

EXTENDED PRODUCER RESPONSIBILITY CHAINS IN FRANCE

Panorama 2011



ADEME



Agence de l'Environnement
et de la Maîtrise de l'Energie

COLLECTION REPÈRES



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This summary document offers readers an updated view of the current status of Extended Producer Responsibility (EPR) chains and their implementation in France.

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26 Events of the past 24 months

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- Extended Producer Responsibility chains (EPR chains): Filières à Responsabilité Élargie du Producteur (filières REP)
 - Producer Compliance Scheme (PCS): Éco-organisme
 - EPR fee: Éco-contribution



The origins of EPR

Industrial production and goods consumption have been steadily rising for 40 years, since the 1960s. As early as the mid-1970s, when Law 75-663 (15 July 1975) on waste disposal and materials recovery was passed in France, industrial producers were required to improve their waste management practices, in particular for hazardous waste (then called special waste), and waste treatment was taken into consideration in production processes. In the 1980s rising environmental awareness in France, as in neighbouring European countries, led to substantial improvement in the soundness of waste management, as the strong tendency to send waste to storage facilities (called dumps or landfills at the time) gave way to increasingly sophisticated and environmentally friendly treatment activities. At the end of the 1980s local authorities, who are responsible for household waste management, were facing the twin problems of rapidly rising amounts of waste and the obligation to adopt quality-driven management practices. The authorities incurred strong increases in waste management costs, which would have to be passed on to residents.

This was one of the reasons that led the French government, like others, to reassess its waste management policy. To limit the environmental consequences of the growing quantity of waste, it was deemed necessary to transfer the financial responsibility for waste management to the producer (manufacturer or importer), in application of the “polluter pays” principle.

The Organisation for Economic Co-operation and Development (OECD) took a pioneering role in establishing the principle of **Extended Producer Responsibility (EPR)**, launching the debate on the internalisation of the external costs of waste management in the 1980s. In 1994 OECD opened an international discussion to assess the benefits of EPR and outline the conditions necessary for its implementation. OECD published *Extended Producer Responsibility – A Guidance Manual for Governments* in 2001. This handbook defines EPR as an environmental policy instrument that extends the material and/or financial obligations of a product producer up to the final stage of the product’s life cycle, just upstream of consumption.

This can be taken as the birth announcement for EPR.

In 1991 a new type of regulatory instrument was adopted in Germany, implicating the entities that put products on the market (or producers) in the management of packaging waste generated by products offered for sale. Financial responsibility was no longer assumed solely by waste producers, but also by product producers, who could be assigned an organisational role as well.

In parallel, work carried out by the European Union underscored that certain waste streams needed special attention, either because of the risks engendered, as with batteries and accumulators, or because of the increasingly large quantities involved, as with packaging. As these streams called for specifically tailored management, the European Union drew up appropriate policy measures in two directives, in 1991 and 1994, but these did not make EPR mandatory.

At the same time waste recycling targets began to be set in Europe.

In the beginning EPR was characterised by two aims:

- relieve local authorities of some or all of the cost of managing waste, and transfer the financing from taxpayers to consumers;
- internalise the cost of end-of-life management of a product in the new product sale price, so as to incite manufacturers to adopt an ecodesign approach.*

The related objective of efficient waste recycling took hold particularly in Europe and is now systematically found in regulations.

* Ecodesign consists in integrating environmental concerns as early as the initial design phase for products, both goods and services, in order to prevent waste production at the source and facilitate recycling. Ecodesign is a major tool for minimising and reducing environmental impacts at the source, inducing lower consumption of raw materials and energy, less waste, fewer discharges into the air and surface and ground waters. This process covers all stages of a product’s life cycle – extraction and production of raw materials, manufacturing, transport, distribution, use, recovery and treatment of the used product – with a view to limiting the product’s impacts on the environment.

Forerunners to EPR in France

The principle of waste management assigned in whole or in part to actors in the economy, e.g. the manufacturers, distributors and importers who market products that generate waste, has been enshrined in French law since 1975 and is codified in article L. 541-10 of the Environment Code.

"Producers, importers and distributors of these products and/or of components and materials used to manufacture them may be required to take steps for or contribute to the disposal of the waste that comes from these products."

While EPR is based on the notion of the producer's individual responsibility, this responsibility can be assumed individually or collectively.

Implementation of EPR in France

Producer responsibility, in its most restricted form, was first applied in France in the 1980s, with a tax paid by marketers of basic oils to finance management of used lubricants.

The first real Extended Producer Responsibility (EPR) chain came into being with a decree on household packaging issued on 1 April 1992.

Most of the EPR chains in France are established in the framework of regulatory obligations. There are some cases, however, of purely voluntary EPR measures adopted by producers.

France therefore has EPR chains based on national and on European regulations, but also voluntary industrial chains. Some of these chains handle only products destined for household consumption, some handle only professional-use products, and still others cover both household and professional products.

France is currently the country in the world where this management principle is the most broadly applied, with some 20 EPR chains of different types, at different stages of implementation.

EUROPEAN EPR REGULATIONS TRANSPOSED IN FRANCE

- Automobiles*
- Electrical and electronic equipment
- Batteries and accumulators

EPR IN FRANCE IN RESPONSE TO EUROPEAN REGULATIONS

- Household packaging
- Fluorinated refrigerants
- Pharmaceuticals
- (Lubricants)

FRENCH EPR REGULATIONS

- Tyres
- Graphic papers
- Textiles, household linens and shoes
- Healthcare activities and infectious waste
- Furniture
- Chemicals
- Gas canisters (forthcoming)

VOLUNTARY EPR IN FRANCE

- Agricultural supplies
- PV panels **
- Mobile homes
- Ink cartridges

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* End-of-life vehicles

** EPR chain integrated into the WEEE chain (European regulations) as of 14 February 2014

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Type of product	Operational start-up of EPR chain ⁽¹⁾	Products covered by the EPR chain
EPR chains required by European directive		
Portable, automotive and industrial batteries and accumulators	1 January 2001 for household batteries and accumulators 22 December 2009 for new EPR covering portable batteries and EPR extended to professional users (automobile and industrial batteries)	All types of batteries and accumulators regardless of shape, size, volume, weight or materials, excepting batteries and accumulators used in military equipment or in devices meant to be launched in space
Professional and household electrical and electronic equipment	13 August 2005 for professional EEE 15 November 2006 for household EEE	Electrical and electronic equipment for household and professional use
Automobiles	24 May 2006	Personal cars and professional utility vehicles under 3.5 tonnes GVW
EPR chains established in France in response to European directives or EC regulations that do not require EPR		
Lubricants⁽²⁾	Financed by ADEME since 1986 Restricted to overseas departments and communities since 2011	Mineral and synthetic oils
Household packaging	1 January 1993	Household packaging
Fluorinated refrigerants	1 January 2009	Fluorinated refrigerants used by professionals
Pharmaceuticals	1 October 2009	Unused pharmaceuticals for personal human consumption
EPR chains required by national regulations		
Tyres	1 March 2004	Consumer and professional tyres (cars, heavy-duty trucks, motorcycles, public works machinery, tractors, aeroplanes, etc.) excepting bicycle and scooter tyres
Graphic papers	19 January 2007	Household printed and printing paper and similar products
Textiles, household linens, shoes	1 January 2007	Clothing and household linens, shoes
Healthcare activities and infectious waste	Planned for Autumn 2012	Medical waste sharps used in self-treatment
Chemicals	Planned for end 2012	Household chemical waste that represents a potentially significant risk for health and the environment
Furniture	Planned for end 2012	Household and professional furniture and furnishings
Bottled gas canisters	Planned for early 2013	Bottled gas canisters for home use
EPR chains based on voluntary agreements		
Agricultural supplies	Progressive implementation starting 4 July 2001	Empty packaging of professional plant protection products, unused professional plant protection products, flexible packaging of professional agricultural fertiliser and soil amendment substances ("big bags"), used "big bag" seed and plant packaging, used agricultural films (professional use), milking machinery cleaning and disinfection products, dairy farm hygiene products
Office equipment consumables	27 January 2000	Ink cartridges
Mobile homes	2010	Mobile homes

(1) Date of first certification or operational functioning of the organisation, or date from which used products have been effectively processed.

(2) The management chain for used lubricants in France is based on principles close to those of EPR in that the lubricants are collected separately and marketers pay a General Tax on Polluting Activities (Taxe générale sur les activités polluantes, TGAP) into the State budget. ADEME receives a budgetary allocation from the State that funds the collection and treatment of used lubricants. This mechanism differs from a true EPR chain in that producers have no direct responsibility in the management chain.

The principles of EPR

REGULATORY FRAMEWORK



European regulations

Waste Framework Directive 2008/98/EC of 19 November 2008



French regulations

- Article L 541-10 of the Environment Code, supplemented by the Grenelle 2 legislation, Law 2010-788 (12 July 2010) framing the national commitment to the environment
- Specific decrees and articles of the Environment Code for each chain

EPR chains required by European directive

Portable, automotive and industrial batteries and accumulators

Directive 2006/66/EC
Decree n° 2009-1139, 22 September 2009
Decree n° 2012-617, 2 May 2012
Articles R 543-124 to R 543-136, Environment Code

Household and professional electrical and electronic equipment

Directive 2002/96/EC
Decree n° 2005-829, 20 July 2005
Articles R 543-172 to R 543-206, Environment Code

Automobiles

Directive 2000/53/EC, 18 September 2000
Decree n° 2003-727, 1 August 2003
Decree n° 2011-153, 4 February 2011
Articles R 543-153 to R 543-171, Environment Code

EPR chains established in France in response to European directives or EC regulations that do not require EPR

Lubricants

Waste Framework Directive 2008/98/EC, 19 November 2008
Decree n° 79-981, 21 November 1979 (amended)
Articles R 543-3 to R 543-15, Environment Code

Household packaging

Directive 94/62/EC (amended)
Decree n° 92-377 (amended)
Article 46, Law 2009-967
Articles R 543-53 to R 543-65, Environment Code

Fluorinated refrigerants

Community regulations 842/2006 and 1005/2009
Decree n° 2007-737, 7 May 2007
Decree n° 2011-396, 13 April 2011
Articles R 543-75 to R 543-123, Environment Code

Pharmaceuticals

Directive 2004/27/EC, 31 March 2004
Decree n° 2009-718, 17 June 2009

EPR chains required by national regulations

Tyres

Decree n° 2002-1563, 24 December 2002
Articles R 543-137 to R 543-152, Environment Code

Graphic papers

Article L 541-10-1, Environment Code
Articles R 543-207 to R 543-212, Environment Code
Decree n° 2010-945, 24 August 2010

Textiles, household linens, shoes

Decree n° 2008-602, 25 June 2008
Article L 541-10-3, Environment Code
Articles R 543-214 to R 543-224, Environment Code

Healthcare activities and infectious waste

Article L 4211-2-1, Public Health Code
Decree n° 2010-1263, 22 October 2010

Chemicals

Article L 541-10-4 (V), Environment Code
Decree n° 2012-13, 4 January 2012

Furniture

Article 200, Grenelle 2 Law, 12 July 2010
Decree n° 2012-22, 6 January 2012

Bottled gas canisters

Article 193, Grenelle 2 Law, 12 July 2010
Article L 541-10-7, Environment Code

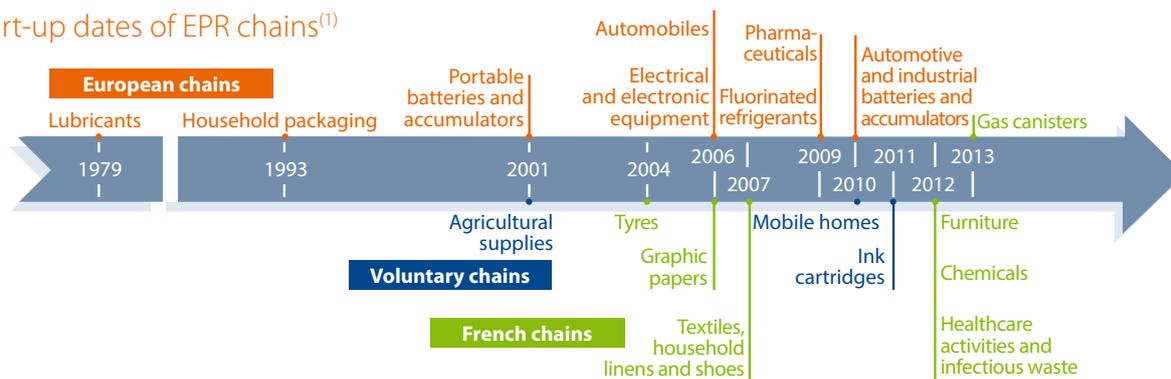


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This is a partial list of founding regulatory texts for EPR chains. For more detailed information see the summary documents for each chain in the Collection Repères, ADEME Editions.

