in some cases they were signed by larger businesses. Today, the requirements for various producer responsibility schemes are generally found in the Norwegian Waste Regulations. This can be partially put down to the development of competing returns schemes and the need for different competitive terms.

The Directive on single-use plastics paves the way for using negotiated environmental agreements to implement the requirements of extended producer responsibility for many single-use plastic products. A working group set up by the Norwegian Ministry of Climate and Environment to assess the implementation of the Directive recommended using such agreements to implement the extended producer responsibility requirements of the Directive.²¹ The report shows that business organisations have extensive experience with environmental agreements and documented implementation capabilities. The Federation of Norwegian Industries also suggested signing an environmental agreement to implement the provisions of the Directive for fishing gear made of plastic. To ensure support for the schemes, there could be a statutory requirement that producers must fulfil their extended producer responsibility, and that this can be done through accession to an environmental agreement.

The advantages of entering into environmental agreements for producer responsibility for single-use products and fishing gear made of plastic can be strong anchoring and ownership in the business community for implementing the rules of the Directive on single-use plastics, high cost-effectiveness and a strengthened competitiveness for Norwegian business. The national administrations can also be spared from tasks that may lead to more work in regulation design and follow-up.

Trade associations and employer organisations have frequently also been founders and owners of producer responsibility organisations. This ownership is based on the conclusion of environmental agreements that were negotiated with the state in the 1990s. There are also examples of individual organisations (companies) owning producer responsibility organisations themselves or jointly.

4.3. Collective vs individual producer responsibility

In general, a distinction can be made between two types of producer responsibility:

- *Collective producer responsibility*, i.e. that producers and importers (and in some cases also distributors of products) attend to their obligations through membership of a producer responsibility organisation. The producer responsibility organisation attends to the obligation to achieve a given goal for the collection and recycling of discarded products (waste) on behalf of the members of the organisation. The producer responsibility organisation's activities are funded through a financial contribution paid by producers and importers that are members of the organisation. Collective schemes are the most common form of extended producer responsibility in Norway.

²¹ The Norwegian Ministry of Climate and Environment's working group on single-use plastics, 2020: *Environmental Agreements on plastic products*. Report created for the Ministry of Climate and Environment. <https://www.regjeringen.no/no/dokumenter/miljoavtale-om-plastprodukter/id2702585/>

- *Individual producer responsibility*, i.e. a company itself establishes collection or returns systems for their own products. This has not been the typical form of extended producer responsibility in Norway because it can be difficult to establish collection solutions for discarded products of a specific brand or product. In addition, the Norwegian Waste Regulations include a requirement that individually funded producer responsibility organisations must participate in the funding of a collectively financed producer responsibility organisation, including covering the costs of managing waste that it is not possible to link to an existing producer, as well as discarded products that were sold at a point before the producer responsibility organisation was set up (including for electric and electronic waste - WEEE). This type of requirements means it is not normally appropriate to establish individual producer responsibility schemes.

According to the OECD's guidance, extended producer responsibility should ideally be implemented through individual schemes in order to provide the greatest possible incentive for environmentally friendly product design.²² However, the OECD also states that collective producer responsibility schemes are normally more common and easier to implement. An explanation of why collective producer responsibility schemes rarely achieve goals related to environmentally friendly design may be that the costs are spread across many individual producers. This means that there is relatively little responsibility for individual companies to promote environmentally friendly product design.^{23,24} So called eco-modulation of fees are recommended as a tool to strengthen incentives for eco-design.

Fact box 3: Road map for circular plastic packaging²⁵

Industry "best practice initiatives" may be a means of mobilising businesses to focus on environmentally friendly product design and increased use of recycled raw materials. The Forum for sirkulær plastemballasje (Forum for circular plastic packaging) and the Emballasjeforeningen (Norwegian Packaging Association) developed a road map in 2019 for circular plastic packaging in Norway. The companies behind the road map advocate for mobilising packaging users to design recyclable packaging, avoid overpackaging, intensify innovation and research activities in business. It was also suggested that a substitution obligation be explored, meaning that if the packaging represents particular environmental challenges, producers and imports shall assess whether the product's function can be protected in a more environmentally friendly manner. The businesses will also explain the opportunities for standardised choices of materials (use of fewer types of plastic in packaged products) and optimised use of plastic in products that are used for shops and that can go into closed loops between producers and retails, for example transport packaging. Many companies have also adopted environmental calculators and substitution tools to optimise the use of packaging with regard to the total environmental impact.

²² OECD, 2016: *Extended Producer Responsibility. Updated Guidance for efficient waste management*. OECD Publishing, Paris. <http://dx.doi.org/10.1787/9789264256385-en>

²³ NOU 2002:19. *Avfallsforebygging* [Waste Prevention]. <https://www.regjeringen.no/no/dokumenter/nou-2002-19/id145734/>

²⁴ Kalimo, H., et al., 2012: *Greening the economy through design incentives: allocating producer responsibility*. European Energy and Environmental Law Review. 21 (6), 274-305.

²⁵ Forum for sirkulær plastemballasje and Emballasjeforeningen, 2019: *Veikart for sirkulær plastemballasje i Norge* [Road map for circular plastic packaging in Norway] <https://www.regjeringen.no/contentassets/ab557e6446d84b1c9c348c9912b47535/veikart-for-sirkular-plastemballasje-i-norge.pdf>

4.4. Eco-modulation as a tool for environmentally friendly product design

Eco-modulation means that financial contributions (fees) paid by producers and importers to producer responsibility organisations are differentiated according to the products' environmental attributes. The EU's Waste Framework Directive sets requirements on countries to introduce eco-modulation of fees in their producer responsibility schemes.

The purpose is to provide producers and importers a stronger financial incentive for environmentally friendly product design and to develop and sell products that lead to lower waste management costs.

By differentiating the financial contributions according to the products' environmental attributes, a practice where the contributions are the same for all competitive producers/importers is avoided. If the difference between the financial contributions paid to producer responsibility organisations is great enough, this may affect the products' retail price and thus consumers' choice of products.

Examples of product properties that may be relevant with regard to eco-modulation are durability, repair options, reusability, recyclability, content of the recycled raw materials and content of substances of very high concern. However, EU rules do not state which material or product properties should be prioritised or how this should be done in practice.

Eco-modulation is a relatively new measure within extended producer responsibility schemes. It is therefore uncertain whether this will provide sufficient incentives for eco-design in practice.

For example, products that are covered by the extended producer responsibility requirements is normally produced for a European and global market. Examples of product groups that are produced for European or global markets are vehicles, electronics, batteries and tyres. In these examples, it is difficult to envisage that differentiated and eco-modulated fees for Norwegian producer responsibility organisations will be significant for products that are sold. If the models for varying fees are harmonised in Europe, there is a greater likelihood that eco-modulation will achieve its desired effect. This assumes that the financial contributions are sufficiently differentiated and provide a genuine difference to a products' retail price so that this affects consumer choice.

When it comes to packaging, it is normally the producers of goods that decide how the packaging should be designed and used. This is one reason as to why it may be most appropriate to set an obligation for businesses that produce packaged products (i.e. users of packaging) to be a member of a producer responsibility organisation. Minimising the environmental impact of packaging requires that the product system is assessed in its entirety instead of just assessing the carbon footprint of the packaging in isolation. Packaging plays an important role in preventing product breakages or food waste. For example, packaging solutions, which have a greater amount of packaging per product, may have a lower total environmental impact if more products per pallet provide lower emissions for transport or the packaging solution provides fewer breakages or less food waste. The goal is therefore to adapt the packaging so that the product and packaging provides the lowest possible environmental impact over its life span, in line with the principles of packaging optimisation.^{26,27}

The complexity of businesses' work on optimising packaging use may make it difficult to find a common model for eco-modulation. In addition, the EU's proposal for a new Packaging Regulation

²⁶ Pihlstrøm, Andreas, et. al., 2020: *Miljøavtale om plastprodukter* [Environmental agreement on plastic products]. Report from the working group set up by the Ministry of Climate and Environment.

