recycler c'est protéger

Summary of Ecodesign and Prevention Plans developed by ecosystem producer members

Small Fire Extinguisher Sector

5 December 2023

Version 1.0

Dashboard of indicators and key messages

Key indicator	Category	Result
Number of **ecosystem** producer members by type of producer in the SFE sector	Manufacturer	6
	Non-manufacturer	23
	Total SFE	29
Number of individual plans received by type of **ecosystem** producer members in the SFE sector	Manufacturer	2
	Non-manufacturer	4
	Total SFE	6
% of individual plans received in relation to the number of producer members in the SFE sector	Total SFE	21%
% of individual plans received in relation to the tonnage of equipment put on the market in the SFE sector	Total SFE	33%
Number of joint plans received from the SFE sector	Total SFE	0

Mandatory areas of the AGEC anti-waste law	Main trends in waste prevention and ecodesign from plans received from ecosystem producer members - SFE
Reduction in the use of non-renewable materials	Optimisation of SFE maintenance to prolong the use of existing products rather than replacing them
	Life cycle analysis of fire extinguishers to identify and reduce non-renewable materials in these products
	Use of renewable materials, in particular concerning the plastic contained in the products distributed
Increased use of recycled materials	Identification and assessment of recycled materials integrated and to be integrated
	Integration of recycled materials (especially powder), higher incorporation rate
	Working with suppliers: awareness, evaluation, incentives
Improved product recyclability	Identification of recyclable materials: plastic parts, dip tube, transport holder, seals, aluminium body, plastic and powder
	Use of recyclable materials, particularly for plastic parts and powder
	Vigilance over the use of PFAS (per- and polyfluorinated chemicals), chemical substances of concern due to their persistence in the environment and their effects on health

Strong action to promote the circularity of EEEs
To be handled with caution with a view to EEE circularity or to be completed
Action outside the scope of treatment in the EEE sector

Contents

Household vs. Professional: Professional equipment incorporates devices that by their very nature are intended exclusively for professional use. All other small fire extinguishers are considered household appliances (ecosystem, Qu'est-ce qu'un DEEE, D3E ou déchet d'équipement électrique et électronique ?, 2023)

Manufacturer: producer responsible for the manufacture and/or assembly of the product(s) marketed (**ecosystem** definition)

Non-manufacturer: a producer who is not considered a manufacturer under the definition above and who may be an introducer (outside the EU), importer (EU), remote seller or own-brand vendor (**ecosystem** definition)

PPE - Plan de Prévention et d'Ecoconception (prevention and ecodesign plan): a plan drawn up by the producer and revised every five years, with the aim of reducing the use of non-renewable resources, increasing the use of recycled materials and increasing the recyclability of its products in processing facilities located in France (Legifrance, Article L541-10-12 - Code de l'environnement, 2020)**SFE:** Small Fire Extinguishers: powder, water or foam, small fire extinguishers (SFE) weighing less than 2 kg or 2 litres are used by professionals and private individuals alike, particularly in road vehicles and pleasure boats. At the end of their useful life, they are known as Household Hazardous Waste (HHW). They must be collected and recycled in accordance with regulations (**ecosystem** definition)

1. Introduction

Article L 541-10-12 of the AGEC anti-waste law enacted in February 2020 states that: "*Each producer is required to draw up and implement a prevention and ecodesign plan with the aim of reducing the use of non-renewable resources, increasing the use of recycled materials, and increasing the recyclability of its products in processing facilities located in France*."

For the SFE (Small Fire Extinguisher) EPR sector, this obligation applies to SFE producers (manufacturers, introducers, importers/retailers, own-brand vendors, distance sellers), whether they are part of an individual system or a Producer Responsibility Organisation (PRO).

They must produce a plan defining the prevention and ecodesign objectives and actions to be implemented over the next five years. This plan can be drawn up individually or collectively by producers and must be revised every five years, incorporating a review of the previous plan.

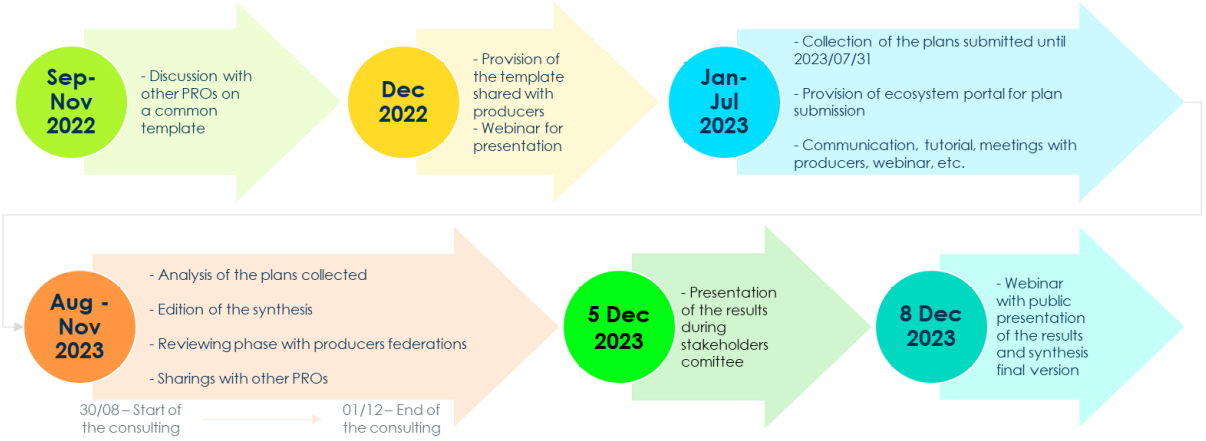
For producers in a mutual system, individual or collective plans must be sent to the Producer Responsibility Organisation to which they belong. Every three years, **ecosystem** must draw up a summary of the prevention and ecodesign plans of its producer members, for publication accessible to the general public.