Start-up dates of EPR chains⁽¹⁾



Framework Directive on Waste 2008/98/EC of 19 November 2008

The principle of Extended Producer Responsibility was stated at the European level by Directive 75/442/EEC of 15 July 1975 (modified): "In accordance with the 'polluter pays' principle, the cost of disposing of waste [...] shall be borne by: - the holder who has waste handled by a waste collector or by an undertaking [...] - and/or the previous holders or the producer of the product from which the waste came."

Following on the 1994 packaging directive, the first directive that led States to implement EPR policy, the European Union has extended this type of management to other products via a series of directives. The EPR principle was clearly enunciated in the 6th Environment Action Programme of the European Community (2001-2010) and integrated into the framework directive 2008/98/EC which was transposed into French law in late 2010 (decree n°2010-1579 of 17 December 2010).

Article 8 of this directive stipulates that Member States can enact legislative or other measures to apply Extended Producer Responsibility to product producers in order to bolster reuse, waste prevention, recycling and other forms of recovery of used products.

The Member States must take technical feasibility and economic visibility into account, as well as social and environmental impacts, while respecting the rules of the internal market.

The French regulatory framework

The responsibilities of actors in EPR chains are specified in Article L.541-10 of the Environment Code, supplemented by the Grenelle 2 legislation, Law 2010-788 of 12 July 2010 framing the national commitment to the environment: "The manufacture, possession with intent to sell, presentation for sale, sale and delivery to users, in whatever form, of products that generate waste can be regulated with a view to facilitating disposal of said waste, or may be banned in case of necessity."

In application of the principle of Extended Producer Responsibility, as laid down in article 8 of directive 2008/98/EC of the European Parliament and the Council of 19 November 2008 pertaining to waste and abrogating certain directives, producers, importers and distributors of these products and/or components and materials used to manufacture them may be required to take steps for or contribute to the disposal of the waste that comes from these products.

The producers, importers and distributors who are subject to the above-mentioned obligations under the provisions of this section, and in compliance with said provisions, shall fulfil their obligations by setting up individual enterprise-based collection and treatment systems for the waste generated by their products, or by collectively putting into place Producer Compliance Schemes to which they transfer their waste obligation, paying a financial contribution and ensuring the governance of the organisations.

The individual systems are approved by the State for a maximum period of six years (renewable) on condition that the producers, importers and distributors who set up the systems show their technical and financial capacity to meet the requirements of terms of reference established by cabinet decree.

The terms of reference applicable to the Producer Compliance Schemes, or PCSs (called eco-organisations in France), stipulate, among others:

- 1) the missions of these organisations
- 2) that the financial contributions received by the organisations and the income they generate are used in their entirety to accomplish these missions
- 3) that the PCSs pursue no lucrative or profit-making ends in fulfilling these missions.

The approved PCSs are subject to oversight by a State comptroller as stipulated by article 46 of the programme law 2009-967 of 3 August 2009 pertaining to implementation of the Grenelle environmental legislation. The mode of designation and the missions of the State comptroller are established by decree.

The same producers, importers and distributors may also be required to participate in the management of waste from products that are identical or similar to those sold or distributed before 18 July 1975, for which they will receive fair remuneration.

The holders of waste from said products may be required to turn them over to facilities or services designated by and under conditions set by the government.

The financial contributions stipulated by articles L.541-10-1 to L.541-10-8 shall be modulated, as the case may be, when product design takes into account the environmental impact of a product at the end of its useful life, in particular when steps are taken to facilitate recovery of materials."

To date the implementation of EPR regulations in France has given rise to:

- 16 specific application decrees
- 17 certification orders
- 34 administrative orders (other than certification orders).

(1) Date of first certification or operational functioning of the organisation, or date from which used products have been effectively processed.

WHAT PRODUCTS ARE COVERED BY EPR CHAINS?

The products covered by EPR are primarily products that pose problems for recycling or recovery operations when they are present in mixed waste, and which generate high management costs,

- because of the quantities involved, as for packaging
- due to the hazards they represent, as for chemicals
- due to health risks in the case of potentially infectious healthcare waste
- or because recovery operations are costly and give rise to undesirable practices, as for tyres.

Other factors that make management more costly are the complexity of certain used products (such as electrical and electronic equipment) and widely dispersed waste products (as for batteries and accumulators).

PRINCIPLES OF IMPLEMENTATION

Each EPR chain has particular features, but they share common principles that underlie the implementation of Extended Producer Responsibility:

- minimum targets for reuse, recycling or recovery operations when possible
- regulatory requirements for financing and/or direct responsibility for management *in situ*
- restriction or banning of dangerous substances in products
- application of an EPR fee (called eco-contribution in France)* when products are put on the market, to cover all or part of the end-of-life management of used products, or creation of a deposit system
- modulation of the EPR fee according to environmental criteria, in particular related to management of the waste phase, to encourage ecodesign by producers
- information and incentives for waste holders, encouraging them to sort waste properly, in conjunction with all actors
- organised monitoring to ascertain that objectives are obtained and to trigger inspections with a view to applying sanctions to producers who fail to comply with regulations
- certification of the organisations that meet requirements, for a period not to exceed six years.

* EPR fees: These fees are related to the requirement that those who put products on the market (producers, importers, distributors) finance in whole or in part the end-of-life management of products covered by an EPR chain, including collection, sorting, transport, removal of pollutants or dismantling, recycling, materials recovery and final disposal, as the case may be. The financial contributions are not a tax; they are not paid into the State budget, but are levied and collected on a contractual basis by PCSs. In exchange these organisations assume a responsibility. The EPR fees are systematically correlated to the quantity of merchandise marketed. They are determined by the costs of managing waste generated by the end-of-life product. As stipulated by the Environment Code, these fees must be adjusted, in particular to incite producers to adopt ecodesign approaches. EPR fees are calculated in the same way for all the industrial producers in a given chain, and cannot vary from one producer to another. They are paid to PCSs which then assume responsibility for the waste in lieu of the producers. These funds underwrite used-product management costs in mainland France and in French overseas departments and territories, under the same legislation. See diagram explaining the principles of EPR fees page 11.

ACTORS AND THEIR ROLES

Extended Producer Responsibility is in practice responsibility shared between all actors.

Holdings

Whether they be the initial producer of waste or any other entity that holds waste intended for discard, either household or professional, waste holders must sort their waste and see that it is treated and disposed of according to the appropriate mechanisms.

Distributors

Retail and bulk distributors must inform consumers of the proper end-of-life management of used products, and may also be required to take back end-of-life products free of charge, without purchase obligations or when an equivalent new product is purchased.

Local authorities

Local authorities separately collect or take in used household products under the framework set by regulations and technical stipulations in the government orders certifying Producer Compliance Schemes.

Producers and marketers

Manufacturers who distribute in France, importers of products from the European Union or elsewhere, and distributors who distribute their own brands must all participate financially and/or directly (handling waste streams) in the appropriate management chain, and see that waste is transported to suitable treatment facilities. To this end they may assume their responsibility individually, or collectively *via* a Producer Compliance Scheme.

Waste treatment service vendors

These vendors ensure waste management in whole or in part, including collection, transport, preparation for reuse, materials recovery and disposal, in conditions that respect the environment, comply with specific standards for each type of waste, and preserve human health.

Government authorities

Government authorities establish the regulatory framework of objectives, responsibility shared between actors, approvals, etc., and ensure that mechanisms are properly executed (monitoring of the EPR chain, quantities entering the market, collected and treated, etc.). They determine that the action undertaken by Producer Compliance Schemes complies with their certification, and take steps to sanction those in violation as the case may be.



IMPLEMENTATION SCHEMES

The implementation of EPR chains grants professionals a certain degree of freedom in organising a system to fulfil their obligations. This organisation may or may not include creation of a Producer Compliance Scheme.

Three broad types of organisation have emerged, distinguished by whether they transfer the producers' financial and/or organisational responsibility or not.

“Individual” schemes

The producer who markets a product assumes in his own name responsibility for collecting and treating the waste generated by the products marketed. In some chains the responsibility for waste generated by the products of more than one producer is shared between producers in proportion to their market share. As an example, the Mobivia company, responsible for tyres marketed under its own brand, meets its obligations by collecting and treating used tyres of all brands.

“Pooled” schemes

The producer who markets a product contracts with a vendor or an entity not controlled by the producer, to organise a system for collecting and treating end-of-life products. In most instances several producers of similar products jointly contract for this service.

The vendor or service provider is mandated to act for the producer(s). These partners are not and cannot be certified, and the producers remain individually responsible.

The France Recyclage Pneumatiques (FRP) firm, for instance, collects and treats waste tyres from several companies that solicited a group service from this vendor.

“Collective” schemes via Producer Compliance Schemes

Producers transfer their responsibility to a collective organisation, known as a Producer Compliance Scheme, in which they take membership. The producers may also be shareholders of the PCS to which they belong. In exchange for the transfer of responsibility the PCSs receive an EPR fee to enable the organisation to fulfil the producers' obligations, including all regulatory requirements. The producers are directly involved in the governance of their respective PCSs.

This system is illustrated by the example of the first PCS, Éco-Emballages, that takes over producers' responsibility for household packaging, in order to raise funds to collect and treat household packaging waste.

The PCS is a “**financer**” if it assumes only the producer's financial responsibility. In this case, the PCSs generally provide funds to local authorities (as for packaging or paper), but may also finance other types of action such as textile sorting.

The PCS may be an “**organiser**” if it takes over a producer's technical responsibility, directly handling waste streams. In all instances of this type currently in operation, the PCS contracts with service providers that are selected *via* calls for tender (examples are batteries and accumulators, and electrical and electronic equipment). An “organiser” PCS can also have a secondary role as “financer”; this hybrid system is frequently in place for household waste.

Producer Compliance Schemes are private-sector enterprises that may adopt any legal form: not-for-profit group, public or private limited company, simplified statutes company, economic interest group. The governance of PCSs must be ensured by its producers, shareholders and/or members.

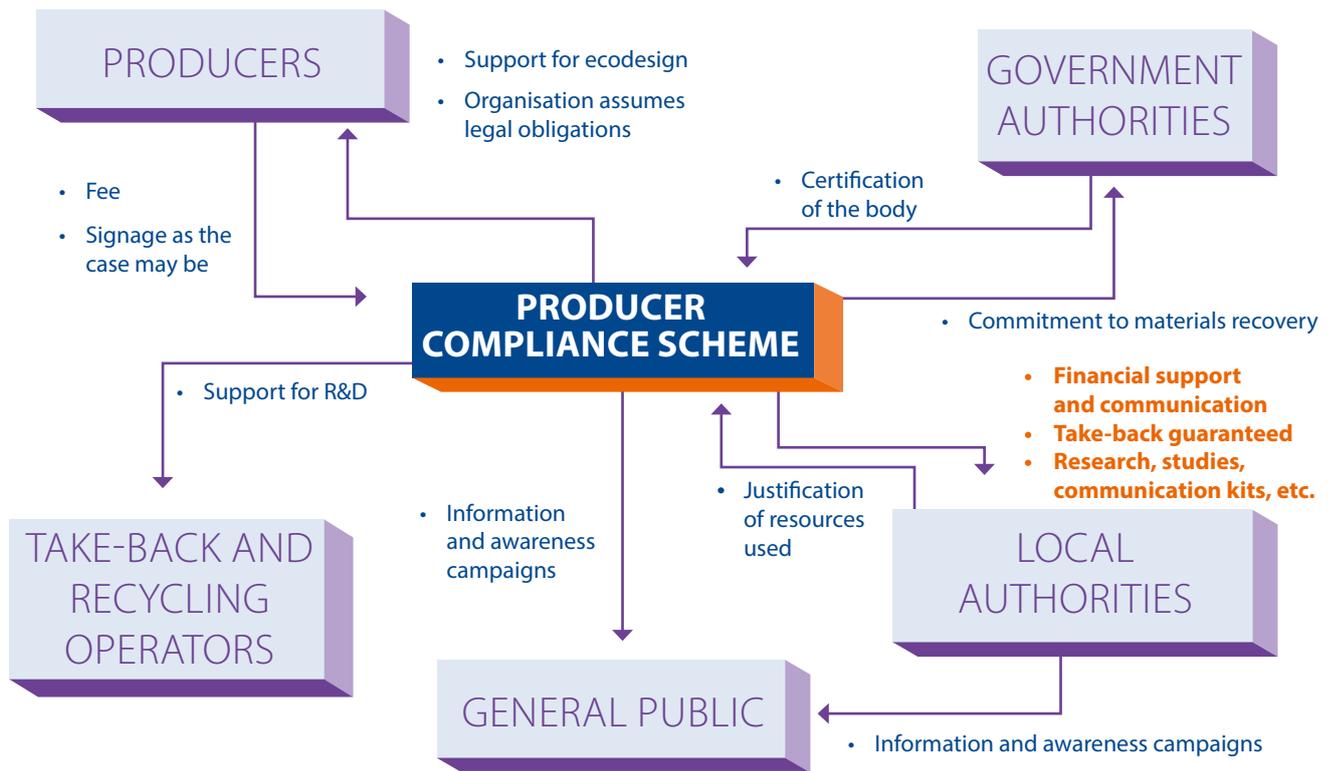
In the case of regulated EPR chains, the organisations are certified by government authorities (excepting treatment of tyres, for the time being) according to the criteria under terms of reference that set the organisations' obligations in terms of resources, results and management of relations between the different actors involved, for a period of no more than six years.