<https://www.regjeringen.no/no/dokumenter/miljoavtale-om-plastprodukter/id2702585/>

²⁷ Grønt Punkt Norge and the Norwegian Packaging Association, 2022: *Emballasjeutviklingen i Norge 2021* [Packaging developments in Norway 2021]. <https://www.grontpunkt.no/media/5058/avfallsforebygging-og-emballasjeoptimering-2021-print.pdf>

contains ambitious requirements for packaging that will reduce the amount of waste, increase the use of recycled raw materials and promote the reuse of products.²⁸ Eco-modulation in extended producer responsibility schemes must be designed to provide an additional environmental effect to the requirements that are already included in the new proposed Regulation.

The EU's Waste Framework Directive sets requirements that producer contributions should not exceed the costs that are necessary to perform waste management in a cost-effective manner.²⁹ If the financial contributions are to be based on actual waste management costs, it is not likely that such price differences will be great enough to influence the products' properties and design.

It is uncertain as to how eco-modulation would best work in situations where there is competition between many producer responsibility organisations. It can be argued that the application of this should be up to the individual company, and that national or European guidelines/rules should be developed that ensure fair practice. Regardless, there will be differences with regards to which product properties should be highlighted depending on the material type and product. For some types of materials, the use of multicomponent materials, for example, may make recycling more difficult, while the content of prioritised chemicals that are harmful to human health and the environment may represent a greater barrier for other products. The material and product properties that should be highlighted for eco-modulation must be decided on a case-by case basis.

4.5. Competitive conditions

According to the Norwegian Environment Agency, extended producer responsibility schemes should ensure funding for the separate collection and processing of waste for recycling that would otherwise not have been recycled, or handled in an environmentally sound and responsible manner. In this way, the regulations will create a market where there previously was not a market or impact and change existing markets. This entails a need for regulation and control of competition in the market.

In their first report evaluating producer responsibility, the Norwegian Environment Agency states that there have been challenges in many current producer responsibility schemes that can be used to distort competition.³⁰

Extended producer responsibility may impact competition between various types of actors and in different manners:

- Competition between producers, i.e. that producers/importers that do not participate in a producer responsibility scheme avoid additional costs that producers that participate must bear. This challenge may be particularly great for product groups where a significant proportion of turnover happens through direct imports (e-commerce) to private households or where there are lots of importers of products so that it is more difficult to maintain effective oversight.
- Competition between producer responsibility organisations for producer membership. Costs for producer responsibility organisations are related to the fulfilment of their producer responsibility (i.e. waste management costs). If major actors receive a better price than smaller actors, this can distort competition.
- Competition between producer responsibility organisations for access to various parts of the country with different collection costs. Producer responsibility organisations can be excluded from regional/local collection areas so that they cannot meet their obligations. Requirements for

²⁸ https://ec.europa.eu/commission/presscorner/detail/en/ip_22_7155

²⁹ See article 8a, number 4, letter (c) of the EU's Waste Framework Directive (2018)

³⁰ The Norwegian Environment Agency, 2021: *Gjennomgang av utvidet produsentansvar i Norge* [Review of extended producer responsibility in Norway]. Report part 1 of 3. <https://www.miljodirektoratet.no/aktuelt/fagmeldinger/2021/mars-2021/vi-utreder-behovet-for-endringer-av-produsentansvaret/>

nationwide collection may also constitute a barrier to the establishment of new producer responsibility organisations.

- Through collection agreements with larger, central municipalities, producer responsibility organisations can force competing companies to enter into agreements with outlying municipalities that involve higher transport costs. A corresponding lock-in effect can occur at the waste sorting and processing level.
- It can be difficult for producer responsibility organisations to enter into agreements on the coordination of waste collection with the framework of the Norwegian Competition Act. This may lead to a socio-economic loss in areas where the amount of waste is so small that it does not make sense for each and every producer responsibility organisation to carry out waste collection.
- If a producer responsibility organisation gains a dominant position, this position could be abused through agreements in the value chain that exclude competing actors, for example at the waste collection and processing level. Normally, there would be significant competition between waste management companies to deliver services for producer responsibility organisations.

Furthermore, cases may arise where producer responsibility organisations will use subcontractors (for example for collection services) and act as a supplier of recycling services to the same subcontractors. Cases may also arise where producer responsibility organisations could be in competition with their own subcontractors for waste volumes and/or delivery of various waste and recycling services.

The Norwegian Competition Authority has previously carried out assessments of the competitive issues related to extended producer responsibility. In a report from 2004, the Norwegian Competition Authority concluded that it is an issue that producer responsibility organisations, which finance and handle waste collection and recycling, have been established through cooperation between actors in an industry. From a competitive point of view, the Norwegian Competition Authority believed that it was an issue that waste policies are so heavily based on cooperation between competitors. The Norwegian Competition Authority further believed that insufficient competition made returns schemes more expensive for society and for consumers. Many producer responsibility organisations will also gain a dominant position. The result of this may be a lack of incentives for cost discipline and a risk that producer responsibility organisation services are priced too highly. In the 2004 report, the Norwegian Competition Authority pointed out that a business in a producer responsibility organisation (depending on the circumstances) may be in contravention of competition legislation and that the industry-wide producer responsibility organisations will be able to facilitate anti-competitive exchanges of information between actors in product markets.³¹

Competitive challenges related to extended producer responsibility are also described in the OECD's guidelines and in a joint report from the Nordic competition authorities from 2016. The OECD and the Nordic competition authorities have also made individual assessments of whether competition should be facilitated between producer responsibility organisations, or whether it is more sensible to have a single company with a monopoly over a given product group. It appears that the OECD and the Nordic competition authorities are moving in the direction of competition between producer responsibility organisations contributing to increased innovation and cost-effectiveness in waste markets. In accordance with the OECD's guidelines, there should only be one producer responsibility organisation where it can be proven that the advantages related to, for example, building up the desired waste infrastructure that otherwise would not be built, is greater than the disadvantages. In all cases, the OECD and competition authorities point out that producer responsibility organisations'

³¹ The Norwegian Competition Authority, 2004: Competitive assessment of product recycling schemes

procurement of services for waste collection and recycling should be based on transparent and competitive tendering processes.^{32,33}

The Norwegian Waste Regulations do not place any limits on the number of approved producer responsibility organisations. For schemes involving multiple producer responsibility organisations, there is competition at both the level of the producer responsibility organisation and between subcontractors of the producer responsibility organisations. In the Norwegian Environment Agency's second report evaluating producer responsibility, it argues that good competition can be guaranteed through both a model involving a producer responsibility organisation and one involving multiple producer responsibility organisations in each scheme. According to the Agency, reduced costs of running a producer responsibility organisation can be put down to the development of collection logistics and management solutions being over time, the fact that processing costs have been reduced and that there is active competition between processing facilities that offer services to producer responsibility organisations. However, it may also be the case that competition between producer responsibility organisations have been one of the driving forces of this development, and it can be argued that competition between parallel producer responsibility organisations helps to reduce costs for producers. The Agency also did not rule out that the possibility of establishing competing producer responsibility organisations constitutes a barrier for raising costs and membership fees significantly. In schemes with only one operational producer responsibility organisation, the potential future competition could also be an incentive to keep costs down.³⁴

The Norwegian Environment Agency seems to conclude that there is no evidence to prove that competition between producer responsibility organisations leads to reduced costs. There may be many reasons as to why costs change, and it is difficult to isolate the effect of increased competition between producer responsibility organisations from other types of measures, in these assessments.