This summary is presented below and expresses the commitment of **ecosystem** producer members in the SFE sector to improve their waste prevention and ecodesign.

Small fire extinguishers are a fast and effective way of fighting small fires in a variety of environments. These devices feature a system under constant pressure, with inherent, significant safety issues. They need to be portable, so are generally compact and lightweight. They also have an expiry date.

2. Methodology

It took more than a year to produce this summary, which is shown in the timeline below:



The deadline set by **ecosystem** for the submission of plans was 31st July 2023. However, this summary includes all plans submitted to **ecosystem** up to 31st August 2023.

During the analysis phase, the main difficulty encountered was the extensive heterogeneity in the formats of plans received (Excel vs PDF, French vs. English, **ecosystem** vs other, added/deleted rows/cells, etc.), as well as their content (modification of areas, sub-areas, freedom of content authoring).

Of all the plans received (in terms of tonnage of equipment placed on the market) 100% were considered in the analysis for the purposes of this summary.

As the number of plans received for this sector was significant, the main trends (if possible the 3 to 5 most recurrent) by area and sub-area representing the objectives and actions proposed by the producers were identified. **ecosystem** then assessed these trends according to three levels presented in chapter 5, with justification of its analysis.

The levers for action in terms of waste prevention and ecodesign may differ according to the type of producer. It is therefore relevant to analyse the possibility of distinguishing between trends taken from plans received from manufacturers and those taken from plans received from non-manufacturers. Any producer in the introducer, importer-reseller, own-brand vendor or remote seller categories is considered here as a non-manufacturer. However, the number of plans received did not allow us to make this differentiation in the analysis and ensure the confidentiality of the information transmitted at the same time. The aggregated data is therefore the results presented in this summary.

3. ecosystem support

To help its producer members implement and build this prevention and ecodesign plan, **ecosystem** has made available a number of resources.

Template for response to regulatory requirements

A spreadsheet template (in French and English) to help producers draw up a five-year action plan was proposed to members, with the aim of guiding them through the required steps and useful questions to ask. This file is available for download on the **ecosystem** website at the following address:

https://pro.**ecosystem**.eco/service/eco-conception/plan-prevention-ecoconception

Co-developed with the Producer Responsibility Organisations CITEO, Ecomaison and Refashion, the proposed template uses the design areas specified by the applicable article of the Law, namely increasing the integration of recycled materials, reducing the use of non-renewable materials and improving recyclability. The template also offers the possibility of going further in all stages of a product life cycle, for example, by potentially extending its lifespan. For each of the areas covered by the regulations and supplementary to them, **ecosystem** has proposed sub-areas where producers have been able to implement one or more related actions. This template is structured as follows:

- **Mandatory areas required by the law:**

Area	**Sub-area**
Reduce the use of non-renewable materials	Identify and reduce non-renewable materials
	Rationalise the quantities of materials and components used
Increase the use of recycled materials	Maximise the use of recycled materials
	Identify suppliers, create partnerships
Improve product recyclability	Choose recyclable materials
	Ensure parts are separable
	Restrict/reduce the presence of recycling disruptors and hazardous substances
	Rationalise the diversity of materials and components

- **Supplementary areas not referred to in the law:**

Area	Sub-area
Product design to extend their useful life	Develop upgradeable products, suited to updates and upgrades/reconditioning/remanufacturing
	Standardise materials, parts and components
	Design for multiple uses and users/facilitate a second life
	Maximise robustness and reliability
	Ensure repairability (disassembly, information and spare parts)
	Prioritise timeless aesthetics and styles
Services and support to extend product useful life	Raise user awareness of proper product maintenance
	Develop/propose product updates/update services (aesthetic, software, functional, etc.)
	Offer repair services (user services, spare parts, etc.)
	Promote/provide services for reuse, recycling and reconditioning
	Promote the sale of uses rather than products and the sharing economy
Product design to limit the impacts of use	Limit consumption (energy, water, consumables, etc.) during use
	Reduce emissions and discharges during the product life cycle
	Facilitate eco-friendly actions (energy consumption, waste management, good product maintenance) by users
	Ensure ease of maintenance
Optimise product packaging	*Obtain information from the dedicated EPR sector*
Manufacturing and distribution processes, traceability	Reduce consumption and emissions associated with manufacturing processes
	Minimise waste and production volumes
	Limit distribution phases, consumption and waste
	Promote the use of renewable energies
	Optimise product weight/volume ratio
	Develop supply chain traceability and control.

In addition and with a view to implementing the actions described above, this template suggests that producers consider:

Organisation	Ecodesign strategy decision-making process
	Human resources
	Creation of a project team or expert
	In-house knowledge of ecodesign
	Ecodesign support
	Budget
Training	Employee training
Tools	Environmental assessment tools
	Decision-making tools
	Diagnostic tools
	Other tools

For information, 50% of the plans received by **ecosystem** used the template described above for the SFE sector. A plan is considered to have used the **ecosystem** template format when the spreadsheet has not been modified in any way, either in terms of form (added/deleted tabs/rows/columns, merged cells, etc.) or content (names of areas/sub-areas/fields to be completed). Nonetheless, in practice, 100% of producers who submitted a plan used the template provided by **ecosystem**, with a small proportion adapting the format to their own needs.

Other **ecosystem** support

For all sectors and in addition to the template, **ecosystem** has provided its members with other media to help them understand the regulations and adopt the template:

Media	**Language (French or English)**	**Consultation (31 August 2023)**
Video tutorial	FR EN	795 views 182 views
Public webinar	FR	151 live participants 1,500 replays
Trade association webinars	FR	AFIMIN - 8 participants CIFL - 7 participants INOHA - 30 participants
Web page	FR EN	7,644 times 203 times
Mail and telephone hotline	FR & EN	419 responses from the **ecosystem** ecodesign team (80% of requests received by the ecodesign team) 102 responses from Producer Relations teams
Workshops, technical meetings	FR & EN	22 support services delivered by the ecodesign team

Between December 2022 and July 2023, a number of email and verbal communications were made to collect as many plans as possible. These proved to be effective as shown by the influx of plans received as a result of these communications.