The PCS mechanism is based on partnerships between different actors in the product life cycle, and calls for coordination of action between these actors.

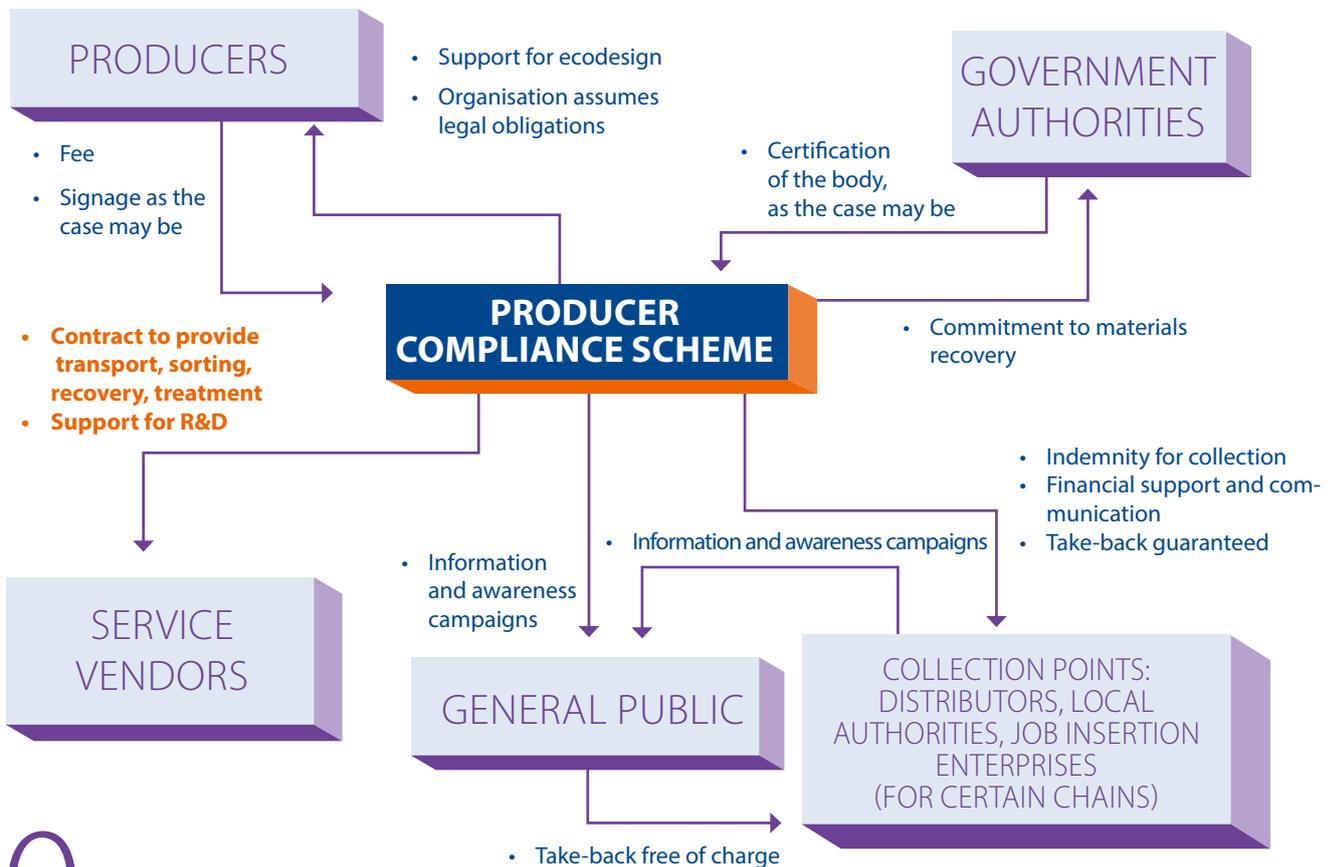
In most cases, and in order to meet recycling and recovery objectives, PCSs sign voluntary agreements with local authorities by which the authorities pledge to implement separate collection and sorting of end-of-life products according to technical instructions that are communicated to residents under their jurisdiction. The PCSs pledge to take in the collected products at no cost, regardless of market conditions for raw materials. This type of mechanism generally includes financial support for collection, sorting and/or communication, as the case may be. PCSs that are organisers can also contract with distributors when the latter are required to take back used products, in particular when a new product is purchased (the “take-back” principle).

To be sure to have long-term outlets for collected products, PCSs in most chains sign partnership or subcontracting agreements with industries that use recovered materials. They also fund research and development programmes to improve the performance of materials recovery and removal of pollutants.

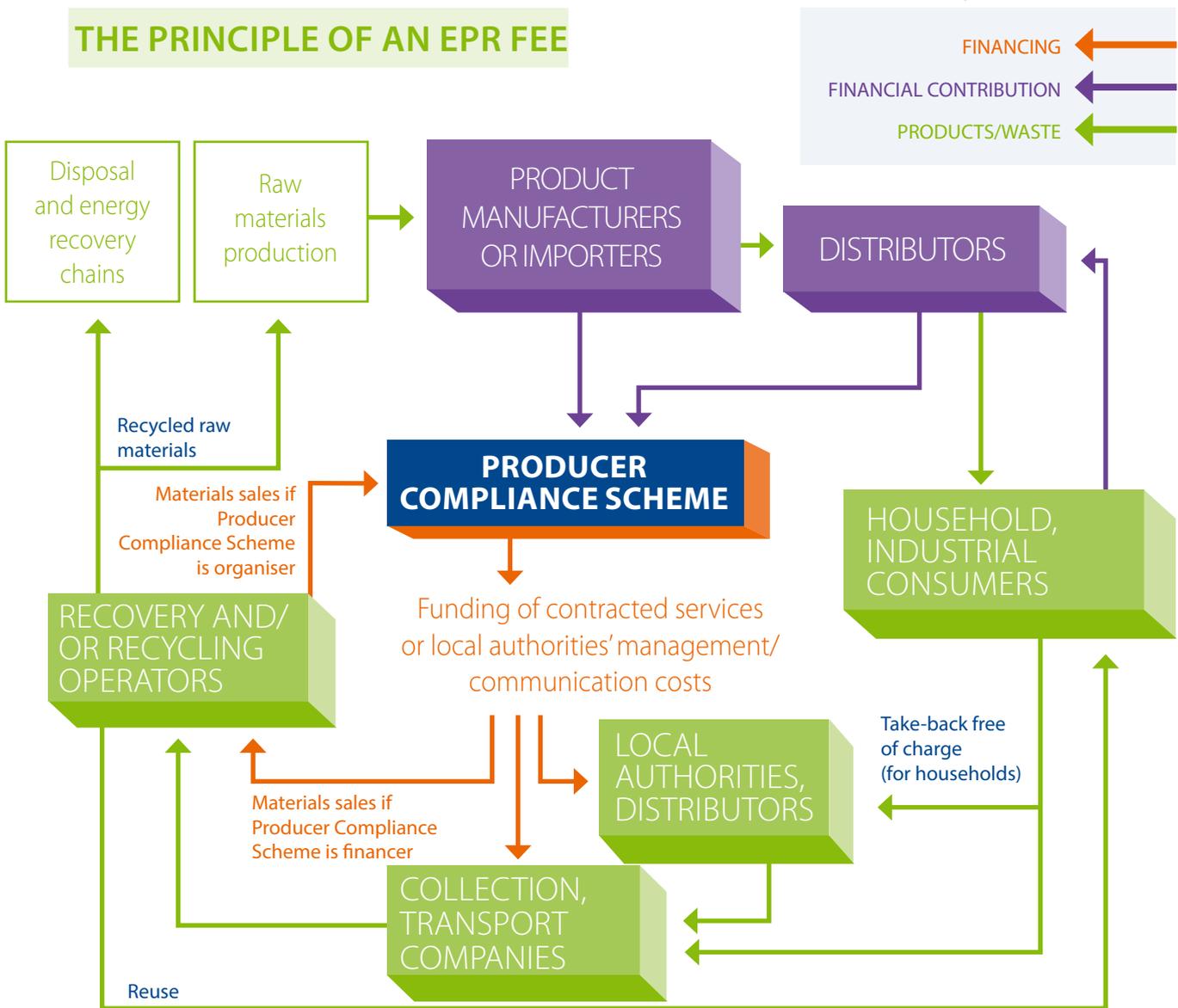
“Financial” producer compliance schemes, e.g. for household packaging



“Organiser” producer compliance schemes, e.g. for tyres



THE PRINCIPLE OF AN EPR FEE



New products

The EPR fee is included in the price paid by consumers when a product is purchased. It is remitted by the retailer to the producer or importer, who in turn passes it on to the appropriate Producer Compliance Scheme. This EPR fee is in most cases not explicitly mentioned in the price of the product; exceptionally the fee amount may be visibly displayed, when regulations allow, as for electrical and electronic equipment. Experience shows that in real life the EPR fee is not fully passed on to consumers and a fraction is absorbed by the market, as a result of commercial practices. The mechanisms by which the fees are fully or partially integrated into the product price are not easily described.

Waste

Households can discard used products free of charge, by turning them over to local authorities, distributors or operators. Professional and business holders of waste can have their end-of-life products collected, or bring them to a collection point set up by a Producer Compliance Scheme. The PCS takes financial responsibility, in whole or in part, for waste collection, sorting, recycling and recovery, and final disposal.

Local authorities

Local authorities are responsible for managing household waste. In this capacity they are an important vector for communicating information to individuals. They can also be a preferred partner for Producer Compliance Schemes when the products covered by an EPR chain are common consumer products.

The proportion of waste collection and treatment costs covered by PCSs varies from one chain to another. For electrical and electronic equipment, for instance, the funding provided by PCSs is based on 100% of the average estimated cost of collection at civic amenity sites.

By comparison, current legislation stipulates that for household packaging waste 80% of the overall reference cost of efficient collection and sorting will be covered by 2012, which means that 20% of the cost of managing separately collected or recycled packaging waste will fall to taxpayers. In most EPR chains the PCSs pay a flat fee to local authorities to support communication campaigns.