³² OECD, 2016: *Extended Producer Responsibility. Updated Guidance for efficient waste management*. OECD Publishing, Paris. <http://dx.doi.org/10.1787/9789264256385-en>

³³ Nordic Competition Authorities, 2016: Competition in the waste management sector <https://konkurransetilsynet.no/publications/konkurransproblemer-i-avfallsmarkedet/>

³⁴ The Norwegian Environment Agency, 2022: *Gjennomgang av utvidet produsentansvar i Norge* [Review of extended producer responsibility in Norway]. Report part 2 of 3. <https://www.miljodirektoratet.no/aktuelt/nyheter/2022/november-2022/produsenter-far-storre-ansvar-for-produktene-som-avfall/>

Fact box 4: One or more competing producer responsibility organisations

Autoretur is owned by Bilimportørenes Landsforening and is the only end-of-life vehicle producer responsibility organisation in Norway. Autoretur collects an environmental fee from Norwegian car importers that is used to cover ongoing operating costs for the returns scheme for end-of-life vehicles. Autoretur has entered into agreements with three main operators to collect and process end-of-life vehicles (Bilgjenvinning AS, Norsk Gjenvinning Metall AS and Bilretur AS). In turn, these three main operators have more than 142 end of life vehicle collection points and 11 shredder facilities. A central tool for achieving a high rate of returns for end-of-life vehicles is the vehicle scrap deposit scheme. Additionally, good accessibility to car collection sites across the entire country is crucial. In this system, there is also competition between recycling companies that are subcontractors for Autoretur and the main operators.

There are four approved producer responsibility organisations for electric and electronic waste (WEEE) that are in competition with each other (Renas, Norsirk, ERP-Norway and Recipo). In turn, these producer responsibility organisations purchase operational services related to the collection and management of electronic waste from competing recycling companies. In accordance with the Norwegian Waste Regulations, producer responsibility organisations can coordinate the collection of WEEE within the framework of the Norwegian Competition Act. Such a cooperation can be entered into in areas of the country where the collection otherwise would lead to inefficient use of social resources (for example high costs due to low population density or long transport routes to waste management and recycling facilities). In the waste management system for WEEE, there is competition at both between producer responsibility organisations and between the subcontractors to these producer responsibility organisations.

4.6. Extended producer responsibility in European legislation

European regulations set requirements for extended producer responsibility for a number of different product groups, such as consumer electronics, batteries, vehicles, packaging, fishing and aquaculture gear made of plastic, as well as various single-use plastic products. The EU's Waste Framework Directive (2018/851/EU) also sets a number of minimum requirements for extended producer responsibility. The minimum requirements were introduced with the hope of achieving increased harmonisation, to improve management and transparency of the schemes, improve their outcomes, ensure fair competitive terms, and to avoid barriers to a well-functioning internal market.

5. Norwegian producer responsibility schemes

Summary of chapter 5:

- Extended producer responsibility has been introduced for seven product types in Norway. In addition, there are extended producer requirements for certain single-use plastic products, including fishing and aquaculture equipment in the EU's Directive on single-use plastics. These requirements have not yet been implemented in Norwegian legislation.
- According to the Norwegian Environment Agency, the producer responsibility organisations saw annual costs in excess of NOK 1.5 billion in 2019. A producer responsibility organisation's revenues are based on the payment of financial contributions (fees) from producers and importers. In addition, a producer responsibility organisation may have revenue streams related to the resale of recycled raw materials, where the waste has a positive market value. There are significant funds tied up in the companies' equity.
- The costs covered through an extended producer responsibility varies between product groups. Different costs may be more or less relevant for different types of products.
- Supervision and follow up from authorities are crucial for ensuring competition on fair terms between producers and between competing producer responsibility organisations. Supervision from authorities is necessary to avoid issues related to free-riders, i.e. producers and importers that are not members of a producer responsibility organisation.

5.1. Current producer responsibility schemes

Extended producer responsibility has been introduced for seven product types in Norway. The schemes are regulated through the Norwegian Waste Regulation. Table 1 has been taken from the Norwegian Environment Agency's first partial report for evaluating producer responsibility and shows current schemes, when they were first established, references to regulations, the number of approved producer responsibility organisations and the amount of waste collected in 2019.³⁵

³⁵ The Norwegian Environment Agency, 2021: *Gjennomgang av utvidet produsentansvar i Norge* [Review of extended producer responsibility in Norway]. Report part 1 of 3. <https://www.miljodirektoratet.no/aktuelt/fagmeldinger/2021/mars-2021/vi-utreder-behovet-for-endringer-av-produsentansvaret/>

Table 1: Schemes for extended producer responsibility in Norway (Source: The Norwegian Environment Agency)

| Product type | Regulated by the Waste Regulations | EU regulations | First introduced in Norway | Approved producer responsibility organisations/systems | Amount of waste collected (through producer responsibility) |
|---|------------------------------------|------------------------------------|----------------------------|--|---|
| Waste from Electrical and Electronic Equipment (WEEE) | Chapter 1 | The WEEE Directive (2012/19/EU) | 1998 | 4 | 138,000 tonnes |
| Batteries | Chapter 3 | The Battery Directive (2006/66/EU) | 1993 | 4 | 19,000 tonnes |
| Vehicles | Chapter 4 | ELV Directive (2000/53/EC) | 2002 | 1 | 191,000 tonnes |
| Tyres | Chapter 5 | | 1995 | 1 | 65,400 tonnes |
| Beverage packaging | Chapter 6 | Packaging Directive (94-62/EC) | 1993 | 9 | 122,000 tonnes |
| Packaging | Chapter 7 | Packaging Directive (94-62/EC) | 1995 | 6 | 413,000 tonnes |
| Double-glazed windows containing PCB | Chapter 14 | | 2002 | 1 | 1,385 tonnes |

5.2. Upcoming producer responsibility schemes

The EU's Directive on single-use plastics (2019/904/EU) requires countries to introduce extended producer responsibility for product groups such as fishing and aquaculture gear made of plastic, as well as single-use products such as food containers for immediate consumption, cups, beverage packaging of up to three litres, lightweight plastic carrier bags, wet wipes, balloons for private use and tobacco filtering products. A working group set up by the Norwegian Ministry of Climate and Environment has developed a report with recommendations for how the negotiated environmental agreements can contribute to the implementation of the Directive on single-use plastics in Norway.³⁶

The European Commission has stated that it will put forward proposals to introduce requirements for extended producer responsibility for textiles.³⁷ Extended producer responsibility for textiles will be assessed in accordance with the revisions to the Waste Framework Directive. According to the plan, the European Commission will put forward a proposal for the revised framework directive in 2023.

³⁶ Pihlstrøm, Andreas, et. al., 2020: *Miljøavtale om plastprodukter* [Environmental agreement on plastic products]. Report from the working group set up by the Ministry of Climate and Environment.