4. Review of plans

The aim of this paragraph is to provide quantity-related and quality-related feedback on the prevention and ecodesign plans submitted.

Quantity-related feedback on plans received

The main quantity-related indicators are shown in the table below:

Key indicator	Category	Result
Number of **ecosystem** producer members by type of producer in the SFE sector	Manufacturer	6
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% of individual plans received in relation to the number of producer members in the SFE sector	Total SFE	21%
% of individual plans received in relation to the tonnage of equipment put on the market in the SFE sector	Total SFE	33%
Number of joint plans received from the SFE sector	Total SFE	0

For information, between 1st September 2023 and 15th November 2023, **ecosystem** received 3 additional plans that were not included in the compilation of this summary.

ecosystem did not want to provide its members with a collective plan to which they could have subscribed, to offer them as much freedom as possible in developing their own content, and to avoid influencing possible actions they have developed in favour of waste prevention and ecodesign. **ecosystem** wishes to enable its producer members to report faithfully on their actions and to make proposals by focusing on the specific features of their appliances.

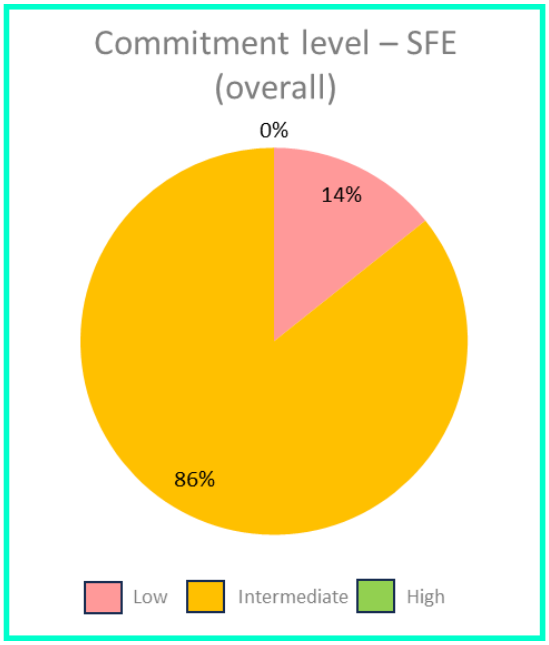
The results presented here and in the following sections reflect the commitment of producers who have adopted a position on the subject, with an encouraging participation rate.

Quality-related feedback on plans received

ecosystem wanted to assess the overall level of engagement in the plans submitted, using three categories:

- Low: The producer is not or is only marginally positioned in the three areas addressed by the regulations (see Introduction) or has not indicated any action in line with the **ecosystem** scope in the areas addressed (e.g. action in terms of packaging and not involving the product). For example, a plan where just one action is described in all mandatory areas could be considered low-level.
- Intermediate: The producer has positioned itself on the three areas addressed by the regulations, in line with the **ecosystem** scope applicable to the areas addressed. It has also positioned itself in other supplementary areas. However, the plan lacks detailed or quantified information on the objectives or milestones associated with the actions described.
- High: The producer has positioned itself on the three areas addressed by the regulations in line with the **ecosystem** scope, as well as on additional areas, providing precise and quantified details of the associated objectives or milestones.

This assessment was applied to all the plans received from the SFE sector, but also based on the distinction between manufacturer and non-manufacturer producers. The following indicators have been developed according to the ratio of the number of plans reviewed with a low/intermediate/high level of engagement to the total number of plans reviewed, overall and then by type.

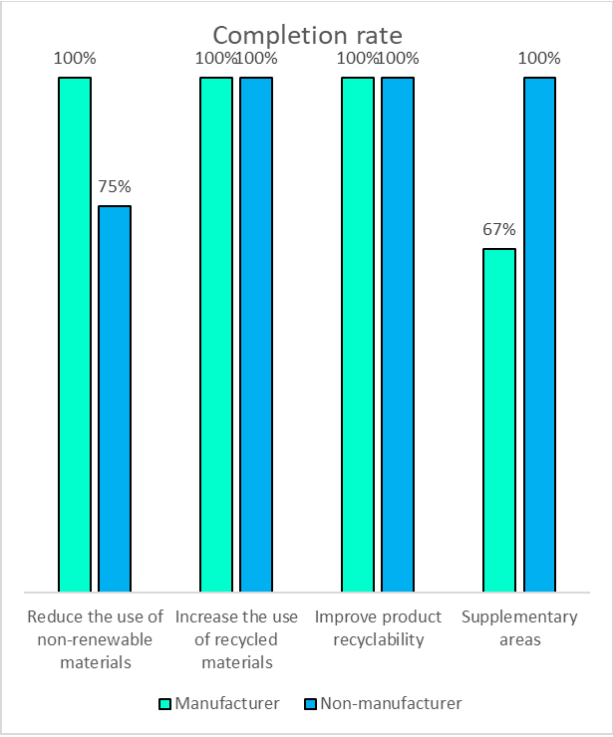


Most of the plans received are at intermediate level, which indicates that all **ecosystem** producers in the SFE sector are well on the way to meeting the three regulatory targets. Furthermore, most of them have also positioned themselves in supplementary areas, which testifies to the willingness of producers to deploy further actions to extend the useful lifetime of appliances and reduce their environmental impact throughout the product life cycle.