REGULATION AND MONITORING OF EPR CHAINS

After putting regulations into place, the prime role of government authorities is to oversee the operation of EPR chains and PCSs, by setting operational rules and targets, and by arbitrating between actors. This role includes:

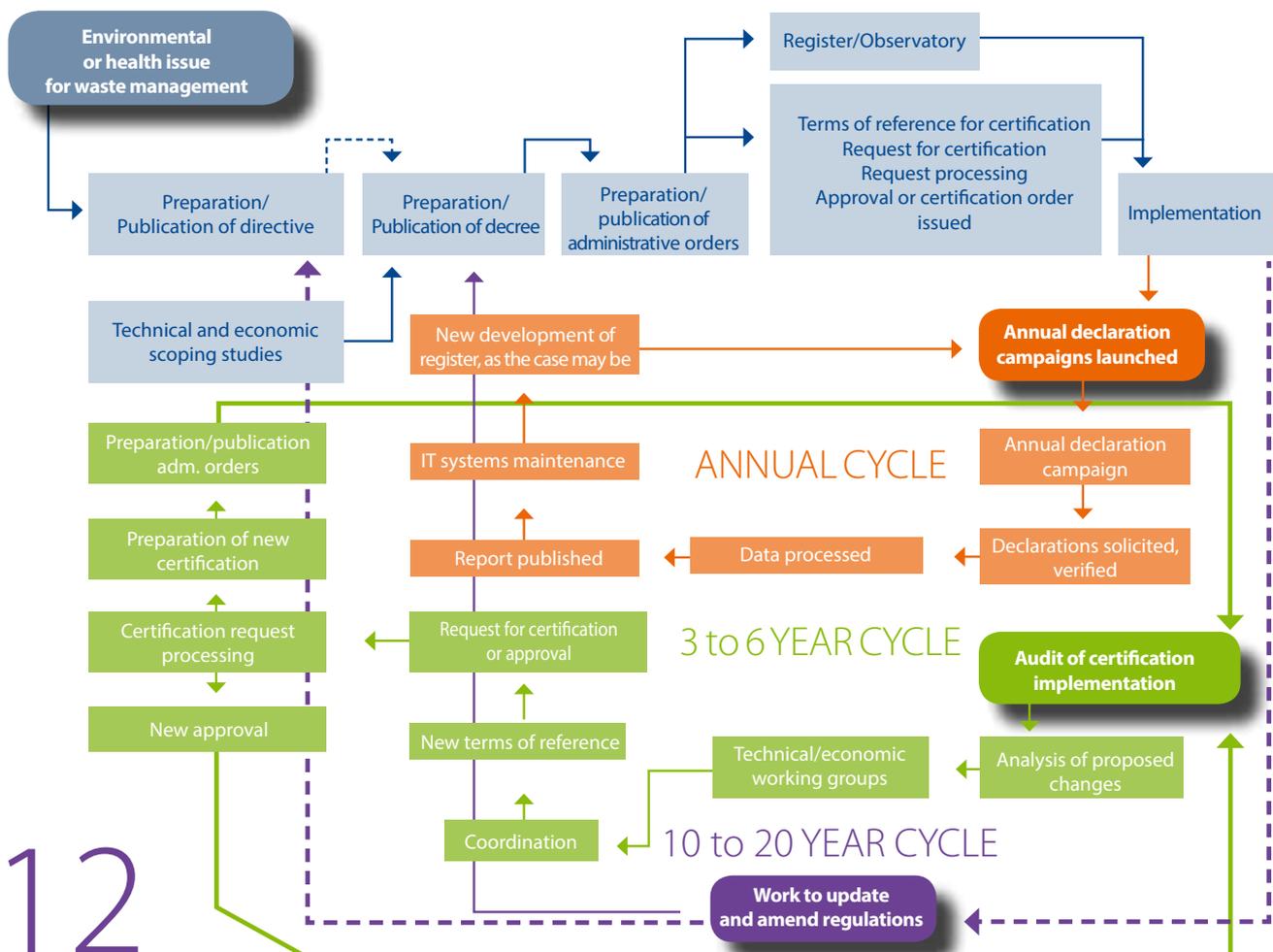
- determining terms of reference for the certification of PCSs
- approving the fee schedule for EPR fees paid upstream by producers
- approving the fee schedule for downstream payments, in particular when local authorities are involved in collection and sorting
- periodic sharing out of objectives between different PCSs that intervene in the same EPR chain
- determining rules for the implementation of financial guarantees, as the case may be
- validating standard contracts.

In most instances the State entrusts ADEME with the task of establishing **Observatories for EPR chains**. This mission consists of:

- managing periodic data transmitted by producers, distributors and operators
- publishing annual Observatory reports on the chains
- evaluating the operations of EPR chains.

For its assessments the State relies on reports from ADEME, on evaluations the government has requested, and on the advice of **special consultative commissions established to monitor or certify each chain**.

Life cycle of an EPR chain



These commissions bring together representatives from government ministries and ADEME, as well as from bodies that represent the actors in the chain:

- entities that bring products to the market
- distributors
- local authorities
- consumer groups
- environmental protection organisations
- waste collection and treatment entities.

By law a State **comptroller** sits on the board of each certified PCS to oversee and ensure proper financial operations. The role of the comptroller is specified by government decree n°2011-499 of 19 April 2011. The comptroller may carry out audits. Each PCS is monitored to ascertain whether it has attained its objectives, as well as to determine France's position in relation to the objectives set for the country by European regulations. The data gathered improves the regulatory process and can be used to sanction actors who are not in compliance, if necessary.

There are a great many EPR chains, with shared issues and concerns. A specific body, the **Commission d'harmonisation et de médiation des filières (CHMF)**, has been created to address these cross-sectoral issues in application of the programme law n° 2009-967 of 3 August 2009 for implementation of the Grenelle environmental legislation (Grenelle 1). This harmonisation commission submits its reviews to the Ministry of Sustainable Development and these reviews are made public. The mission assigned to the commission is to participate in mediation efforts and harmonise the separate collection and waste treatment chains based on the principle of extended producer responsibility. This instance is attached to the National Waste Council.

EPR chains in France

In the last 20 years the possibility of creating EPR chains has been investigated for some 20 sectors of activity, and in most cases the chains have subsequently been established.

The forms of implementation differ, depending on the product. .

Some chains cover only household consumer products, others only professional-use products, and still others encompass both market segments. France is currently the country in the world where this management principle is the most broadly applied, with some 20 EPR chains of different types, at different stages of implementation.

An estimated 16 million tonnes of **products put on the market** were covered by an operational or soon-to-be-operational EPR chain in 2011.

The difficulty of estimating the **reservoir of waste products** on the basis of quantities put on the market increases for products with a long life span. While the amount of packaging waste for a given year is logically taken to be equal to the quantities put on the market, the same is not true for electrical and electronic equipment, because this market is rapidly evolving, and there is a time lag linked to the life span of products. The European Commission has specified that the assessment of the reservoir of used batteries and accumulators, for example, is based on an average of the quantities marketed in the preceding three-year period.

EPR fees totalled €926 million in 2011. Based on trends in the EPR chains, this figure is expected to approach €1.4 billion by 2015. Along with the proceeds of recycling and recovery operations, the fees pay for collection, transport, and treatment of used products, and overall communication and management costs.

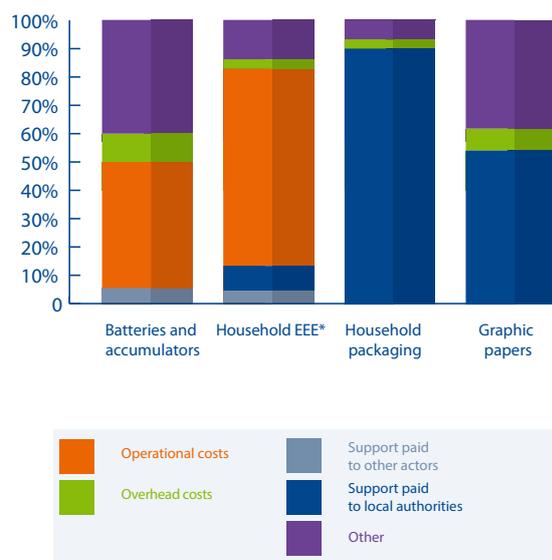
In 2011 €601 million in EPR fees collected by Producer Compliance Schemes were passed on directly to local authorities that collect and/or sort used products. Waste treatment handled directly by PCSs represented a value of €218 million. Overall, local authorities were the beneficiaries of approximately 68% of EPR fees collected.

Total fees received by regulated EPR chains in France between 1992 and 2015



In the graph above, when PCSs are financiers, local authorities are more heavily solicited for collection and sorting (household packaging and graphic papers) and therefore receive more support. Inversely, when PCSs are organisers the local authorities are less involved and receive less direct support (B&A, EEE).

Breakdown of PCS expenditures by EPR chain in 2011



* EEE – Electrical and electronic equipment

Type of product	Collection, recycling and recovery targets	Name of Producer Compliance Scheme or "pooled" collection organisations	Date of first certification or creation of the scheme
EPR chains required by European directive			
 Batteries and accumulators (B&A)	Collection targets for portable B&A: 25% in 2012 and 45% in 2016 Minimum recycling rate: 50%, 65% or 75% of average weight, depending on battery/accumulator type	Portable B&A COREPILE www.corepile.fr SCRELEC www.screlec.fr	Portable B&A Collective schemes certified 22 December 2009
 Household and professional electrical and electronic equipment (EEE)	Recycling rate varies between 50% and 80%, depending on the category, and recovery rates between 70% and 80% <u>Household EEE</u> : Collection targets: 6 kg per capita and per year, +1 kg per capita and per year through 2014 (certification terms for PCSs eco-organisations) <u>Professional EEE</u> : 2015 collection targets 25% of total put on the market in 2014	<u>Household EEE</u> RECYLUM www.reylum.com ÉCOLOGIC www.ecologic-france.com ECOSYSTEMES www.eco-systemes.fr ERP www.erp-recycling.fr OCAD3E (certified coordination body) <u>Professional EEE</u> PCS set up in 2012	<u>Household EEE</u> Collective schemes certified 15 November 2006
 Automobiles (End-of-life vehicles)	Collection target is implicitly 100% Reuse and recycling target 80% as of 1 January 2006, then 85% as of 1 January 2015 Reutilisation and recovery target 85% as of 1 January 2006 and then 95% as of 1 January 2015	No Producer Compliance Scheme Approximately 1,600 certified ELV centres and shredders	-
EPR chains established in France in response to European directives or EC regulations that do not require EPR			
 Lubricants (1)	No regulatory collection or recovery targets	No Producer Compliance Scheme. Funding from ADEME	-
 Household packaging	No collection targets Recycling target 75% in 2012	ÉCO-EMBALLAGES www.ecoemballages.fr ADELPHÉ www.adelphé.fr CYCLAMED www.cyclamed.org	Collective scheme certified 12 November 1992 Collective scheme certified 5 February 1993 Individual scheme certified 20 September 1993
 Fluorinated refrigerants	Collection target is implicitly 100% Mandatory recovery and destruction of CFCs since 1 January 2002 Recycling of HCFCs is banned since 1 January 2010	No Producer Compliance Scheme 31,945 operators with attested capacity as of 31 March 2012	-
 Pharmaceuticals (Unused pharmaceuticals for personal human consumption)	Collection target +2% per year over the six-year certification period starting 25 January 2010 i.e. +13% over 2008	CYCLAMED www.cyclamed.org	Collective scheme certified 25 January 2010
EPR chains required by national regulations			
 Tyres	Collection and recovery targets are implicitly 100%	ALIAPUR www.aliapur.fr AVIPUR (DOM) www.sicr.re AFIP/GIE FRP www.gie-frp.com COPREC TDA Martinique TDA Guadeloupe ARDAG (DOM)	Collective scheme certified Pooled collection schemes, not certified
 Household graphic papers	No recovery target	ÉCOFOLIO www.ecofolio.fr	Collective scheme certified 19 January 2007
 Textiles, household linens and shoes	Collection and treatment targets 50% of quantities marketed; recycling, materials recovery and reuse of sorted waste targets 70%	ÉCO-TLC www.ecotlc.fr	Collective scheme certified 17 March 2009
 Healthcare activities and infectious waste (related to patients in self-treatment)	Collection target 60% by the end of first certification period	DASTRI	Scheme created 8 February 2012. Not certified as of this writing.
 Chemicals	Amounts collected annually are to rise at least 10% per year National collection target of 1.5 kg per capita to be attained in 2015	ÉCODDS	Scheme created 23 April 2012. Not certified as of this writing.
 Furniture	Waste minimisation by ecodesign target: 3% of quantities brought to market. Collection target: cover entire national territory Reuse target: 50% increase by tonnage Reuse and recycling target: 45% for household items, 75% for professional items collected Reuse, recycling and other recovery target: 80%	<u>Household furniture</u> ÉCO-MOBILIER www.eco-mobilier.fr <u>Professional furniture</u> VALDELIA www.valdelia.org	ECO-MOBILIER Scheme created 12 December 2011 VALDELIA Scheme created 23 November 2011
 Bottled gas canisters	Not specified as of this writing	Not specified as of this writing	Not specified as of this writing
EPR chains based on voluntary agreements			
 Plant protection product packaging	Collection target 70% in 2010 Recycling/recovery target 20% to 100%	ADIVALOR www.adivalor.fr	Collective scheme set up in 2001
 Unused professional plant care products	Collection target 90% in 2010	ADIVALOR www.adivalor.fr	Collective scheme set up in 2001
 Ink cartridges (12)	Targets for manufacturers: - 85% reuse/recycling rate for waste ink cartridges collected separately by manufacturers - 95% recovery rate for waste ink cartridges collected separately by manufacturers Targets for all actors: - 70% reuse/recycling rate for all separately collected cartridges - 95% recovery rate for all separately collected cartridges	No collective organisation for all actors as of this writing.	-
 Mobile homes	No collection target	ÉCO MOBIL-HOME www.ecomobilhome.fr	Collective scheme set up in 2010

Given the differences in the types of holders, duration of product use, product range, the nature of waste and the rate of expansion of EPR chains, it is very difficult to compare recycling rates between chains. It is relevant, however, to observe the performance of a given chain over time in terms of reuse, recycling and recovery.