<https://www.regjeringen.no/no/dokumenter/miljoavtale-om-plastprodukter/id2702585/>

³⁷ https://environment.ec.europa.eu/strategy/textiles-strategy_en

5.3. Resource use related to extended producer responsibility

A producer responsibility organisation's revenues are based on the payment of financial contributions (fees) from producers and importers. In addition, a producer responsibility organisation may have revenue streams related to the resale of recycled raw materials, where the waste has a positive market value. According to the first part of the report from the Norwegian Environment Agency evaluating producer responsibility, the producer responsibility organisations saw annual costs in excess of NOK 1.5 billion in 2019 to ensure the collection and processing of waste covered by the schemes. On the whole, the costs are mainly related to the collection and management of waste.³⁸

The revenues and costs for the producer responsibility organisations will vary depending on the area of responsibility and membership. For example, Plastretur AS, which is a producer responsibility organisation for plastic packaging, had operating profits of approximately NOK 260 million in 2021. Autoretur AS, which is responsible for end-of-life vehicles, had operating profits of approximately NOK 40 million in the same year. Ruteretur AS, which is responsible for double-glazed windows containing PCB, had operating profits of approximately NOK 18 million. A common regulatory requirement is that producer responsibility organisations must at all times have six months' worth of financial reserves, which ensures that the companies can fulfil their obligations to their members. There are therefore significant funds tied up in the companies' equity.

The costs related to extended producer responsibility are expected to increase significantly in the years ahead. This is due in particular to stricter goals for the recycling of materials of product groups such as packaging and that EU regulations set requirements on the introduction of extended producer responsibility for new product groups. For some single-use plastic products, requirements will be introduced in the future for the financing of public collection systems and litter clean-up through extended producer responsibility. Table 2 has been taken from the report to the Ministry of Climate and Environment's working group for single-use products and shows the requirements for cost coverage for various single-use products. According to the EU legislation, producers and importers of packaging will also have greater obligations imposed on them than today when it comes to covering necessary costs to achieve the goals related to increased recycling of waste packaging.

Overall, this means that resource use related to extended producer responsibility will likely increase significantly going forward. As extended producer responsibility is normally financed through contributions (fees) that are then passed on consumers purchasing a product, it will be consumers that bear the costs.

³⁸ The Norwegian Environment Agency, 2021: *Gjennomgang av utvidet produsentansvar i Norge* [Review of extended producer responsibility in Norway]. Report part 1 of 3. <https://www.miljodirektoratet.no/aktuelt/fagmeldinger/2021/mars-2021/vi-utreder-behovet-for-endringer-av-produsentansvaret/>

Table 2: Requirements for cost coverage for different single-use plastic products (source: The Norwegian Ministry of Climate and Environment's working group on single-use plastics)

| Type of cost | Beverage packaging, food containers, cups/drink lids, bags and packaging film, plastic carrier bags* | Wet wipes and balloons | Tobacco products with filters |
|--|---|--|---|
| Consumer-facing informational measures | Provide information on access to multi-use solutions, correct waste management, the consequences of littering and incorrect disposal of waste down drains. | Provide information on access to multi-use solutions, correct waste management, the consequences of littering and incorrect disposal of waste down drains. | Provide information on access to multi-use solutions, correct waste management, the consequences of littering and incorrect disposal of waste down drains. |
| Waste management | For waste that is disposed of in public collection systems, including their infrastructure and operation, as well as subsequent waste transport/management. | | For waste that is disposed of in public collection systems, including their infrastructure and operation, as well as subsequent waste transport/management. |
| Litter clean-up | The costs of cleaning up litter from these products, including subsequent waste transport/management. | The costs of cleaning up litter from these products, including subsequent waste transport/management. Also, collection and reporting of data. | The costs of cleaning up litter from these products, including subsequent waste transport/management. Also, collection and reporting of data. |

* Packaged products are also covered by extended producer responsibility requirements through the EU's Packaging Directive and chapters 6 and 7 of the Waste Regulations.

5.4. Which costs should be covered by extended producer responsibility?

Extended producer responsibility should cover costs related to waste management where products covered by producer responsibility schemes are discarded as waste. A topic for decades regarding the use of producer responsibility as a tool in environmental policy has been which types of waste management costs and what extent of the costs that are regarded as relevant should be covered by producer responsibility organisations. One point of view may be that producer responsibility organisations should fully cover all costs. Another point of view may be that producer responsibility organisations should only cover the difference between the cost of recycling and the cost of incineration of waste so that the environmental targets that are set for waste recycling are achieved.

Differentiation of waste management costs has been a fundamental tool in waste management policies, right since the Report to the Storting no. 44 1991-92.³⁹ The rules in the Norwegian Pollution Control Act provides incentives to reduce the amount of waste and sorting of recyclable waste in companies that produce waste, by having the waste management prices facing companies reflect the costs related to further waste management. Companies with significant amounts of mixed waste will normally pay a higher price for the waste management services they purchase than companies that can display a higher rate of source separation for waste that can be recycled.⁴⁰ Correspondingly, the

³⁹ The Ministry of Climate and Environment, 1992: *Strategy for environmentally friendly waste management*. Report to the Storting 42 (1991-92).

⁴⁰ The Ministry of Climate and Environment, 2002: *Om lov om endring i lov 13. mars 1981 nr. 6 om vern mot forurensninger og om avfall (forurensningsloven)* [Act of 13 March 1981 No.6 Concerning Protection Against Pollution and Concerning

Norwegian Environment Agency has proposed an amendment to the Pollution Control Act that will oblige municipalities to differentiate the waste collection fee for household waste to motivate households to reduce the amount of waste and increase sorting of waste that can be recycled.⁴¹ If municipal waste collection fees are differentiated so that households pay more for residual waste and less for sorted fractions, this will provide better incentives for source separation and recycling.

It is important to maintain the waste producers' incentives for waste reduction and source separation. Costs related to waste management in businesses and municipalities must reflect the further waste management so that it provides incentives for waste reduction and recycling. At the same time, producer responsibility organisations should take their share of the costs. The key point is that the tools together lead to the achievement of environmental policy goals in the most effective manner possible. As the prices that waste producers (i.e. municipalities and businesses) face reflect the costs related to further processing of waste, increased awareness of waste issues will be created, making it more attractive to reduce the amount of waste and to sort out waste for recycling.⁴²

If approved producer responsibility organisations are required to cover an unreasonably large proportion of the costs of waste management, this may make it less interesting to reduce the amount of waste and to sort waste for recycling. Hence, extended producer responsibility schemes should not fully cover all the costs of waste management from either households or businesses. Extended producer responsibility will, however, be able to provide an environmental effect by covering the necessary costs of separate collection and recycling which otherwise would not happen.

Fact box 5: Extended producer responsibility in the EU's Waste Framework Directive and the Directive on single-use plastics

In accordance with article 8a) of the EU's Waste Framework Directive and article 8 of the Directive on single-use plastics, producer responsibility schemes should cover costs for separate collection and recycling of waste that are necessary for the fulfilment of the EU's waste goals, as well as the costs related to information and reporting. Generally, the obligations include covering "necessary costs" for waste packaging and individual single-use plastic products, cf. Annex E of the Directive on single-use plastics.

What exactly count as necessary costs has triggered debates between producer responsibility organisations (that argue for the lowest possible cost coverage) and municipal waste companies (that want the highest possible cost coverage). The EU's Waste Framework Directive also allows for 80% of the necessary waste management costs to be covered by producers as long as the remaining costs are covered by the waste producer or distributor, respectively. For producer responsibility schemes in EEA members states that were established before 4 July 2018, but were not required to be established under specific requirements in EU legislation, at least 50% of the necessary costs must be covered.

This memorandum does not go into detail on the issue of which waste management costs it would make sense for extended producer responsibility to cover. The waste management costs covered by extended producer responsibility will naturally also depend on what sort of product needs to be dealt with. For end-of-life vehicles, it may be pertinent to cover costs related to transporting the vehicles from the car collection sites to shredder facilities, while the waste management is funded by the material value of the vehicles. Another example may be waste packaging, which is collected from

Waste (Pollution Control Act)]. Proposition to the Odelsting 87 (2001-2002).