As this is the first time all producers have used this format, the results are very encouraging. Despite the lower proportion of plans with a high level of engagement, making these plans part of an improvement process will help to increase this rate. **ecosystem** is available to support producers in this process.

With regard to the differences between the two categories of producer, it has been observed that non-manufacturers have levers that are more difficult to activate, as they involve working mainly with the upstream value chain. This helps to explain why there are fewer high-engagement plans compared to manufacturer producers.

An analysis of the engagement rate for each of the areas covered by the regulations and for the additional areas proposed by **ecosystem** through the template is also presented to supplement the previous results. The results of the graph below represent the rates of plans for which at least one relevant action in each area has been indicated, for the two categories of producers.



NB: A producer who has committed to one action for one area is counted the same as a producer who has committed to several actions for the same area.

Like non-manufacturers, manufacturer producers are almost as engaged in the areas targeted by the regulations as they are in supplementary areas.

For each area, producers were able to use one or more of the sub-areas proposed in the template to define their actions and engagements. The results presented below detail the completion rate for each sub-area of the **ecosystem** template for each area.

Example of the "Increase the use of recycled materials" area:

Two sub-areas are presented in the template:

- *Sub-area 1: Maximise the use of recycled materials*
- *Sub-area 2: Identify suppliers, create partnerships*

If a producer has only committed to sub-area 1, its engagement rate for the "increase the use of recycled materials" area is 50%.

The final rates were therefore calculated as follows:

$$\frac{\text{Total number of sub} - \text{areas informed in all plans received and analysed}}{\text{Number of sub} - \text{areas in the template x Number of plans received and analysed}}$$

To conclude this part of analysis related to the level of engagement in the plans, **ecosystem** notes a strong willingness among producers to commit to a strategy of waste prevention and ecodesign across all areas, whether mandatory or supplementary. It should not be forgotten that this is the first time that all producers, irrespective of their sales figures, the quantity of units placed on the market or the type of appliance, are concerned by such an obligation. For some producers, particularly non-manufacturers, it represents an initial opportunity to get to grips with ecodesign issues. This makes the resulting level of engagement in the plans even more appreciable.

Finally, it should be noted that this assessment is the sole responsibility of **ecosystem** and does not confirm or reject the compliance of producer plans. Its aim is simply to assess the level of maturity of **ecosystem** producers with regard to these issues, in order to develop appropriate support programmes and offer the right level of support.

When examining the plans, it was noted that **ecosystem** has difficulty in reaching the right level of corporate contact responsible for completing the plans. Some producers, especially self-employed entrepreneurs, very small businesses and SMEs, do not always have the human and financial resources to propose an ambitious plan. Furthermore, in general, non-manufacturer producers needed specific support to understand the regulations and see how they could respond to them, not without difficulty. These factors can therefore potentially reduce the level of engagement in plans submitted to **ecosystem**.

Moreover, the plans received were extremely heterogeneous. Producers have engaged in various actions, often in quantity-related terms. However, it is difficult to compare these quantitative targets for the same action, as the units of quantity used are very often disparate. As an illustration, with regard to Area 2 which aims to increase the amount of recycled materials, producers have committed to several points in their plans:

- a specific range of products
- all product ranges
- X% integration of recycled materials in the whole product
- Y% integration of recycled materials in the plastic content
- Y'% integration of recycled materials in a specific plastic content
- Z% integration of recycled materials in the metal content
- χ suppliers surveyed
- ψ% of suppliers surveyed

It therefore proved impossible to consolidate average quantities for the actions proposed. **ecosystem** therefore decided to use a few relevant examples to illustrate the trends emerging from the plans, rather than calculate doubtful averages that would not accurately reflect producer engagement in this area.

5. Prevention and ecodesign initiatives for the sector

The aim of this chapter is to present the main trends promoting waste prevention and ecodesign, as illustrated by producers in the prevention and ecodesign plans submitted to **ecosystem**. The distinction between manufacturer and non-manufacturer producers could not be made, as the number of plans received for this sector did not allow us to ensure the confidentiality of information.

The analysis of major trends was conducted based on the elements of the **ecosystem** template in the following sequence:

- Compilation of all data entered in each plan analysed for each area and sub-area
- Clean-up of compilation file by deleting elements not relevant to the analysis ("NA", "not relevant", "/", etc.)
- Elimination of duplicates resulting in an identical plan for two producers belonging to the same entity
- Recurrence analysis of terms to prioritise trends for each area and sub-area.

Mandatory areas

For each of the mandatory areas, a maximum of ten major trends were identified per sub-area and prioritised according to their recurrence in the plans analysed.

Each trend identified according to its recurrence in the plans analysed was evaluated according to the following three categories:

- Strong action to promote the circularity of EEEs
- To be handled with caution with a view to EEE circularity or to be completed
- Action outside the scope of treatment in the EEE sector

The following sections present the tables summarising the main trends by sub-area for each of the mandatory areas analysed by **ecosystem**.

Reduction in the use of non-renewable materials

Mandatory area	Major trends in waste prevention and ecodesign taken from plans submitted by ecosystem producer members
Reduction in the use of non-renewable materials	Optimisation of SFE maintenance to prolong the use of existing products rather than replacing them
	Life cycle analysis of fire extinguishers to identify and reduce non-renewable materials in these products
	Use of renewable materials, in particular concerning the plastic contained in the products distributed

In general, there were three main trends in producer engagement, with one more related to the overall objective of reducing the use of non-renewable materials, which shows that this concept was not easily understood by producers. The action most closely related to this mandatory area concerns the maintenance activity, making it possible to avoid manufacturing new products and therefore to prevent the use of new materials.