- 1) The management chain for used lubricants in France is based on principles close to those of EPR in that the lubricants are collected separately and marketers pay a General Tax on Polluting Activities (Taxe générale sur les activités polluantes, TGAP) into the State budget. ADEME receives a budgetary allocation from the State that funds the collection and treatment of used lubricants. This mechanism differs from a true EPR chain in that producers have no direct responsibility in the management chain.
- 2) These are either declared or apparent reservoirs.

Data year	Quantities on the market (in thousands of tonnes)	Calculated waste amount (in thousands of tonnes) (2)	Collection (in thousands of tonnes)	Collection rate or apparent collection rate for recovery	Tonnages treated (in thousands of tonnes) (3)	Tonnages recovered (in thousands of tonnes)	Tonnages of recycled materials (in thousands of tonnes)	Recycling rate in relation to tonnage collected	Recycling rate in relation to reservoir or quantities on market	Total LEPR fees received by Producer Compliance Schemes (in thousands of euros)	Total funding passed on to local authorities (operations and communication) (in thousands of euros)
2011	222	220 (4)	215	97%	175	175	82%	79%	Portable B&A 11.34	Portable B&A 8.5	Portable B&A 1.83
2011	1,657	950	470	47%	408	366	78%	22%	Household EEE 193.41	Household EEE 197.7	Household EEE 19.18
2011	Number of new vehicles 2,651,444	-	1,502	-	-	-	79% 2010 data	-	-	-	-
2011	356	240	215	90%	209	109	51%	45%	-	2.9	-
2011	4,653	4,653	-	-	3,805	3,120	-	67%	584	0	519
2011	11	11	0.9	8%	0.6	0.6	69%	6%	-	-	-
2011	170	28	14.5	52%	14.5	0	-	-	4.4	4.5	0
2011	491	491	392	84% (5)	392	104	29%	22%	48.58 (6)	Not available	-
2011	Between 1920 and 1950	3,533 (7)	1,450 (7)	-	-	-	-	43.2% 2010 data (8)	67.4	0	53.6
2011	700 (9)	700 (9)	146	-	116	38 (10)	-	-	13.7	0	3.14
2007	0.4 (11)	1 (11)	-	-	-	-	-	-	-	-	-
2007	471 (11)	43 (11)	-	-	-	-	-	-	-	-	-
2007	3,000 (11)	2,700 (11)	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
2011	61.25	81.25	44.43	73%	40.96	40.57	91%	66%	3.2	-	-
2011	Not available	11	0.2	-	0.2	0	-	-	0.2	-	-
2011	14.9	14.9	6.4	43%	6.3	-	-	-	-	-	-
2010	52.5	70	-	-	-	-	-	-	-	-	-
TOTAL	13,794	13,787	4,456		4,776	3,953			926	214	597

- 3) The tonnages recovered are equal to the sum of tonnages of materials that are reused, recycled or recovered for energy value.
4) Average of the quantities put on the market in 2009, 2010 and 2011 for portable B&A.
5) Data collected in 2011 for products marketed in 2010.
6) Amount of EPR fees received by Alapur.
7) Graphic papers (other than specific uses) utilised by the end user.
8) By convention the recycling rate is calculated for all types of paper.

- 9) 2007 estimate.
10) Recycled materials from textiles (bulk fibres and cleaning cloths) represent 30% of the quantities treated.
11) Preliminary scoping study for this chain available on the ADEME website www.ademe.fr
12) These data are limited to the data submitted by the signatories of the framework agreement.

OVERVIEW OF EPR CHAINS

Legend to pictograms



EUROPEAN EPR CHAINS

Four EPR chains in France stem from European regulations: batteries and accumulators (B&A), electrical and electronic equipment (EEE), both household and professional, and automobiles (end-of-life vehicles).

- EPR is extended to cover collection and treatment of all three types of B&A.
- More stringent rules govern the use of dangerous substances (mercury, cadmium) in B&A entering the Community market.
- National collection targets are set at 25% in 2012 and 45% in 2016 for portable B&A, based on average annual sales in the previous three-year period (including the current year).
- Recycling efficiency targets are set at a minimum of 75% for accumulators that contain cadmium, 65% for those containing lead and 50% for other types of B&A.
- Battery capacity must now be marked on portable and automotive B&A.
- A national register of B&A producers has been created, with registration harmonised at the European level.



This chain started up in January 2001 with EPR applied to household batteries and accumulators (B&A). Directive 2006/66/EC of 6 September 2006 that calls for application of EPR to all types of B&A (portable, automotive and industrial), a chain which was already present in France, was transposed into French law by decree n° 2009-1139 of 22 September 2009 pertaining to putting B&A on the market and disposing of used B&A. New measures include:

- The distinction between household and professional B&A is replaced by classification in three categories depending on the type of battery: portable / automotive / industrial.

The two collective schemes Corépil and Screlec are certified up to 31 December 2015 for the collection and treatment of portable B&A. These PCSs have over 50,000 collection points in France: 41% of tonnages are collected in retail stores, 30% by local authorities and 29% from private companies and other holders (schools, hospitals, etc.). Producers may also have their own individual system approved. To date, just one individual producer system for portable B&A has been approved by French authorities (Mobivia Groupe). No collective scheme or individual system has been approved for automotive B&A (vehicle ignition and lighting systems). Producers may also transfer their responsibility for this type of B&A to users other than households, by written agreement. This chain is currently self-financed by the market value of lead. Producers of industrial B&A (designed exclusively for professional or industrial uses, as well as batteries used in all types of electric vehicles) must directly ensure treatment of their own used B&A (either individually or collectively) or transfer their obligation to the industrial or professional end user. In 2011 222,000 tonnes of B&A were put on the market, 215,000 tonnes were collected and 211,000 tonnes were treated in France. For this same year 32,820 tonnes of portable B&A were put on the market and 11,620 tonnes collected by collective schemes, for a collection rate of

* Available in english

36%, an increase of 2% compared to 2010. The target of 25% set by the European directive for 2012 had already been attained and exceeded by France in 2011, but more remains to be done in terms of collection to attain the target of 45% set for 2016. Work is underway to establish a single collective scheme for automotive batteries and accumulators.

For more information see the summary document Batteries and accumulators, available for download on www.ademe.fr/publications*



Following the transposition of the European Directive 2002/96/EC (the WEEE Directive) into French law in July 2005, the collection and treatment of WEEE officially began in France on 13 August 2005 for professional waste, and on 15 November 2006 for household waste.

In 2011, 447,828 tonnes of **household WEEE** were collected by the four approved PCSs, with total EPR fees amounting to €193 million. Four PCSs are certified to collect and treat household WEEE in France: Récyclum for lamps, Écologic, Éco-systèmes and ERP for other categories of products. Household WEEE is collected by local authorities who have set up separate collection systems, through distributors (returns to stores or take-back when products are delivered to customers), or *via* enterprises in the social economy that process items for reuse. The PCSs organise the activity of the chain, from collection points to final waste treatment. A coordinating body, OCAD3E, compensates local authorities for the cost of separate collection of WEEE.

With 6.9 kg of household WEEE collected per capita and per year in 2011, the European collection target set by directive 2002/96/EC for end 2006 was exceeded by 2.9 kg per capita and per year. There is room for further progress:

- local authorities continue to expand separate collection (60 million inhabitants covered at the end of 2011)
- “one for nothing” take-back, which allows holders to deposit used devices without buying a new one, is being developed by distributors.

Under their certification the PCSs were given the objective of collecting 7 kg per capita in 2011; this target was not attained, and the PCSs must now strive to collect 10 kg per capita annually up to 2014. The WEEE directive was revised on 4 July 2012, and now calls for a collection rate of 65% of the average quantity of EEE put on the market in the preceding three-year period, by 2019, which could represent about 13 kg/capita/year. This new directive must be transposed into French law within 18 months of the date of publication.

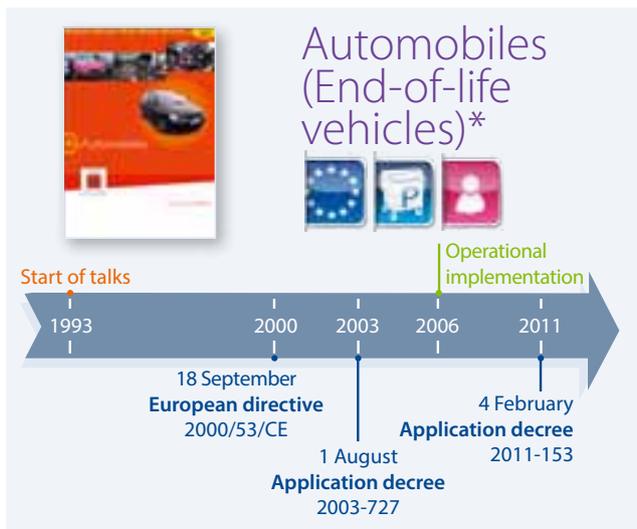
The field of professional WEEE is much less structured. The amounts of waste equipment collected are low: producers are responsible only for waste generated by equipment entering the market after 13 August 2005. Companies that put professional EEE on the market after this date are responsible for handling the end-of-life products that are generated. To date companies have assumed this responsibility either by individual treatment schemes, or by delegating treatment to the end user, but regulations also allow them to entrust this task to PCSs. Four PCSs were certified in August 2012 for various categories of devices:

- Récyclum for the categories: 5 – lighting equipment; 8 – medical devices; 9 – surveillance and control instruments.
- Recydent for the subcategory of equipment used in dentists’ offices.
- Écologic for the categories: 3 – information technology and telecommunications equipment; 4 – mass consumer devices.
- Éco-systèmes for category 10 – automatic vending machines.

This structuring of professional WEEE chains is likely to significantly improve handling of this waste by producers, thereby raising the rate of collection.

For more information see the summary document Electrical and electronic equipment, available for download on www.ademe.fr/publications*

* Available in english



The mechanism in effect since 24 May 2006 and modified by decree on 4 February 2011 stipulates that the holders of end-of-life vehicles (ELVs) must turn them over to certified ELV centres only. These centres are not allowed to charge the holders for any costs (unless the vehicle has been stripped of its essential components, such as the motor, catalytic converter, etc.). The ELV centres disassemble the vehicle and remove pollutants, in order to extract reusable or recyclable elements (parts, tyres, battery etc.) before sending the frames on to certified shredders. As of today the shredders extract primarily recyclable metals. The “recycling and reuse” and “reuse and recovery” rates for end-of-life vehicles processed in 2010 were 79% and 81.9% respectively. These rates are very far from the European directive targets, respectively 85% and 95% by 1 January 2015. To reach these regulatory targets it will be necessary to significantly improve the recovery of non-metallic fractions of materials in end-of-life vehicles, e.g. plastics, rubber and glass. The costs of treating end-of-life vehicles that are incurred by ELV centres are currently compensated by the sale of stripped frames to shredders and the sale of parts and materials in second-hand markets for reuse and recycling. The economic returns for shredders are secured by the sale of materials (mostly ferrous and non-ferrous metals) in recycled primary materials markets. Therefore it is not necessary at present for producers (automobile makers) to ensure the economic equilibrium of this chain. The number of certified ELV centres and shredders has risen slightly. At the end of 2011 approximately 1,600 ELV centres and 60 shredders were certified by prefects to treat end-of-life vehicles. These authorised operators handled slightly over 1.5 million ELVs in 2011. The potential pool of ELVs is estimated at two million units. A significant portion, estimated at 30%, of these vehicles are disposed of in non-certified treatment circuits.