<https://www.regjeringen.no/no/dokumenter/otprp-nr-87-2001-2002-/id169578/>

⁴¹ <https://www.miljodirektoratet.no/aktuelt/nyheter/2022/juli-2022/nye-krav-til-kildesortering-av-avfall/>

⁴² For example, see Report to the Storting 44 (1991-92) and Proposition to the Odelsting no. 87 (2001-2002).

households through regular waste collection carried out by municipalities. Waste packaging from industry and businesses is collected by private recycling companies according to commercial agreements. Waste collection is therefore already taken care of. What may be more pertinent here is that producer responsibility organisations provide financial incentives that make recycling of separately collected packaging waste (i.e. plastics) more profitable compared to waste incineration.

Fact box 6: Producer responsibility and litter clean-up

The EU's Directive on single-use plastics sets requirements that extended producer responsibility schemes for certain single-use plastic products should include the cost of cleaning-up litter, as well as subsequent transport/management of this waste. However, section 28 of the Norwegian Pollution Control Act already contains a prohibition on littering. As the local pollution control authority, a municipality may demand that litterers also cover the costs of litter removal or clean-up. The basis of this is therefore that the litterer, in breach of the law, should cover the cost of clean-up themselves. Going forward, for certain single-use plastic products, producers and importers, as a part of their extended producer responsibility, will be obliged to cover the cost of litter clean-up that is carried out by public authorities.

5.5. Supervision by public authorities

Producer responsibility organisations must be approved by the Norwegian Environment Agency. To get approval, it must be documented that the organisation will establish a returns system that will be able to fulfil regulatory requirements. For example, there is a requirement in the Waste Regulations that producer responsibility organisations for waste from electrical and electronic equipment (WEEE) shall collect their respective proportion of the total amount of electronic waste, where their members' products are or have been sold. The obligation is calculated for different sub-categories of product groups. In addition, there are requirements for processing and recycling of the waste.

In cases where there is competition between producer responsibility organisations, regulatory requirements must ensure that the competition between producer responsibility organisations occurs on equal terms. Producer responsibility organisations that are not likely to fulfil regulatory requirements should not be approved. At the same time, the rules must not lead to insurmountable roadblocks to the establishment of such organisations. For example, there is a requirement that producer responsibility organisations ensure that waste collection occurs on an ongoing basis across the entire country. This is an important requirement to ensure equal terms between competing producer responsibility organisations. At the same time, it will be difficult to fulfil a requirement for ongoing and nationwide collection before approval is granted. The follow-up and supervision with the extended producer responsibility schemes must find a balance between these considerations.

The Norwegian Environment Agency may withdraw a producer responsibility organisation's approval if the organisation does not comply with the requirements in the Waste Regulations, for example if a producer responsibility organisation has repeatedly breached the regulations. Another potential tool is to impose a coercive fine that applies until the unlawful conditions have been rectified.

The Norwegian Environment Agency's evaluations show that the proportion of producers and importers that do not participate in any producer responsibility schemes, so called "free-riders", is too high. As an example, the consultancy, COWI, has produced estimates on behalf of the Norwegian Environment Agency indicating that as much as 1/3 of plastic packaging that was introduced to the

Norwegian market in 2019 was not covered by an approved producer responsibility organisation.⁴³ A high share of "free-riders" leads to lower legitimacy for the schemes in place. The most important measures to avoid "free-riders" is increased supervision to ensure that producers and importers fulfil the requirement to be a member of an approved producer responsibility organisation. This applies not least to e-commerce as it can often be difficult to identify these distributors. The Norwegian environmental authorities have on isolated occasions implemented supervisory actions aimed at producers and importers that are obliged to be a member of producer responsibility organisation.

6. Driving forces and tools to achieve environmental goals

Summary of chapter 6:

- The goals of environmental policy will be achieved by using a broad range of tools. Extended producer responsibility is one of the tools of environmental policy. A key question is whether, and in that case how, extended producer responsibility schemes can supplement other tools so that policy goals are achieved in the most cost-effective manner possible.
- The EU's Waste Framework Directive sets requirements on countries to introduce eco-modulation on financial contributions in their producer responsibility schemes. The purpose is to provide greater financial incentives for environmentally friendly product design. However, it is difficult to see that this will have any measurable impact on promoting environmentally friendly product design. In general, consumer preferences will govern product development. Other tools such as the EU's Ecodesign Regulation and the emphasis on the environment in public procurement will also be more suitable for promoting environmentally friendly products.
- For small electronics and portable batteries, the requirement for free-of-charge returns of waste and further free-of-charge collection has been viewed as important for maintaining nationwide waste collection. An alternative solution could have been to maintain the obligation for distributors to offer free-of-charge returns, but that further collection would follow normal commercial agreements between waste producers and recycling companies.
- The EU's Directive on single-use plastics sets requirements that producer responsibility for certain single-use plastic products should include the cost of cleaning up litter. The overriding rule should, however, be that litterers are held responsible for clean-up. The most important measure to reduce the extent of littering is that municipalities more strongly prioritise the enforcement of the prohibition against littering.
- A number of requirements have been introduced to promote source separation and recycling of waste. Extended producer responsibility can, however, play a stabilising role as a market buffer, which means that it can provide financial support for recycling in situations where there is a particularly weak raw materials market. Increased demand for secondary raw materials will likely be driven by other tools such as European product requirements for the content of recycled raw materials, green public procurement, with emphasis on climate and environment, and industry initiatives such as the Circular Plastics Alliance.
- Extended producer responsibility can play an important role with regard to information on products that are sold, returns systems for discarded products, waste management and recycling. There are no other public administrative tools for disseminating information on returns schemes.

⁴³ The Norwegian Environment Agency, 2021: *Gjennomgang av utvidet produsentansvar i Norge* [Review of extended producer responsibility in Norway]. Report part 1 of 3. <https://www.miljodirektoratet.no/aktuelt/fagmeldinger/2021/mars-2021/vi-utreder-behovet-for-endringer-av-produsentansvaret/>

6.1. Extended producer responsibility in comparison to other tools

The goals of environmental policy will be achieved by using a broad range of tools. Extended producer responsibility is one of the tools of environmental policy. In this chapter, we will describe other tools that contribute to the same environmental policy goals as producer responsibility. The purpose of this review is to allow us to assess whether, and how, extended producer responsibility can supplement other tools so that the goals of environmental policy are achieved in the most cost-effective manner possible. In other words, what can extended producer responsibility solve in a more cost-effective manner that other driving forces in society cannot?

Such assessments will depend on which product groups are being assessed. For example, there will be major differences in what affects the design of vehicles, clothes and tyres. In the same way, there will be fundamental differences when it comes to what drives collection and recycling of end-of-life vehicles, double-glazed windows containing PCB and waste packaging from households. There has not been carried detailed assessments for all product groups in this memorandum. The assessments in this memorandum are of a more general nature, while also trying to point out the peculiarities of different product types where extended producer responsibility applies, or may apply in the future.

Fact box 7: Examples of similar environmental policy tools:

Examples of other tools and driving forces that contribute to nationwide waste collection, increased recycling, reduced littering and more environmentally friendly product design are:

- The Norwegian Pollution Control Act's general rules on waste management and littering
- Requirements for sorting and material recycling of defined waste fractions
- Requirements for, and supervision of, waste management facilities
- Requirements for, and supervision of, transboundary waste shipments
- The EU Ecodesign Regulation and other European product rules
- Different industry initiatives in the EU and Norway
- Consumer preferences and expectations

6.2. Driving forces and tools for environmentally friendly product design

Requirements for products appear in a number of different regulations. Most requirements are minimum requirements aimed at ensuring that products are safe to use, that they do not contain prioritised substances that are harmful to human health and the environment, etc. An energy rating system has been introduced for many energy using products, as well as labelling requirements. In addition, there are a range of certification and labelling schemes to provide information about the environmental impact of a product. Norway is an open economy and the majority of products we surround ourselves with are made by foreign producers for an international market.