The main difficulty with this mandatory area for the SFE sector is that the alternative to the use of non-renewable materials can be understood as the promotion of renewable materials, such as natural materials (e.g. biosourced plastics). For the SFE sector, the challenge lies in the fact that plastics are difficult to recycle, as they are used in small quantities and in dip tubes (with metal inserts). It would therefore be interesting to focus ecodesign efforts on the efficient separation of plastic parts at the end of their life cycle. It should be noted that very few biosourced plastics are currently used in PAE.

Carrying out a Life Cycle Assessment can be indirectly useful for accessing the material footprint of the appliance, with the aim of identifying and reducing the corresponding non-renewable materials.

For future plan updates and with a view to continuous improvement, here are our recommendations and points for attention:

- Gain better understanding of the concept of renewable and non-renewable materials
- Focus ecodesign efforts on the efficient separation of plastic parts at the end of their life cycle
- Encouraging producers to quantify targets for reducing the quantity of non-renewable materials, based on optimising product design (weight, size, volume) or improving the supply process.

Increased use of recycled materials

Mandatory area	Major trends in waste prevention and ecodesign taken from plans submitted by ecosystem producer members
Increased use of recycled materials	Identification and assessment of recycled materials integrated and to be integrated
	Integration of recycled materials (especially powder), higher incorporation rate
	Working with suppliers: awareness, evaluation, incentives

In general, producers have committed to appropriate actions aimed at increasing the proportion of recycled materials in appliances placed on the market.

These actions have often been defined according to the challenge of maximising the use of recycled materials, mainly powder, through sometimes quantified and very heterogeneous targets for minimum rates to be achieved on product ranges.

Other actions were based on the challenges of working with suppliers. Among the latter, a distinction is made between suppliers who offer recycled materials downstream in the chain (e.g. recyclers), leading to the creation of new partnerships, and suppliers upstream in the chain who supply manufacturers with components, parts and/or products for which new requirements are included in specifications on the incorporation of recycled materials.

The SFE sector is also supported by the AGEC law, which requires the largest manufacturers to display a statement on the percentage of recycled materials in the appliances they put on the market. This encourages producers to position themselves on this criterion.

For future plan updates and with a view to continuous improvement, here are our recommendations and points for attention:

- Understand the concepts of recycling and recycled vs. reused
- Encourage producers to set realistic targets for incorporating recycled materials into their products. A feasibility assessment of the proportion of recycled material that can be incorporated into products is recommended before defining the target rates. **ecosystem** is available to support producers in integrating recycled materials.
-

Improved product recyclability

Main trends in waste prevention and ecodesign in plans submitted
Identification of recyclable materials: plastic parts, dip tube, transport holder, seals, aluminium body, plastic and powder
Use of recyclable materials, particularly for plastic parts and powder
Vigilance over the use of PFAS (per- and polyfluorinated chemicals), chemical substances of concern due to their persistence in the environment and their effects on health

In general, producers have committed to appropriate actions aimed at increasing the recyclability of appliances they design, develop, manufacture, purchase and place on the market.

These actions are mainly based on:

- The choice of recyclable materials or products, with an initial assessment of the recyclability rate
- The integration of separability concepts into specifications for R&D teams in charge of product design or for suppliers
- The reduction/elimination of recycling disruptors and substances such as PFAS.

It is worth noting that the challenges of extracting components and reducing irreversible assembly bonds (e.g. dip tube inserts) have been relatively well integrated by manufacturers, who are seeking to improve product design or raise awareness of this issue among their suppliers.

The SFE sector is also affected by the AGEC law, which requires the largest marketers to display a recyclability statement ("mostly recyclable" or no statement at all). This may encourage producers to position themselves on these questions.

In this sense, the quest for the highest possible recyclability rate on all products is a priority often found in the plans of both manufacturers and non-manufacturers.

For future plan updates and with a view to continuous improvement, here are our recommendations and points for attention:

- Understand the concept of recyclability vs. recycling/reuse
- Support producers in ecodesign to assess and improve product recyclability, define realistic, quantified targets.

Supplementary areas

In addition to the three areas mentioned above and addressed by the Law, producers were invited to use the form provided to set out their objectives and commitments in **four supplementary areas** (in addition to packaging, which is specific to the EPR sector in question), with a view to extending the useful life of appliances, limiting the impact of use and "produce more wisely", with a section dedicated to the manufacturing, distribution and traceability phases.

Analysis of the plans shows that producers have made a strong commitment to these issues and are determined to respond to them by taking action, in particular to ecodesign and develop products that incorporate their potential for repair or reuse, and by offering associated services to ensure that they last longer.

The availability of information and product documentation for maintenance and servicing is also essential to ensure that appliances last as long as possible. Significant efforts have been made by producers to commit to this approach. Furthermore, the development of digital solutions was widely mentioned as a support to these challenges. Traceability is also one of the areas for improvement on which many producers have made a commitment, particularly with regard to their supply chain.

Lastly, the standardisation and rechargeability of appliances are mentioned several times in the context of prevention and ecodesign for the industry.

Levers for action by manufacturers and non-manufacturers

Considering all sectors, analysis of prevention and ecodesign plans shows that manufacturers and non-manufacturers do not have the same levers for action to prevent waste and to ecodesign the lamps they put on the market. These levers have been compiled for all sectors, areas and sub-areas in the table below. A relevant example for each lever from the plans is also presented. **ecosystem** has taken the approach of considering all the sectors for which **ecosystem** is approved, to be able to draw inspiration from best practices across these sectors.