The European Court of Justice brought judgement against France on 15 April 2010 for incorrect and incomplete transposition of the directive on end-of-life vehicles. The court ruled against France for failing to take “all necessary legislative and regulatory measures” to correctly and completely transpose several articles of this directive (ruling of the European Court of Justice C-64/09 – 15/04/2010). ELV regulations were therefore revised in France, leading to publication of a new decree in 2011 (decree n° 2011-153 of 4 February 2011). The main points of these regulations are as follows: Manufacturers must set up networks of certified ELV centres that must take back

free of charge the ELVs brought in by their owners. The certified ELV centres are the mandatory entry point for the ELV treatment chain, to ensure full traceability of these vehicles. These centres are required to eliminate pollutants from the vehicles and to remove certain parts that can be reused, before sending the ELVs to certified shredders who shred them and separate out various remaining materials for recycling or recovery. An oversight body is appointed to assess the overall economic equilibrium of the EPR chain. If the chain is found to be not economically balanced, the State can trigger compensation mechanisms. The authorised ELV centres and certified shredders are required to achieve results that will ensure that France will comply with the reuse, recycling and recovery objectives set for 2015 by the European directive. To increase the current reuse, recycling and recovery rates that are insufficient to meet the 2015 objectives, the operators in the EPR chain must improve their performance, in terms of ecodesign for manufacturers, and in terms of quality of treatment for waste operators in order to boost reuse, recycling and energy recovery.

For more information see the summary document *Automobiles**, available for download on www.ademe.fr/publications

FRENCH EPR CHAINS THAT IMPLEMENT EUROPEAN REGULATIONS

Four EPR chains have been established to comply with European regulations. These are household packaging, pharmaceuticals, lubricants and fluorinated refrigerants.



The management chain for used mineral and synthetic oils was created in 1979. It follows principles close to those of EPR in that the lubricants are collected separately and the entities that market them pay a State tax on pollutants levied on the lubricants put on the market.** This mechanism differs from a true EPR chain in that producers have no direct responsibility in the management chain. It also has an organisational structure that is atypical among French EPR chains. Collectors certified by prefectural authorities are required to pick up all consignments of oil over 600 litres, free of charge and within two weeks. The oils are then recovered in the facilities of companies

* Available in english

**TGAP: Taxe Générale sur les Activités Polluantes

certified by the prefects, either by regeneration (recycling), or by use as an industrial fuel, primarily in cement works. In 2011, 48 certified operators collected 215,345 tonnes of used black oils in mainland France. The collection rate for used motor oils is 96.8%. Roughly 52% of the used black oils collected were regenerated, and the rest recovered in the form of energy. Six collectors recover used oils in French overseas departments. The cost of collection of used black oils in mainland France was entirely covered in 2011 by the sale of these oils to operators of treatment facilities. By contrast, continued financing was needed in 2011 to cover the higher collection costs in overseas departments and communities, due notably to the cost of maritime shipping of the used oils. The overseas chain accordingly received a public subsidy of €2.9 million in 2011, managed by ADEME. The funding mechanism will be reviewed in 2012 to draw up new measures to be implemented when the current system expires in November 2012. The new mechanism will apply only to overseas departments and communities.

For more information see the summary document *Lubricants**, available for download on www.ademe.fr/publications

- as ecodesign is more systematically adopted, with environmental modulation of the fee scale, and adoption of an indicator for upstream waste prevention.
- At the end of 2011 fewer than 1 million people (including overseas departments and communities) were without access to a multi-materials collection point, i.e. were not covered by home collection service or by civic amenity sites for materials other than glass.
- As the reservoir of used packaging stabilises, the commitments to separate collection and to support for recycling have continued to boost collection and recycling of packaging.
- Guaranteed take-back of packaging collected and sorted by local authorities, and guaranteed supply to user enterprises, as well as financial support for research, have helped to bring recycled materials back into the industrial circuit more quickly.

The Grenelle environmental legislation sets new ambitious challenges for this chain, with the objectives of recycling 75% of household product packaging in 2012, and 80% coverage of the “net baseline cost of efficient collection and sorting services.”

For more information see the summary document *Household packaging (Emballages ménagers)*, available for download on www.ademe.fr/publications

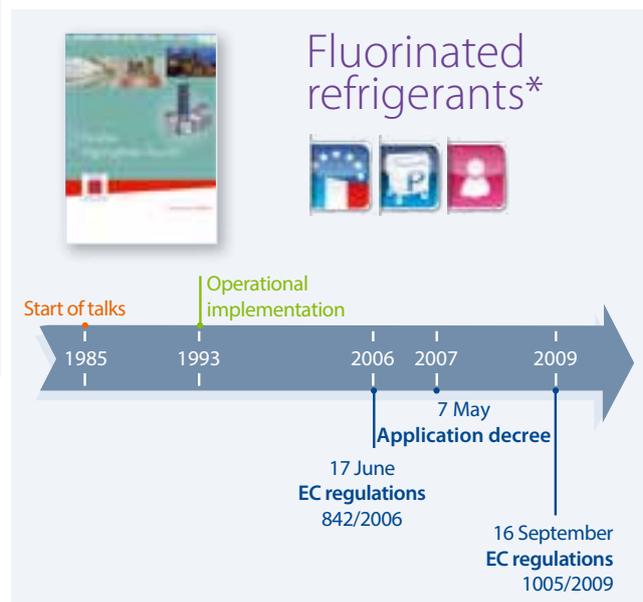


The household packaging EPR chain, established in 1992, was the first large-scale chain to be set up in France. With a reservoir of 4.7 million tonnes to be treated and total EPR fees amounting to €584 million in 2011, this chain continues to hold an important place in the panorama of EPR chains. Certification of the two PCSs in this chain, Adelphi and Éco-Emballages, was renewed for six years on 1 January 2011. In 2011 89% of their expenditures were devoted to funding for local authorities, amounting to €519 million. Financial support for local authorities rose by 25% between 2010 and 2011, with the entry into force of a new subsidy scale.

Overall, for all materials taken together, the recycling rate was 67.1% in 2011. This rate has risen regularly by 1.5 percentage points per year since 2007. EPR has largely contributed to meeting European objectives for household, industrial and commercial waste.

EPR chains have also fostered progress in a number of areas:

- Industrial companies have taken steps to reduce the unit weight of packaging and to make it more easily recyclable; these advances are likely to continue



Refrigerants are substances with thermodynamic properties that are used in cooling systems (refrigeration and air-conditioning units). There are several categories of refrigerants, each with its own unique chemical composition. Fluorinated refrigerants, e.g. chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs) and hydrofluorocarbons (HFCs) used in cooling systems are subject to a specific body of national regulations.

Following implementation of Community regulations n° 842/2006 and n° 1005/2009, a French decree dated 7 May 2007 instituted extended responsibility for the producers of these products, whether intended for professional or household use. Producers of refrigerants and

* Available in english

equipment containing these substances are required to take back, each year and at no additional charge, the refrigerants returned to distributors (or operators), and treat them directly or take responsibility for having them treated by another entity. These refrigerants can be reused, when authorised, once they have been reconditioned to meet the original specifications, or reused as is. When they cannot be reused they must be destroyed.

The actors in the refrigerants product chain – producers of refrigerants and equipment containing refrigerants, distributors, and accredited bodies that certify operators – must report to the Observatory each year the quantities of refrigerants placed on the market, distributed, collected, acquired, transferred, loaded into machinery, treated and stocked.

The reservoir of fluorinated refrigerants put on the market came to 10,900 tonnes in 2011; distributors and producers declared that they collected 890 tonnes of refrigerants from operators. Some 611 tonnes of used refrigerants were regenerated in 2011, close to 70% of the tonnage collected by producers and distributors in the same year. In addition to refrigerants recovered by producers and distributors, operators declared that 2,170 tonnes of refrigerants were collected in the course of maintenance or end-of-life disposal of equipment. Over half of this quantity was treated by operators under their own responsibility.

For more information see the summary document *Fluorinated refrigerants**, available for download on www.ademe.fr/publications

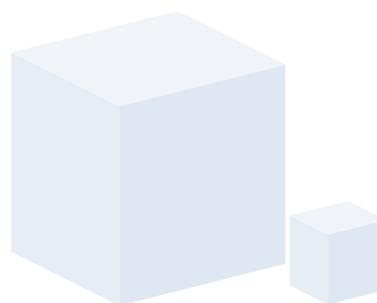
for 19 years by pharmacists on a voluntary basis under the auspices of pharmaceutical firms that founded Cyclamed, has now become mandatory and the law stipulates that the pharmaceutical companies finance collection and incineration of these waste products.

Collection results were very good in 2011, with an increase of close to 10% in the collection rate over 2011, largely exceeding the 2% goal set in the certification request submitted by Cyclamed. This increase in the collection rate was due largely to communication campaigns pursued by Cyclamed, with a change of strategy to target housewives with children in television campaigns, in addition to senior citizens who had previously been the focus of communication.

For more information see the summary document *Pharmaceuticals (Médicaments)*, available for download on www.ademe.fr/publications



Directive 2004/27/EC of 31 March 2004 stipulates that "Member States ensure the creation of appropriate collection systems for unused or outdated pharmaceuticals and medicines." French decree n° 2009-718 of 17 June 2009 specifies the ways in which unused pharmaceuticals are collected and destroyed in France, at the expense of the pharmaceutical companies that market them, in keeping with the Extended Producer Responsibility principle. This management chain came into being after the distribution and donation of unused pharmaceuticals for humanitarian purposes were banned as from 31 December 2008. Collection of waste medicines, carried out



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* Available in english

EPR CHAINS THAT ARE MANDATORY UNDER NATIONAL REGULATIONS

In the majority of cases the creation of nationally regulated EPR chains is not primarily the result of mandatory European collection or recovery requirements. EPR was already widely applied before the Grenelle environmental legislation was enacted, and has intensified with the creation of five EPR chains since September 2007. These cover textiles, furniture and furnishings waste, chemicals identified as specific non-point waste substances, bottled gas canisters, and healthcare activities and infectious waste.

Bottled gas canisters



Article 193 of the Grenelle 2 legislation (Law 2010-788 of 12 July 2010 framing the national commitment to the environment) established a EPR chain for bottled gas canisters destined for household use, effective 1 January 2011. The legislation specifies that the mechanism can be based on a deposit or equivalent system. The application decree is being prepared according to administrative procedures and should be issued in Autumn 2012.

Healthcare activities and infectious waste



Unlike most other EPR chains, this chain is primarily a response to the health risks posed to waste management workers by medical waste sharps used by patients in self-treatment. The principle of EPR for this waste is stated in Article 187 of the Grenelle 2 legislation (Law 2010-788 of 12 July framing the national commitment to the environment). These waste sharps from self-treatment represent a volume estimated at 360 tonnes

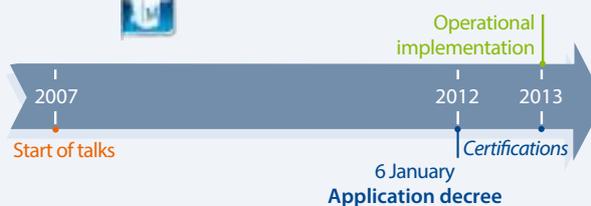
per year, making this EPR the smallest in France in terms of tonnage. But given the widely dispersed nature of this waste the per-tonne cost of collecting and treating it will be high. The decrees governing the establishment of this EPR chain entered into effect on 1 November 2011 (decree n° 2010-1263 of 22 October 2010 and decree n° 2011-763 of 28 June 2011).

To meet their obligation producers have joined together in a joint structure, the DASTRI association, that represents all the healthcare industries that contribute to this chain. This organisation has applied for certification. The EPR system will be operational once the PCS has been certified by decree issued by the Sustainable Development, Local Authorities and Health ministries. The certification order is expected to be issued in early Autumn 2012.

The beneficiary of the certification will then work to set up, develop and consolidate the EPR chain for waste medical sharps used by self-treatment patients, by expanding separate collection of this waste and treatment in conditions that respect the environment and public health, while holding down costs. The beneficiary will also be required to implement measures to help achieve the national goal of collecting at least 60% of the stock of this waste by the expiration of the first certification period.