One of the most important driving forces for product design is consumer preferences. A producer will design its products so that they meet consumer and customer expectations. Meeting consumer expectations and preferences is a precondition to making a sale. Expectations regarding the climate and sustainability are one part of this picture. Other considerations are price and costs, functionality, quality, aesthetics, style, etc.

The European Commission has presented its new product policy, aiming at making sustainable goods and services the norm in Europe.⁴⁴ A key move is the proposal for a new eco-design regulation and the introduction of new requirements for documentation of product qualities such as life cycle, suitability for reuse, environmental impact over the product's life cycle, content of recycled raw materials, in addition to the products' energy efficiency. A requirement has been introduced at the EU level for the use of at least 30% recycled plastic in beverage packing made of plastic by 2030. The European Commission's proposed new packaging regulation contains ambitious requirements on reusability and the content of recycled raw materials.⁴⁵ Minimum requirements for recycled raw materials in products such as batteries, vehicles, building materials, etc. have also been assessed.

The European Commission's proposed new ecodesign regulation also contains a proposal to set requirements for so-called digital product passports, which will contain the most important environmental information about a product and make it easier for consumers to choose sustainable products. In addition, the information should be accessible to recycling companies and make it easier to reuse or recycle products that are discarded as waste. The European Commission will assess new tools that prevent the destruction of unsold goods that are still usable. Comprehensive work is also in progress in the EU to harmonise how various products' environmental impact over their life cycle should be documented, referred to Product Environmental Footprints (PEF). In all, the new initiatives from the European Commission involve an enormous amount of regulatory work to achieve more environmentally friendly product design and sustainable consumption.

The European Commission has also put forward proposals for new regulatory initiatives to prevent misleading marketing related to the environment and sustainability. In Norway, the Consumer Authority has published guidance for how the Norwegian Marketing Act should be applied and enforced when it comes to marketing of sustainability towards consumers. Under the Act, there is a ban on unreasonable and excessive marketing. Documentation on the use of marketing must be available. Using sustainable statements in relation to marketing is not allowed if the statements leave an incorrect general impression or they cannot be proven.⁴⁶

The public sector purchases goods and services in excess of NOK 600 billion every year with a total carbon footprint of 11 million tonnes of CO₂.⁴⁷ Requirements from public purchasers are therefore regarded as a good and well-suited tool for achieving climate and environmental policy goals and for creating a robust internal market for environmentally friendly products and production processes. In the Hurdal platform, the Norwegian government stated that it wants to change regulations and practice for public procurements so that they support important targets such as sustainability, good profit and working conditions, use of apprentices, innovation and local ripple effects. Climate and environment shall be weighted at at least 30 percent in public procurements, and higher if relevant.

The Ministry of Trade, Industry and Fisheries has sent circulated a proposal for changes to the Procurement Regulations. It has been proposed that the public sector should primarily weight environmental aspects at at least 30% in its procurements.⁴⁸

⁴⁴ https://ec.europa.eu/commission/presscorner/detail/en/ip_22_2013

⁴⁵ https://ec.europa.eu/commission/presscorner/detail/en/ip_22_7155

⁴⁶ <https://www.forbrukertilsynet.no/lov-og-rett/veiledninger-og-retningslinjer/forbrukertilsynets-veiledning-om-bruk-av-baerekraftpastander-markedsforing>

⁴⁷ Office of the Auditor General of Norway, 2022: *Riksrevisjonens undersøkelse av grønne offentlige anskaffelser* [Office of the Auditor General of Norway's investigation of green public procurements]. Document 3:5 (2021–2022) <https://www.riksrevisjonen.no/globalassets/rapporter/no-2021-2022/gronne-offentlige-anskaffelser.pdf>

⁴⁸ Ministry of Trade, Industry and Fisheries, 2022: *Proposal for stricter environmental requirements in public procurements*. <https://www.regjeringen.no/no/dokumenter/horing-3/id2938509/?expand=horingsnotater>

As mentioned in Chapter 4.4., the EU's Waste Framework Directive sets requirements on countries to introduce eco-modulation on financial contributions in their producer responsibility schemes. The purpose is to provide producers and importers a stronger financial incentive for environmentally friendly product design and to develop and sell products that lead to lower costs in the waste management phase.⁴⁹ If the difference between the financial fees paid to producer responsibility organisations is significant, this may affect the products' retail price and thus consumers' choice of products.

Since consumer products are generally made for an international market, it is difficult to see that eco-modulation of fees in Norwegian producer responsibility schemes will have an impact on products sold on the Norwegian market. Norwegian importers have little influence over the product design for groups of goods such as electronics, vehicles and batteries, that are created for international markets. Eco-modulation in Norwegian producer responsibility schemes will thus be of little significance.

For packaging, larger Norwegian actors in the grocery and retail segments may have greater opportunities to influence the design and environmental impact of packaging. However, this is complicated because the environmental impact of packaging is related to its ability to prevent products from breaking and to increase the products' durability. It is important that businesses' work on packaging optimisation being the basis of the development of regulations. In addition, rules and guidelines for eco-modulation of fees should be harmonised as much as possible in the EEA-area.

6.3. Driving forces and tools for nationwide waste collection

Chapter 5 of the Norwegian Pollution Control Act lays out the rules for collecting and handling waste. In accordance with section 30 of the Act, municipalities must handle household waste collection. This obligation is normally handled by inter-municipal companies or, as in the case of the City of Oslo, a municipal agency. For household waste, municipal collection should ensure nationwide collection.

Correspondingly, businesses that produce commercial waste are obliged to ensure that their waste is taken to a legal waste disposal plant, cf. section 32 of the Norwegian Pollution Control Act. This is resolved through the waste producer entering into a commercial agreement with a waste and recycling company for the collection of waste produced. The offering and infrastructure for waste collection will be dependent on the needs of the companies locally and regionally. There may be areas outside of cities and larger urban areas where competition between waste companies is more limited as a result of the fact that there are small volumes of waste to compete for. However, there is no information to indicate that there is a lack of waste collection services in any parts of Norway.

For many product groups subject to extended producer responsibility regulatory requirements, distributors are obliged to receive discarded products (waste) free-of-charge for returns to shops or an equivalent location in the immediate vicinity of this.⁵⁰ Furthermore, producer responsibility organisations must provide free collection of such waste from distributors and municipalities. The obligations for various product groups are somewhat differently formulated, but the overriding principles are essentially the same. The practical follow-up of the requirements for free-of-charge returns and collection may vary between different types of products. For end-of-life vehicles, there is a need for financial support for transporting the vehicles from the car collection sites to processing

⁴⁹ For many product groups covered by extended producer responsibility requirements, waste management will be fairly similar regardless of the products' environmental impact over its life cycle. In these circumstances, it is not that likely that eco-modulation of contributions that are based on waste management costs will impact the products' qualities and design in an environmentally friendly way.

⁵⁰ For WEEE items classed as commercial waste, the obligation that distributors have to receive electronic waste returns free-of-charge for new purchases of equivalent amounts of electronic products applies.

plants (shredders). On the other hand, the collection of waste packaging from households is handled through regular municipal waste collection. The collection of waste packaging from businesses is handled through normal commercial agreements, which are entered into with recycling companies.