MANUFACTURER		**NON-MANUFACTURER**	
LEVER	TEXT TAKEN FROM PLANS	LEVER	TEXT TAKEN FROM PLANS
Identify materials and their composition (nature, substances, etc.) for evaluation and improvement	*Calculate the percentage of recycled and recyclable material for each product*	**Gather information from suppliers**	*Encourage the use of devices manufactured in short circuits and request information from our suppliers on their circuits*
Product design (design, styling,	*Add a design review phase during the development of new*	**Collaborate with manufacturers**	*Work closely with at least X key suppliers to increase the use of*

assembly, etc.)	*products to improve disassembly and separation of parts*	**on product design**	*recycled materials in our products by Y% by 2028*
Work with material suppliers to promote the use of less non-renewable materials and to integrate more recycled and recyclable materials	*Increase the % of recycled materials used in our products and have 100% suppliers with up-to-date REACH & RoHS certification*	**Produce specifications for products using fewer non-renewable materials, more recycled materials and more recyclable products**	*Incorporate design analysis into new product specifications to reduce the amount of material used in mechanical and electronic components*
Pool and standardise materials and components	*Harmonise our product BOMs to use the same component on several products as much as possible*		
Optimise production (quantity of materials, etc.), reduce product size and volumes	*Reduce the total weight of the equipment and its recharging system by at least X%*	**Optimise purchasing, ordering and inventory management**	*Supply/store/sell standard spare parts common to several machines under a single reference (screws, bearings, switches, belts, carbon brushes, etc.): limit the number of product references stocked and reduce logistics flows*
Raise awareness of the circular economy, ratings for materials suppliers (sustainable purchasing)	*Make designers (internal) and suppliers (all) aware of the need to recycle our products using ecosystem tools*	**Raise awareness of the circular economy, ratings for manufacturer suppliers (sustainable purchasing)**	*Introduce an internal eco-responsible purchasing charter for our suppliers, distributors and customers*
-	-	**Create eco-selection systems and raise consumer/end customer awareness**	*Create an eco-score on the 2024 catalogue*

After-sales management	*Development of after-sales service to encourage equipment repairs*	**After-sales management, distribution platform and warehouse**	*Maintain after-sales service and spare parts availability for at least 10 years after product discontinuation*
Internal employee training and engagement	*Raise awareness among purchasing, quality and marketing staff and new recruits of the need to reduce the use of non-renewable resources*	**Employee training and engagement**	*Raise awareness among R&D and purchasing teams of non-renewable materials and their environmental impact*

Manufacturers and non-manufacturers may therefore have different levers for action on product ecodesign due to their role and position in the value chain. These two categories of producer nevertheless underline the importance of raising awareness about waste prevention and ecodesign issues in-house.

For their part, manufacturers have direct control over the production process. They can influence the selection of materials, manufacturing methods and technologies used. They can work directly with suppliers of materials and components, giving them greater capacity to integrate more sustainable materials and more environmentally-friendly manufacturing processes through better control of technical constraints. Thanks to their expertise in manufacturing processes, manufacturers may have a better understanding of the environmental implications of different production methods and are directly involved in product design, giving them the opportunity to integrate environmental considerations right from the start of the process.

Producers who are not directly involved in manufacturing may have less control over these aspects. Their influence can be limited to the definition of specifications and the management of subsequent phases in the product life cycle. These producers are often dependent on their suppliers, in a sometimes closed or niche market. Their ability to influence sustainability may be limited by the options available on the market and by manufacturer decisions. Non-manufacturers may also not have such in-depth knowledge of the technical details of a product and production, which may limit their ability to directly influence these aspects of circularity. Through their closeness, they sometimes have other levers to influence customers/end consumers to choose the most sustainable products, to promote reuse and repair circuits, to manage logistics and after-sales platforms, and thus constitute an important link in the chain for more circularity.

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6. Recommendations and conclusion

Feedback from **ecosystem**

In the SFE sector, ecodesign requirements have already been in place for several years, notably through eco-modulation. More recently, French and European initiatives have focused on optimising material efficiency, which means working on the constituent materials of a product and the way they are arranged: recyclability, integration of recycled materials, re-usability, repairability, durability, etc. The new requirement for prevention and ecodesign plans, which complements other regulations, enables us to **summarise and structure our activities, focusing in particular on this material efficiency**.

In the course of supporting producers in the development of these plans, **ecosystem** has been confronted with **numerous questions about this new obligation**, particularly from small businesses with no resources dedicated to these subjects, and specifically for those with no expertise in product manufacturing. Implementing and identifying levers throughout the supply chain may have been a difficult task, given its scale and relatively tight time line. At the same time, **ecosystem** has sensed concern on the part of producers about the vagueness associated with certain points of these regulations (performance obligation/best efforts obligation, checks, data confidentiality, etc.). **More clarity is needed on the future of these prevention and ecodesign plans**.

With regard to the use of non-renewable resources, the integration of recycled materials and recyclability, certain producers are also subject to obligations concerning the display of the environmental qualities and characteristics of their products (Decree No. 2022-748). Depending on the regulations with which they are confronted, or their level of maturity in ecodesign**, producers may be more or less familiar with these concepts in their technical aspects** (e.g. recycled vs. recovered vs. reused, recyclability vs. recycling, recycled vs. recyclable materials, definition of renewable character, etc.). **Greater awareness of semantics** is needed among all producers. The glossary in the appendix 7 includes terms that may have raised questions or led to confusion in the answers.

To support its producer members in the development of their plans, **ecosystem** has chosen to propose a template to structure their thinking and provide ongoing support. This is reflected in the figures and support tools provided to producers, as described in section (0) "Quality-related feedback on plans received".

This support, which has been much in demand by manufacturers, has also served as a reminder of the challenges facing the sector and the constraints specific to recycling SFEs. **ecosystem warns of the standardisation of obligations and priorities required the law, which could lead to negative rebound effects depending on the sector in question**.

Furthermore, the extensive analysis of plans carried out by **ecosystem** to develop this summary was particularly valuable, especially for the dedicated support to producers. Prior to meeting with a manufacturer, the **ecosystem** ecodesign team can consult the manufacturer's prevention and ecodesign plan, to assess its level of maturity on these issues and make appropriate recommendations to take things even further. This work on prevention and ecodesign plans, and the commitment of producers to areas that complement the mandatory areas, such as repair/repairability, are **very positive signs** that**waste prevention is being integrated at all stages of the product life cycle, beyond end-of-life and production**.