For more information see the summary document *Healthcare activities and infectious risk related to patients in self-treatment (Déchets d'activités de soins à risques infectieux des patients en autotraitement)*, available for download on www.ademe.fr/publications

Furniture



Article 200 of the Grenelle 2 legislation, Law 2010-788 of 12 July 2010 framing the national commitment to the environment, established a EPR chain for household and professional furniture components. With an estimated volume of 2.7 million tonnes, made up for the most part of home furniture and assimilated elements, this chain has major financial consequences for local authorities, that take in a large proportion of used furniture in civic amenity sites. The share of waste professional furniture is estimated at 22% according to data compiled in a study carried out by ADEME as part of working group 251. Furniture items covered by decree n° 2012-22 of 6 January 2012 are: furniture for living/sitting/dining rooms, accessory furniture, bedroom sets, mattresses and box springs, office furniture, kitchen units, bathroom furniture, garden furniture, chairs, furniture elements used in technical, commercial and institutional settings, not including decorative elements or recreational items. Also excluded are urban and street

furnishings destined for public spaces and public property, and, in certain conditions, specific fittings designed for professional premises and built-in as permanent fixtures. Entities that put these items on the market have a choice between establishing a PCS or an individual treatment system, for household furniture as well as for furniture intended for professional use.

The Éco-Mobilier organisation is in the process of being certified for household furniture. Through this organisation, marketers of household furniture will assume the costs of separate collection and contribute to the cost of general collection incurred by local authorities and groups of authorities. They will be responsible for the treatment of separately collected waste items.

For professional furniture, the Valdélia organisation, in the process of certification, will set up a network of voluntary drop-off points, and will pick up waste items directly from their holders, when the quantities and volumes exceed a minimum level set by the terms of certification. The decree also refers to ecodesign that takes the final disposal of furniture into account, and to the quality of information given to the end user. This chain will be monitored *via* a declarative information register compiled by ADEME.

- rapid ramp-up of contracts with local authorities in charge of collection.

In 2010 98% of the French population were directly covered by this EPR chain. Close to €190 million were paid to local authorities between the creation of Écofolio in 2007, and 2011. The recycling rate for graphic papers was 43% of the total potential volume in 2010. Écofolio is now focusing on making improvements to the mechanism, in particular to raise awareness in the general public and collect larger amounts of paper separately, and on the deployment of specific waste prevention measures for this chain.

For more information see the summary document Graphic papers (Papiers graphiques), available for download on www.ademe.fr/publications



Thirty years after the first contacts between paper makers and local authorities, initiated at the request of local elected officials, the EPR chain for paper took effect on 1 January 2006, with article L.541-10-1 of the Environment Code that institutes the principle of a financial payment or contribution in kind, or failing these the payment of a tax on polluting activities. Écofolio, the PCS for this chain, was certified on 19 January 2007. In 2011 the volume of printing paper covered by Écofolio was an estimated 1.9 million tonnes. In three years the chain has strengthened its organisation:

- the scope of graphic papers covered by law and subject to an EPR fee has been progressively widened to include
 - 2006: unsolicited printed items (phone books, flyers, publicity brochures, free classified advertising publications, etc.)
 - 2008: business publications and mass mailings
 - 2010: envelopes, postal covers, printing papers sold in reams, mail-order catalogues and shipments
 - in 2011 producers contributed to collection and management of 1.7 million tonnes of graphic papers, paying roughly €65 million euros in EPR fees to Écofolio;



Decree n° 2002-1563 of 24 December 2002 pertaining to the disposal of waste tyres gives tyre producers the technical and financial responsibility for disposal of their products. Close to 491,000 tonnes of tyres were declared put on the French market in 2011. The certified EPR chain processed in 2011 approximately 84% of tyres declared brought to market in 2010, a little over 392,000 tonnes. Of the quantities treated, 47.2% were processed for energy recovery, 28.7% for materials recovery, 19.9% were recycled in public works, and 4.2% were reused. This chain shows very good results, but it should be mentioned that some tension has appeared in recent years, due to certain marketers failing to contribute to waste tyre collection and treatment. To perfect the organisation of the chain and correct these operational difficulties, the State has pledged to rewrite the tyres decree. The new decree should be issued by the end of 2013. The treatment of the 800,000 tonnes of tyres stockpiled before the entry into force of the current decree is the object of a special mechanism set up in 2008 by producer organisations, specialised distributors, waste operators and the State, creating a collective fund managed by the Recyvalor not-for-profit corporation.

For more information see the summary document Tyres (Pneumatiques), available for download on www.ademe.fr/publications

Chemicals



Dispersed or non-point chemical substances are wastes derived from chemical products, both containers and contents, that present significant health and environmental risks due to their physico-chemical characteristics. Special treatment is required to limit their impact on the environment, on human health and on other waste treatment operations. The volume of household chemical waste is estimated at 43,000 tonnes per year, of which roughly 14,000 tonnes are soiled and unsoiled packaging waste. The main category is sludge waste (paints, varnishes and glues) but this stream also includes acids and bases, solvents, plant protection products, etc. Treatment of these substances, which are currently collected in part in civic amenity sites, constitutes a costly responsibility for local authorities. Article L.541-10-4 of the Environment Code institutes a EPR chain for household chemical products as of 1 January 2011. Decree n° 2012-13 of 4 January 2012 defines the scope covered by the EPR chain and specifies the technical and economic management of this waste stream. An administrative order dated 16 August 2012 sets forth the complete list of products covered by the EPR chain.

Under another order published on 15 June 2012 the PCS organisation will be certified in the last quarter of 2012 and the collection mechanism rapidly deployed country-wide. To meet their obligation producers have joined together in a joint structure, Éco-DDS. This organisation has applied to public authorities for certification.

Textiles, household linens and shoes

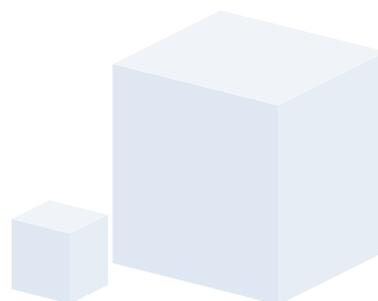


Unlike other EPR chains, this activity was not created in response to waste issues, but rather has its origins in the economic difficulties encountered by sorting and recycling operations, in particular solidarity enterprises in the social economy. To confront this situation government authorities created a EPR chain for clothing textiles, household linens and shoes collected from households, effective 1 January 2007. The application decree was issued on 25 June 2008 and Éco-TLC, the PCS for the chain, was certified on 17 March 2009. In the medium term this chain aims to handle 50% of the clothing textiles, linens and shoes consumed annually by households, amounting to 350,000 tonnes of discarded items, half of the 700,000 tonnes of new products put onto the market each year. The chain emphasises reuse and recycling, and seeks to create jobs to help people enter or return to the job market. This chain collected 125,000 tonnes of used textiles, linens and shoes from households in 2011.

The Éco-TLC chain has been in operation since November 2009, and now has a membership of over 5,100 product marketers. The chain provided financial support to close to 50 authorised sorting operators, thanks to €13.7 million in EPR fees received in 2011. In the framework of its missions Éco-TLC must:

- create a sustainable activity and develop it by providing financial assistance to operators
- raise awareness of separate collection in the general public, in particular *via* aid resources granted to local authorities
- support research and development to find new market outlets and new uses for products and materials derived from clothes sorting.

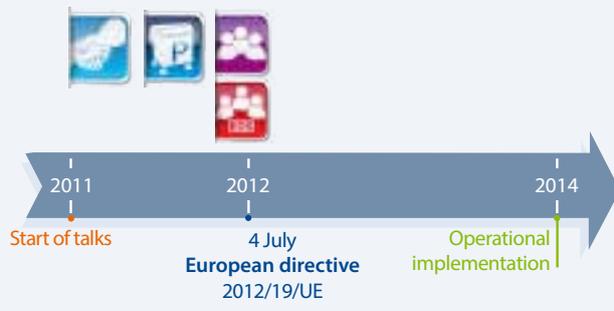
For more information see the summary document Textiles, household linens and shoes (Textiles, linge de maison et chaussures), available for download on www.ademe.fr/publications



EPR CHAINS BASED ON VOLUNTARY AGREEMENTS

The EPR chains described above have been implemented in a regulatory framework. A few initiatives, however, are the fruit of voluntary action by industrial actors. This approach is guided by twin concerns: the desire to meet demand for environmental stewardship by taking part in the management of used products, and to demonstrate to government authorities that regulations are not necessary. Chains of this type may grow in number, at the European level for example, as seen with the creation of the PV Cycle group by the photovoltaic panel industry, or nationally with the chain for agricultural supplies.

Photovoltaic panels

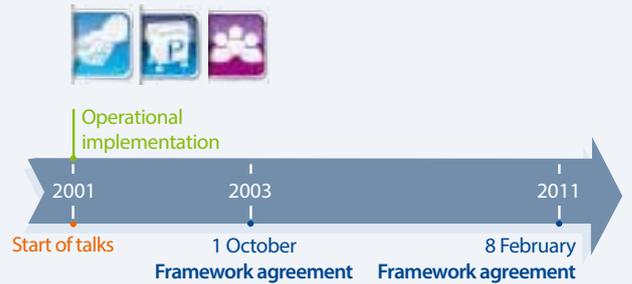


The new WEEE directive 2012/19/EU of 4 July 2012 includes photovoltaic panels in the category of WEEE. This directive must be transposed into French law by 14 February 2014. End-of-life photovoltaic panels will be managed either by existing WEEE Producer Compliance Schemes, or by PCSs specifically devoted to PV panels. Two entities exist at present, PV Cycle and CERES.

PV Cycle is a not-for-profit corporation created in July 2007. In 2010 its membership numbered 52 industrial manufacturers who represent 85% of the European market. The manufacturers decided to establish a voluntary collection and recycling chain for photovoltaic modules, in keeping with the Extended Producer Responsibility principle. The objective is to recover 90% of PV modules put on the market since 1990 and achieve a minimum recycling rate of 85% by 2015. Collection and treatment operations started up in January 2010. Members of PV Cycle pay financial contributions that are proportional to the number of photovoltaic modules they have installed, to cover transport and recycling costs. The organisation has also constituted a guarantee fund to cover an eventual default by a member. The Centre européen pour le recyclage de l'énergie solaire (CERES) is a not-for-profit group created in July 2011 that, with its recycling partners, covers the cost of collecting end-of-life solar panels and factory rejects. CERES has over 25 members, representing in excess of 1.5 GW sold in Europe (generating 150,000 tonnes to be recycled). The membership includes power plant operators, equipment installers and manufacturing facilities.

For more information see www.pvcycle.org
www.ceres-recycle.org

Agricultural supplies



France is the only country in Europe that has a national organisation devoted to recovering agricultural supply waste across the whole country. In 2001 the Union des industries de la protection des plantes (UIPP) founded the Adivalor company that has elaborated technical and financial management mechanisms for used agricultural products. Collection of agricultural supply waste began in 2001 with the collection of empty plant protection product packaging and of unused plant protection products. Specific collection mechanisms for this waste cover nearly all the territory of France. The experience acquired by Adivalor enables this entity to take an active role in preparing implementation of chains for other products. Fertiliser packaging items, primarily big bags but also sacks, kegs and barrels, have been collected and recovered since 2008.

Also in 2008 French and foreign manufacturers who market agricultural plastic films agreed to the implementation of a collection and treatment scheme for used films, a volume of soiled films estimated at 70,000 tonnes. ADEME has strongly supported start-up of this chain, with aid (on a progressively declining scale) totalling €2.8 million for the first five years of operation. In 2009 a chain covering seed packaging was created under the auspices of the national trade group for seeds and seedlings Groupement National Interprofessionnel des semences et plants, in partnership with Adivalor. A chain dedicated to empty packaging of livestock hygiene products was created in 2010, in liaison with the Centre national interprofessionnel de l'économie laitière (CNIEL), the Association française de l'industrie de la détergence, de l'entretien et de l'hygiène industrielle (AFISE) and the makers of hygiene products for dairy animals. New chains are being explored to treat:

- personal protection equipment
- empty packaging of winemaking and vineyard hygiene products
- baling wire, netting, irrigation pipes, etc.

Adivalor, with assistance from Chambers of Agriculture and other professional organisations, is deploying a programme to inform professionals of best practices. Adivalor is also involved in research to improve the recycling of agricultural supplies.

In 2011 80,000 tonnes of used plastics were generated, with an average collection rate of 55% and an average recycling rate of 49%.

For more information see www.adivalor.fr

Ink cartridges



France is the only country in Europe that has a national organisation devoted to recovering used ink cartridges from office equipment. The main brand-name companies in office and computer equipment created the Conibi company in 2000 to provide their end customers with a simple solution for disposing of their used consumables.