For small electronics and portable batteries, the offer of free-of-charge returns of discarded products and further free-of-charge collection of waste has been viewed as important for maintaining nationwide collection. It is possible to envisage that an obligation to receive discarded products (waste) for distributors and municipal recycling stations without an obligation for producer responsibility organisations to ensure the free-of-charge collection of waste. Such a solution would entail that the collection of returned, discarded products from distributors would result from normal commercial agreements between the waste producer (distributor) and the recycling company in the same way as for other waste fractions. There has been a concern amongst environmental authorities that the cessation of the producer responsibility organisations' obligation to provide free waste collection from distributors might lead to illegal processing and waste dumping. There is, however, no reason why regular agreements between waste producers and recycling companies should not work properly in the same way as for the collection of hazardous waste, for example.

Increased supervision from authorities and the option to impose a fine for breaches of pollution control rules will also reduce the risk of illegal processing of commercial waste.

There is a slightly different system in place for windows containing PCB. Window producers/importers are obliged to ensure that discarded double-glazed windows containing PCB are safely processed, by ensuring that the regular price for delivering PCB double-glazed windows to a waste management facility does not exceed the price for delivering double-glazed windows do not contain PCB to a regular waste reception point. The Norwegian Environment Agency sets out what is regarded as the maximum price for the delivery of double-glazed windows that do not contain PCB for three years at a time. In practice, the requirements are followed up by a producer responsibility organisation (Ruteretur AS), which covers additional costs beyond the regular price that has been set.

Fact box 8: The EU's new Battery Regulation ^{51,52}

The European Commission has put forward a proposal for a new Battery Regulation that will replace the current Directive. The Regulation is comprehensive and sets a range of product requirements for batteries that will be put onto the EEA market, for example performance and durability requirements, labelling and digital information, safety, restrictions on the content of prioritised substances that are harmful to human health and the environment and minimum requirements for the content of recycled raw materials. The Regulation will introduced new and more ambitious requirements for extended producer responsibility, to ensure higher collection rates for discarded batteries, processing, reporting and information on returns schemes.

The European Parliament and the Council of the European Union agreed in December 2022 on tightening the collection requirements for discarded portable batteries. Tightened collection requirements for loose, portable batteries will enter into force from 2025 and be further tightened to 63% in 2027 and 73% in 2030, respectively. In comparison, current requirements in Norwegian Waste Regulations are that producer responsibility schemes shall collect 30% of members total imports and production of loose, portable batteries. The EU's new Battery Regulation will also contain ambitious targets for recycling discarded batteries, for example value metals such as copper, cobalt, lithium, nickel and lead. When the Battery Regulation is incorporated into the EEA-agreement, the requirements will apply directly as a Norwegian law.

6.4. Tools to counteract littering

The Norwegian Pollution Control Act stipulates that no one may empty, discard, store or transport waste in a way that may spoil, damage or be a detriment to the environment (section 28, "Prohibition against littering"). Municipalities may order someone who has littered to clean up the litter or cover the cleaning up costs. The provisions of the Act can thus be used actively to counteract littering and hold litterers accountable. Experience has shown, however, that municipalities enforce the prohibition against littering all too rarely.

The EU's Directive on single-use plastics sets requirements that extended producer responsibility schemes for certain single-use plastic products should include the cost of cleaning-up litter, as well as subsequent transport/management of this waste (see table 2 and fact box 6). It may seem unreasonable for producers and importers of these products to pay for cleaning up litter that they themselves are not responsible for. The basis of the Norwegian Pollution Control Act is that the litterer, in breach of the law, should cover the cost of clean-up themselves. It makes sense that someone who litters must also pay to clean it up. At the same time, including clean-up costs in contributions paid to producer responsibility schemes may lead to producers and importers gaining a financial incentive to develop products with less potential for littering. Such an argument will primarily be relevant to products with a high potential for littering, for example certain types of single-use products. In addition, the contributions that need to be paid to producer responsibility schemes need to be properly differentiated between products with high and low potential for littering. As mentioned, there is doubt as to whether eco-modulation of fees will provide producers and importers with sufficient financial incentives to develop more environmentally friendly products.

The overriding rules must be that littering is prohibited, that litterers pay for clean-up, and that producers and importers are not held responsible for covering the costs of cleaning up litter created by someone else. In some cases, it may be appropriate to introduce cost sharing to lead to good

⁵¹ <https://www.regjeringen.no/no/sub/eos-notatbasen/notatene/2021/jan/batteriforordningen/id2828700/>

⁵² https://ec.europa.eu/commission/presscorner/detail/en/IP_22_7588

environmental outcomes over the life cycle of the product. The most important measure to reduce the extent of littering will nevertheless be that municipalities more strongly prioritise the enforcement of the prohibition against littering. An alternative that may be assessed is amending the Norwegian Pollution Control Act so that this authority is instead handed over to the county governor.

Fact box 9: The Norwegian Retailers' Environment Fund⁵³

The Norwegian Retailers' Environment Fund was established in 2017 by The Federation of Norwegian Enterprises, The Norwegian Federation of Service Industries and Retail Trade and Dagligvarehandelens Miljøforum. The Fund, which is Norway's largest private environment fund, was established to fulfil the EU's Plastic Bags Directive (94/62/EC). The Directive requires that countries either comply with fixed reduction goals for plastic bags, or that carrier bags are paid for over the counter. In Norway, the retailer itself is responsible for taking payments for plastic bags. Shops, chains and wholesalers that sell plastic bags can pay a "membership fee" of NOK 1 per bag to the Norwegian Retailers' Environment Fund. From 1 August 2023, the fee will be increased to NOK 2. The Fund awards funds from the fee to projects in Norway and abroad that contribute to achieving the goals of removing and preventing plastic littering, improving resource efficiency and increasing recycling of plastic waste and reducing use of plastic bags.

6.5. Driving forces and tools for sorting and material recycling of waste

A range of requirements have been introduced for recycling of waste, originating in product types covered by requirements for extended producer responsibility. Examples of product groups with minimum European requirements for recycling are packaging, batteries, electrical and electronics products and end-of-life vehicles. Producer responsibility organisations are responsible for ensure that such requirements for recycling of waste are achieved. Normally, a producer responsibility organisation uses income from contributions (fees) to straighten out differences in the recycling companies' costs related to material recycling compared to waste incineration or landfilling.

Producer responsibility organisations ensure that public and private recycling companies receive financial incentives to sort waste that is collected for recycling and use as recycled raw materials.

In cases where there is a demand for secondary raw materials, it is not necessary that the producer responsibility organisations contribute with funding (as this would be the most financially viable solution for a recycling company). In such cases, normal market mechanisms ensure that the waste is recycled. The same applies as far as the regulations already requires that waste producers shall sort out recyclable waste and that facilities that receive the sorted waste shall make sure it is recycled.

Extended producer responsibility can, however, play a stabilising role as a market buffer, which means that it can provide financial support for recycling in situations where there is a particularly weak raw materials market. Such a function will be able to act as stabilising force for incentives for recycling. However, extended producer responsibility cannot drive European raw materials markets.

The Norwegian Ministry of Climate and Environment has recently introduced new requirements in the Waste Regulations that food and plastic waste from households is sorted out for recycling. The requirements also apply to similar commercial waste from businesses. The waste that is sorted shall be recycling, unless other solutions are more appropriate from an environmental or resource point of view.⁵⁴ The Norwegian Environment Agency has proposed that similar requirements be introduced

⁵³ <https://handelensmiljofond.no/>

⁵⁴ <https://www.regjeringen.no/no/aktuelt/strengere-krav-til-kildesortering-av-avfall/id2917708/>

for cardboard, paper, glass, metal and textile waste.⁵⁵ This is in accordance with requirements in the EU's Waste Framework Directive.