In purely operational terms, our analysis of the plans was complicated by the heterogeneity of producer situations. Some producers, for example, have contracts with **ecosystem** for several sectors (Household/Professional/Lamp/Small fire extinguisher) in which **ecosystem** is approved. Therefore, it was sometimes difficult to know which actions specifically concerned the SFE sector. Similarly, some manufacturers who market appliances in more than one sector submitted a single plan, without any segmentation by sector. Numerous actions in the plans submitted also concern the packaging scope in sections dedicated to products. **ecosystem** must therefore **continue to raise producer awareness of the need to complete the template correctly and enable them to specify the scopes addressed and the associated commitments as and when the plans are updated**.

The AGEC anti-waste law has accelerated the process of transforming business practices and models towards a circular economy. The main trends emerging from this summary have made it possible both to observe a growing awareness among producers and to identify relevant actions aimed at reducing waste, integrating an ecodesign approach as well as other key principles of the circular economy, notably through the repair and re-use of products, but also on other aspects such as supply chain management. On this last point, despite the difficulty many non-manufacturer producers have in identifying levers for action, it is worth noting their willingness to encourage the suppliers and manufacturers of their upstream products to improve ecodesign. **In addition to support for ecodesign, we can also provide real added value in the implementation of sustainable and circular purchasing strategies focused on material efficiency.**

Link with other industry standards and regulations, and **ecosystem** support for ecodesign

For many years, **ecosystem** has already worked to support its producers in ecodesign and the circular economy, promoting the second life of materials and more recently, the extension of appliance life. All these services are described on the company's website (ecosystem, Eco-conception de vos produits, 2023). **ecosystem** support is structured around eight pillars:

- Know your ecodesign obligations
- Be trained in the circular economy and ecodesign
- Discover recycling and its environmental impact
- Ecodesign your products for their second life or end-of-life management
- Assess the recyclability and environmental impact of your products
- Develop products with a circular approach
- Innovate through our research and development projects
- Benefit from ongoing support.

For example, between 1st January and 1st November 2023:

- 869 participants attended the support sessions
- 77 different types of support were provided
- 509 responses were received by e-mail or telephone.

ecosystem remains available to its producer members to continue addressing these issues.

Outlook and conclusions

This year's work has enabled **ecosystem** to consolidate its support for ecodesign in its areas of expertise (second life of materials and products) and to restructure its actions to offer tools suited to the different levels of producer maturity. There is still room for improvement in many areas and the outlook for the next period is bright.

ecosystem intends to continue strengthening its relations with other Producer Responsibility Organisations, as cooperation between PROs and EPR sectors is key to successfully scaling-up waste prevention and ecodesign. By sharing our experience, our visions and our actions, synergies can be identified, enabling us to go further and be even more relevant in our analyses.

Producers are advised to update their prevention and ecodesign plans regularly (at least every year). Regulations specify that this review must be carried out at least every five years. Producers who submitted their plans in July 2023 are therefore required to submit a new version before July 2028.

Finally, **ecosystem** would like to thank all the members who submitted their plans and those who continue to work on them, as well as all the internal and external stakeholders who took part in the project.

7. Glossary and abbreviations

AGEC (Law) - Anti-Gaspillage pour une Economie Circulaire anti-waste law for a circular economy: French law aimed at transforming the linear "produce, consume, dispose" economy into a circular one. It is divided into five main areas:

- Cease the use of single-use plastic;
- Better inform consumers;
- Combat waste and promote solidarity-based reuse;
- Take action against programmed obsolescence;
- Produce more wisely.
  (Service Public, 2023)

Circular Economy: a model that can be defined as an economic system of exchange and production which, at all stages of the product life cycle (goods and services), aims to increase the efficiency of resource use and reduce environmental impact, while enhancing the well-being of individuals. The circular economy can be broken down into three areas and seven pillars, including recycling, extending useful life through reuse, repair and re-use, and ecodesign (ADEME definition, 2023)

CPP - Comité des Parties Prenantes (Stakeholder Committee): committee led by **ecosystem**, incorporating various stakeholders (producers, NGOs, elected representatives, operators, etc.) (**ecosystem** definition).

Ecodesign: a preventive approach that integrates environmental protection into the design of goods and services. Its aim is to reduce the environmental impact of products throughout their life cycle from extraction of raw materials to production, distribution, use and end of life. It is characterised by a broad view of these environmental impacts: it is also a multi-stage approach (incorporating the different stages of the life cycle) and multi-criteria (taking into account material and energy consumption, emissions into the natural environment, effects on climate and biodiversity, etc.). (Minsitère de la Transition Ecologique, 2023)

EPR - Extended Producer Responsibility: extended responsibility for producers to collect or arrange for the collection and treatment of separately collected waste, regardless of when the appliance was put on the market. These obligations are divided between producers according to the categories and sub-categories of appliances defined in paragraph II of article R. 543-172. (Legifrance, Décret n° 2020-1725 du 29 décembre 2020 portant diverses dispositions d'adaptation relatives à la responsabilité élargie des producteurs, 2020)

Household vs. Professional: Professional equipment incorporates devices that by their very nature are intended exclusively for professional use. All other small fire extinguishers are considered household appliances (ecosystem, Qu'est-ce qu'un DEEE, D3E ou déchet d'équipement électrique et électronique ?, 2023)

LCA - Life Cycle Assessment: compilation and evaluation of the inputs, outputs and potential environmental impacts of a product system over its life cycle. The life cycle is characterised as the consecutive and interrelated phases of a product system, from the acquisition of raw materials or the generation of natural resources through to final disposal. (ISO14040:2006)