Since then the issue of used ink cartridges has been addressed in the context of a draft decree for the establishment of an EPR chain for specific dispersed waste streams. In the absence of proven hazards related to this type of product, public authorities in France have decided not to include ink cartridges from office equipment in the scope of these new regulations, on the condition that producers make adequate commitments to manage the resulting waste. The Ministry for Sustainable Development and professionals in the office equipment ink cartridge sector signed a framework agreement for 2012-2015 on 22 November 2011. This agreement is made up of two distinct documents:

- a voluntary agreement signed by the ministry and manufacturers of printing systems and branded office equipment ink cartridges;
- a memorandum of joint commitments signed by all the actors in the chain.

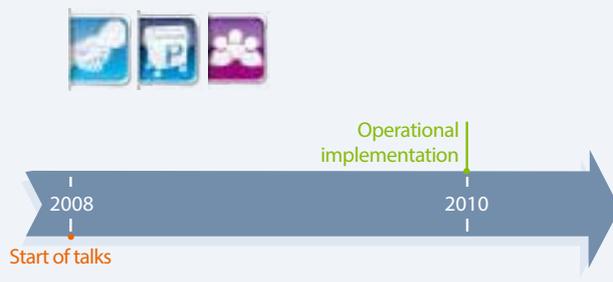
Find current news about EPR chains in "A chaque déchet des solutions", "L'Echo des filières", downloadable at www.ademe.fr or subscribe free of charge by e-mail echodesfilières@ademe.fr

Under this framework agreement all the actors pledge to:

- support the voluntary action of manufacturers and other actors in the chain
- develop separate and local collection services
- encourage reuse and recycling
- no longer discard waste products without treatment.

Close to 15,000 tonnes of ink cartridges were put on the market in 2011, and 6,400 tonnes collected. The chain recycled 6,300 tonnes of used ink cartridges.

Mobile homes



To avoid the development of uncontrolled practices that are harmful to the environment and to the image of the outdoor camping and caravanning sector, the manufacturers of mobile homes, grouped together in a leisure vehicles trade group, pledged in late 2008 to pursue a voluntary policy to develop treatment of mobile homes at the end of their useful life, under the manufacturers' responsibility. After conducting (with support from ADEME) technical, economic and legal studies on the feasibility of setting up such an organisation, French manufacturers and makers in other countries joined together in the Association pour la valorisation des mobil-homes anciens (AVMHA), a not-for-profit group that subsequently created the Éco Mobil-Home Producer Compliance Scheme. An EPR fee of €100 is applied to each mobile home sold in France since 1 September 2011. This PCS is gradually ramping up its activities. There are currently about 15 processing centres, and 500 units have been dismantled since the creation of Éco Mobil-Home. The goal is to treat 3,000 to 4,000 end-of-life mobile homes annually.

For more information see www.ecomobilhome.fr

Collection Repères - Summary information brochures

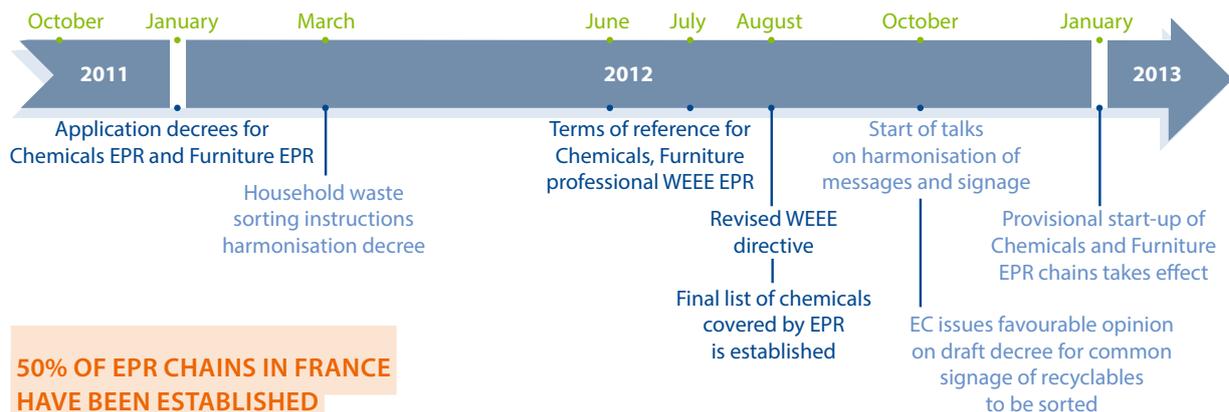
- > Activités de soins à risques infectieux des patients en autotraitement
- > Automobiles in France*
- > Batteries and accumulators in France*
- > Electrical and electronic equipment in France*
- > Emballages industriels, commerciaux et ménagers
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- > Médicaments
- > Papiers graphiques
- > Pneumatiques
- > Textiles, linge de maison et chaussures



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* Available in english

Events of the past 24 months ! Implementation of EPR chains



50% OF EPR CHAINS IN FRANCE HAVE BEEN ESTABLISHED IN THE PAST FIVE YEARS

Many types of end-of-life products are collected separately within the household and assimilated waste stream, and are covered by specific treatment chains. Separate collection began with glass, at the initiative of industrialists following the first oil crisis in 1974, and continued with paper in the 1980s. The first regulated national EPR chain was set up in 1992 to collect waste packaging of household products. Other mechanisms were subsequently put into place for batteries and accumulators, waste electrical and electronic equipment from households, graphic papers, tyres, pharmaceuticals, textiles, and infectious healthcare waste. Chains are currently being set up to handle chemicals, furniture and bottled gas canisters, and the WEEE chain now covers professional-use equipment.

The **progressive development of chains** to treat end-of-life products has resulted in the creation of more than 10 certified Producer Compliance Schemes (PCSs) that collect and treat different types of waste for local authorities. Certification criteria differ from one chain to another. Each PCS has developed its own communication methods. Many systems have been created by different actors to mark packaging and products. Local authorities have also put into place systems with different types of sorting instructions, collection methods and signage.

This diversity **now appears to hinder more effective development of separate collection**, and pledges 252 and 255 of the Grenelle environmental conference are aimed at harmonising these chains. This reinforces work by the Ministry for Sustainable Development to coordinate regulations and certifications as they are issued or updated. In January 2010 the **Commission d'harmonisation et de médiation des filières** (CHMF) established by decree dated 29 August 2009 set forth its agenda of issues to be addressed.

The following topics have been discussed by the commission: administrative sanctions in the event of non-compliance with the requirements of EPR chains; harmonisation of waste sorting instructions and signage; the transparency of the funding of public waste management services; drafting of guidelines for relations between organisational PCSs and waste management operators; drafting of a decree to set up an EPR chain covering furniture and furnishings.

The harmonisation commission has drawn up opinions on the role of PCSs in waste prevention, on the draft decree to harmonise waste sorting instructions for household packaging, and on the draft government report on the development and extension of the EPR principle.

Pledge 255 of the Grenelle conference calls for action **"to harmonise sorting signage and instructions** at the national level, for example when contractual agreements are renewed, to enable national informational campaigns and to promote legible information on packaging", with the **twin aims of greatly improving the efficiency of separate collection and meeting recycling objectives**. Initially focusing on packaging waste, the scope was extended in the framework of Grenelle conference working committee 22 to cover all waste generated by end-of-life products. This pledge is also embodied in the Grenelle 1 legislation stipulating that "sorting signage and instructions will be progressively harmonised."

PROGRESS REPORT ON THE HARMONISATION OF SORTING INSTRUCTIONS AND SIGNAGE TO ENABLE NATIONAL COMMUNICATION CAMPAIGNS

The Grenelle 2 legislation, Law 2010-788 of 12 July 2010 framing the national commitment to the environment, reiterates the Grenelle 1 objective and calls for harmonisation of chains for the purpose of national communication campaigns: *"By 1 January 2011 at the latest a harmonised system of sorting instructions for household packaging shall be drawn up, for implementation no later than 1 January 2015 by decree of the Council of State after review by the Harmonisation and Mediation Commission for separate collection and waste treatment chains under the National Waste Council.*

By 1 January 2012 at the latest all recyclable products covered by an Extended Producer Responsibility mechanism shall be indicated by a common symbol informing consumers that the product is to be disposed of in accordance with waste sorting instructions."

ADEME has been charged with the task of preparing implementation of this pledge, and has set up a working group composed of representatives of the various actors involved (central government authorities, local authorities, environmental protection and consumer groups, producers and Producer Compliance Schemes). The group drew up an action plan that was approved by the harmonisation commission at its meeting of 30 March 2010.

Operational implementation plans are now being drawn up, after wide consultation with stakeholders. These plans call for five main measures:

- The first measure is to **implement a harmonised marking system** to clearly and reliably distinguish products and packaging waste that have to be collected separately (other than B&A, EEE and products subject to regulations on hazardous substances). On the basis of the work carried out by the harmonisation working group, the Ministry for Sustainable Development drafted a decree and submitted it to the European Commission, which has approved the draft.
- The second measure, formally adopted under article L.199 of the Grenelle 2 legislation, is to **harmonise the list of products to be sorted**, called the "sorting categories". This measure focuses most specifically on packaging, as other chains are already fairly well harmonised. Decree n° 2012-291 on harmonisation of sorting instructions for household packaging waste has been drawn up to this end, and published in the Journal officiel of 2 March 2012. This decree removes some of the disparities at the local level between lists of packaging to be sorted (for instance, plastic caps and caps to edible oil bottles are to be separately collected everywhere). The list of products to be sorted is subject to updating to take into account the results of tests with separate collection of all plastic packaging. These test projects are slated to end in 2013.
- The third measure is to **harmonise the waste streams collected**, corresponding to a small number of target schemes, in order to reduce the diversity of organisations country-wide. Harmonisation of

collection systems applies mainly to collection of packaging and paper waste. This step will be analysed as part of a forward-looking study on the collection and sorting of packaging and paper waste by public waste treatment services; this study was launched by ADEME with stakeholders at the end of 2012.

- The fourth measure is to **harmonise messages and visual elements** used in communication campaigns with the signage deployed for separate collection, to render this communication consistent and cogent at the national level. Work on a multi-chain toolbox for local authorities and other actors began in Autumn 2012.
- The fifth measure is to **inform consumers** on the subject of all products that are separately collected and the appropriate ways to sort them, *via* a multi-chain national communication campaign. This campaign is scheduled for 2013.

CAN THE EPR PRINCIPLE BE EXTENDED TO OTHER PRODUCT CHAINS?

The development and extension of EPR chains was addressed during discussion of the Grenelle 2 legislation. Article 201 of Law 2010-788 of 12 July 2010 framing the national commitment to the environment stipulates that the government must submit to Parliament a report on ways to develop and extend application of the EPR principle.

This report, submitted to Parliament on 21 March 2012, formulates eight cross-sectoral guidelines. One of these is to consolidate and harmonise existing EPR chains, rather than create new ones for new waste streams. An impact study must be systematically conducted for any new EPR chain to determine whether the proposed chain makes sense in environmental terms.

The report also lists other concerns for reflection:

- implementation of a mechanism to precisely appraise costs, and receipts as the case may be, related to waste management for each EPR chain, and compare them with general waste management costs and receipts;
- a clear and documented survey of the current status of the interaction between funding provided by EPR chains and that provided by local taxes;
- monitoring and processing of data prior to verification of reported information, to be financed at least in part by product marketers;
- support measures for civil officers designated to carry out verification operations;
- more substantial oversight of the ways and means that certified bodies plan to use, in order to ensure consistency.

In addition to the above, 16 specific measures are proposed for existing chains.

For more information see www.developpement-durable.gouv.fr/IMG/pdf/21032012-Rapport_evolution_extension_filiere_REP.pdf

ABOUT ADEME

The French Environment and Energy Management Agency (ADEME) is active in the implementation of public policies regarding the environment, energy and sustainable development. ADEME provides expertise and advisory services to businesses, local authorities, government bodies and the public at large, to enable them to consolidate their environmental action. As part of this work the agency helps finance projects, from research to implementation, in the areas of waste management, soil conservation, energy efficiency and renewable energy, air quality and noise abatement.

ADEME is a public agency under the joint authority of the Ministry for Ecology, Sustainable Development and Energy, and the Ministry for Higher Education and Research.



For further information consult:

www.ademe.fr/dechets

www.ademe.fr/publications

www.developpement-durable.gouv.fr/Lexique-a-l-usage-des-acteurs-de.html

Collection Repères

Summary brochures for each chain can be downloaded from www.ademe.fr/publications

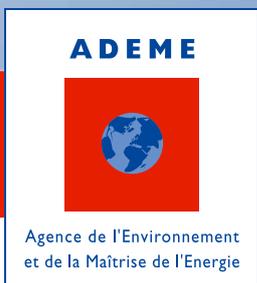
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