As described in Chapter 5.4, the Norwegian Pollution Control Act's ordinary provision on collection of commercial waste provides incentives for waste reduction, source separation and recycling. The Norwegian Environment Agency has recently proposed introducing requirements for Norwegian municipalities to introduce differential waste collection fees, where this might contribute to waste reduction, increased preparation for reuse and increased recycling.⁵⁶ There may also be a potential to increase the separate collection of cardboard and paper, glass and metal in municipalities through increased emptying frequency and improved adaptation of collection units for these waste fractions.

The pricing of greenhouse gas emissions from waste incineration will increase the profitability of recycling of waste. Introduction of pricing of greenhouse gas emissions from waste incineration have been put forward over time.⁵⁷ A national tax for waste incineration, which is not already included in the European Emission Trading Scheme, was introduced in the 2022 national budget.

The value chain for recycled raw materials is complete once the raw materials are used in new industrial production, such as compensation for virgin materials. There is little point in sorting waste for recycling if these materials are not in demand and can be used by industry. Demand for recycled raw materials is a condition for increased recycling of waste. This demand usually arises in a European or international market. Extended producer responsibility will hardly be able to ensure demand for secondary (recycled) raw materials in a European market or international value chains.

Examples of tools that can increase demand for recycled raw materials are minimum requirements for the use of recycled raw materials in suitable products (cf. chapter 6.2), increased emphasis of the climate, environment and circular economy through public procurement (green public procurements) and voluntary industry initiatives such as the Circular Plastics Alliance (see fact box 1).

Common quality standards for recycled raw materials that state which raw material qualities are in demand in the industry will also be able to contribute to a more predictable demand for sorted waste fractions. The paper industry has already developed a quality standard for return paper (EN 643). Correspondingly, harmonised quality standards will be developed in the EU for recycled plastic. Scrap metals are included in global raw material streams and various qualities that are in demand are well incorporated in the industry.

6.6. Tools for environmentally responsible waste management

Reception and processing plants for managing waste must, in general, have a permit from environmental authorities. There are some exceptions, meaning that a facility does not normally need a permit, for example for municipal waste reception points. Individual product types subject to the requirements for extended producer responsibility may contain components that are classified as hazardous waste, including end-of-life vehicles and waste from electrical and electronic equipment.

For example, chapter 1 of the Waste Regulations regarding electronic waste sets requirements that certain materials and components that contain harmful substances shall be disposed of manually as a

⁵⁵ <https://www.miljodirektoratet.no/aktuelt/nyheter/2022/juli-2022/nye-krav-til-kildesortering-av-avfall/>

⁵⁶ <https://www.miljodirektoratet.no/aktuelt/nyheter/2022/juli-2022/nye-krav-til-kildesortering-av-avfall/>

⁵⁷ For example, see the Norwegian Ministry of Climate and Environment, 2017: Report to the Storting (2016 – 2017).

Klimastrategi for 2030 - norsk omstilling i europeisk samarbeid [Norway's Climate Strategy for 2030: a transformational approach within a European cooperation framework].

<https://www.regjeringen.no/no/dokumenter/meld.-st.-41-20162017/id2557401/>

first step in the management process.⁵⁸ Extended producer responsibility schemes are obliged to ensure that collected waste is handled in accordance with the regulations and to ensure that waste management operators have sufficient competencies to fulfil the management requirements.

The requirements apply until the waste is finally recycled or processed, regardless of whether the processing takes place in Norway or in another country. In such cases, the extended producer responsibility means that producer responsibility organisations also have a role in ensuring that the processing plants where the waste is treated are operated in accordance with the regulations.

Waste processing plants must also follow the requirements of their permit and Waste Regulations, comply and document fulfilment of internal control requirements. The authorities also supervise the facilities.

In comparison, processing plants for hazardous waste comply with regulations and permits according to the system of the Norwegian Pollution Control Act, without the involvement of a third party (such as a Producer Responsibility Organisation). The environmental authorities supervise the facilities. The processing plants for electronic waste and end-of-life vehicles will, on the same lines as other processing plants for waste, normally be certified and audited by an accredited certification body.

Fact box 10: Revision of the EU's Waste Shipment Regulation

The European Commission has put forward a proposal for a revised Regulation on waste shipments. In short, the proposal means that waste shipments for recycling internally in the EEA should be simplified. Waste shipments for disposal will be made harder. Among other things, there will be a requirement that it must be documented that waste for disposal cannot be recycled in a technically and financially responsible manner, that the waste cannot be disposed of in a technically and financially responsible manner in the country of origin and that the shipment/disposal is in line with the waste hierarchy and principles of proximity and self-sufficiency.

The proposal also includes increased control with waste shipments for recycling outside of the EEA. Exports of waste to countries outside of the OECD will, as a basis, be prohibited, with the exception of countries that are entered on to a separate list that will be drawn up by the European Commission.

In order to be able to be placed on the list, the country outside of the OECD must provide information about what sort of waste they will accept, the country's waste and environmental legislation, including accession to international agreements, as well as strategies to ensure that the waste shipment regulations are complied with. The European Commission will then assess the information that has been submitted against the stated environmental criteria. Exporters of waste for recycling to countries outside of the EEA must document that the facilities will process the waste in line with health and environmental requirements that are concurrent as in the EEA. Requirements will also be put in place to ensure that an audit of the environmental requirements be carried out by an independent and accredited third party with the necessary qualifications. These audits of waste facilities must be carried out at least every three years.

⁵⁸ The requirement for manual disposal applies unless it can be documented that an equally good environmentally responsible processing by a mechanical, chemical or metallurgical process.

6.7. Tools for information measures targeted at consumers

It is normal that extended producer responsibility contains obligations for producers and importers to provide information about returns systems for discarded goods and how the waste should be handled. The obligations are formulated differently for different product types. Normally, informational tasks are handed over to approved producer responsibility organisations that carry out informational tasks on behalf of their members. For some product groups, such as electric and electronic waste, producer responsibility organisations shall carry out regular, nationwide campaigns or other similar measures. Competing producer responsibility organisations may, according to the Waste Regulations, cooperate to fulfil the obligations to implement informational measures.

LOOP is a foundation that promotes source separation and recycling by households and businesses. LOOP was established in 2000 by the Norwegian producer responsibility organisations. The aim was to establish a cooperative body that would implement joint national communication measures aimed at consumers and contribute to the founders fulfilling the information requirements of extended producer responsibility. LOOP has also developed and launched a national labelling scheme for waste together with the Norwegian Waste Management and Recycling Association. The labelling scheme is the first step in a larger effort to harmonise schemes for waste sorting in Norway. A collaboration has also been set up with other Nordic countries. The Nordic Council of Ministers on the establishment of a cooperation platform to develop a labelling scheme.⁵⁹

The creation and activities of LOOP does not in itself fulfil the producer responsibility organisations' information obligations. Producer responsibility organisations must be able to document that they themselves carry out and fund information measures that fulfil the regulatory requirements or through cooperation on information measures through LOOP or other joint initiatives.

Producers and imports will naturally deal with information about products and activities as a part of their regular operations and marketing. In addition, public and private recycling companies will provide information about their offer as a part of their regular operations. However, beyond the obligations resulting from the rules on extended producer responsibility, there are no other public administrative requirements that ensure the dissemination of information on returns schemes for the collection and recycling of waste. At a national level, extended producer responsibility can therefore play an important role with regard to providing information measures on products that are sold, returns systems for discarded products, waste management and recycling.

⁵⁹ www.loop.no