Manufacturer: producer responsible for the manufacture and/or assembly of the product(s) marketed (**ecosystem** definition)

Non-manufacturer: a producer who is not considered a manufacturer under the definition above and who may be an introducer (outside the EU), importer (EU), remote seller or own-brand vendor (**ecosystem** definition)

Non-renewable (or exhaustible): refers to a material whose rate of destruction exceeds the rate of creation, whether by a wide margin or not. Some examples for the industry: all metals, fossil-derived thermosets and thermoplastics (plastics), glass, etc. (**ecosystem** definition)

PPE - Plan de Prévention et d'Ecoconception (prevention and ecodesign plan): a plan drawn up by the producer and revised every five years, with the aim of reducing the use of non-renewable resources, increasing the use of recycled materials and increasing the recyclability of its products in processing facilities located in France. (Legifrance, Article L541-10-12 - Code de l'environnement, 2020)

PPE - Plan de Prévention et d'Ecoconception Collectif (collective prevention and ecodesign plan): prevention and ecodesign plan consolidated by a Producer Responsibility Organisation to represent the sector (**ecosystem** definition)

PPE - Plan de Prévention et d'Ecoconception commun (joint prevention and ecodesign plan): prevention and ecodesign plan drawn up jointly by several independent producers who are not part of the same group (**ecosystem** definition).

PPE - Plan de Prévention et d'Ecoconception Individuel (individual prevention and ecodesign plan): prevention and ecodesign plan developed by a single producer (**ecosystem** definition)

PFAS - Perfluoroalkylated substances: a family of several thousand synthetic chemicals containing carbon-fluorine bonds, commonly used throughout society and found in the environment. Most PFAS are also easily transported in the environment over long distances, far from their source of emission, and are very persistent in the environment and harmful to human health (**ecosystem** definition)

Prevention: all measures taken before a substance, material or product becomes waste, when these measures contribute to the reduction of at least one of the following items:

- the quantity of waste generated, including through the re-use or extension of the useful life of substances, materials or products;
- the harmful effects of waste products on the environment and human health;
- the content of substances hazardous to the environment and human health in substances, materials or products.
  (Legifrance, Article L541-1-1 - Code de l'environnement, 2020)

Producer: any natural or legal person who, regardless of the sales technique used, including by remote methods such as mail order, internet or telephone:

- is incorporated in France and manufactures small fire extinguishers under its own name or brand, or has small fire extinguishers designed or manufactured and markets them under its own name or brand in France;
- is incorporated in France and resells, under its own name or brand, small fire extinguishers produced by other suppliers, the reseller not being considered as a "producer" when the producer's brand appears on the appliance in accordance with a;
- is incorporated in France and sells, on a professional basis, small fire extinguishers from a third country or another member state;
- is incorporated in another Member State or in a third country and sells small fire extinguishers in France by means of remote methods directly to households or to users other than households.
  (Legifrance, Article R543-174 - Code de l'environnement , 2021)

REACH - Registration, Evaluation, Authorisation and restriction of CHemicals: European Union regulation adopted to better protect human health and the environment against the risks associated with chemical substances, while promoting the competitiveness of the EU chemical industry. (ECHA, 2023)

Recyclable: a material or component that can effectively be recycled with waste from identical or similar products. Recyclability is characterised by:

- Being suitable for efficient collection on a regional scale, through access to local collection points;
- Being suitable for sorting i.e. directed to recycling channels for recycling;
- The absence of elements or substances that interfere with sorting and recycling or limit the use of recycled material;
- The ability to ensure that the recycled material produced by the recycling processes used represents more than 50% by mass of the waste collected;
- Being suitable for recycling on an industrial scale and in practice, in particular by guaranteeing that the quality of the recycled material produced is sufficient to ensure long-term outlets, and that the recycling chain can demonstrate a strong capacity to handle products that can be integrated into it.

  (JORF n°0101, 2022)

Recycled (material): refers to a material that is recovered from the waste generated. The material may be "pre-consumer" or "post-consumer". The term "pre-consumer" material is used when it is diverted from the waste generated during a manufacturing process, excluding the reuse of materials such as those resulting from reprocessing, regrinding, or residues generated by a given process, and which are re-injected into the same process [same manufacturing operation for the same type of product] that generated them. "Post-consumer" materials are those recovered from waste generated by households or by commercial, industrial, or institutional facilities in their role as end-users of a finished product. This includes returns of products or their constituent parts, from the distribution of finished products to end users. The terms "recycled material" and "secondary material" have the same meaning. (Comité Européen de Normalisation (CEN), 2020)

Recycling: any recovery operation whereby waste, including organic waste, is reprocessed into substances, materials, or products for use in its original function or for other purposes. (Legifrance, Article L541-1-1 - Code de l'environnement, 2020)

Renewable: refers to a material whose stock can be replenished over a short period of time on the human time scale, renewing itself at least as fast as it is consumed. Some examples for the industry: bamboo fibre, certain types of wood, biosourced plastics based on corn starch or cane sugar, for example, certain rubbers, etc. (**ecosystem** definition)

Re-use: any operation by which substances, materials or products that are not waste are used again for a purpose identical to that for which they were designed [same definition as above] (Legifrance, Article L541-1-1 - Code de l'environnement, 2020)

SFE: Small Fire Extinguishers: powder, water or foam, small fire extinguishers (SFE) weighing less than 2 kg or 2 litres are used by professionals and private individuals alike, particularly in road vehicles and pleasure boats. At the end of their useful life, they are known as Household Hazardous Waste (HHW). They must be collected and recycled in accordance with regulations (**ecosystem** definition)

Waste: any residue from a production, transformation or use process, any substance, material, product or more generally, any movable asset abandoned or intended for abandonment by its holder. (Legifrance, Article L541-1-1 - Code de l'environnement, 2020)

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