



# Extended Producer Responsibility

POLICY HIGHLIGHTS

Guidance for efficient  
waste management

# Extended producer responsibility

## Updated guidance for efficient waste management

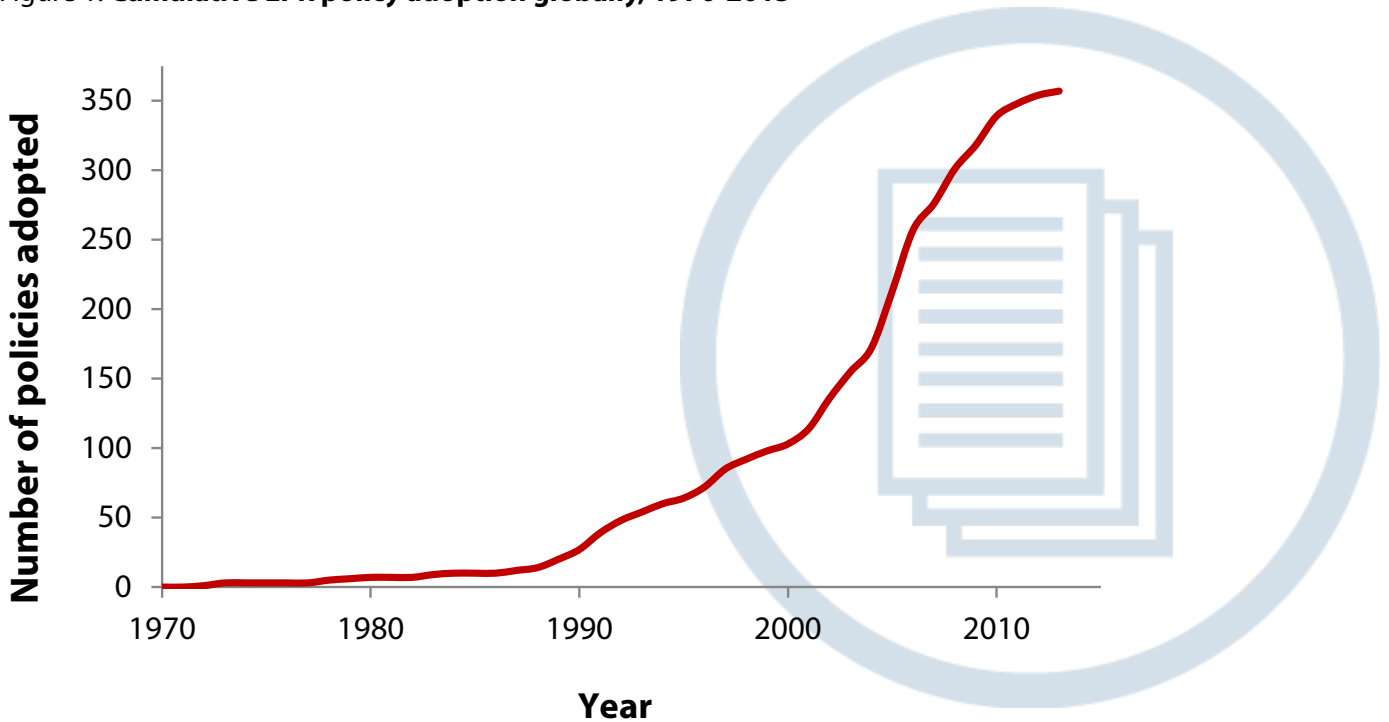
Since the late 1980s, the concept of “Extended Producer Responsibility” (EPR) has become an established principle of environmental policy in an increasing range of countries. It aims to make producers responsible for the environmental impacts of their products throughout the product chain, from design to the post-consumer phase. It was hoped that this would alleviate the burden on municipalities and taxpayers for managing end-of-life products, reduce the amount of waste destined for final disposal, and increase rates of recycling.

OECD provided a platform for countries to exchange experience, and, in 2001, produced a Guidance Manual to support the development of EPR systems. Given the diversity of approaches, the Guidance Manual did not aim to prescribe how EPR systems should be set up. Rather it provided some general guiding principles,

outlined possible options, and analysed some of their pros and cons.

Since 2001, the number and variety of EPR systems have increased significantly. Thus, a review of recent experience is timely, particularly in view of the support that EPR could provide to enhancing resource productivity and the circular economy, issues that are now high on the environmental policy agendas of many countries. In its first part, this report provides updated Guidance on EPRs, building on the 2001 Manual and in view of the developments and lessons learnt since then. In the second part, the report focuses on four selected challenges within EPR systems: the design and governance of EPR, competition issues, design for environment incentives and the role of the informal sector.

Figure 1. **Cumulative EPR policy adoption globally, 1970-2015**

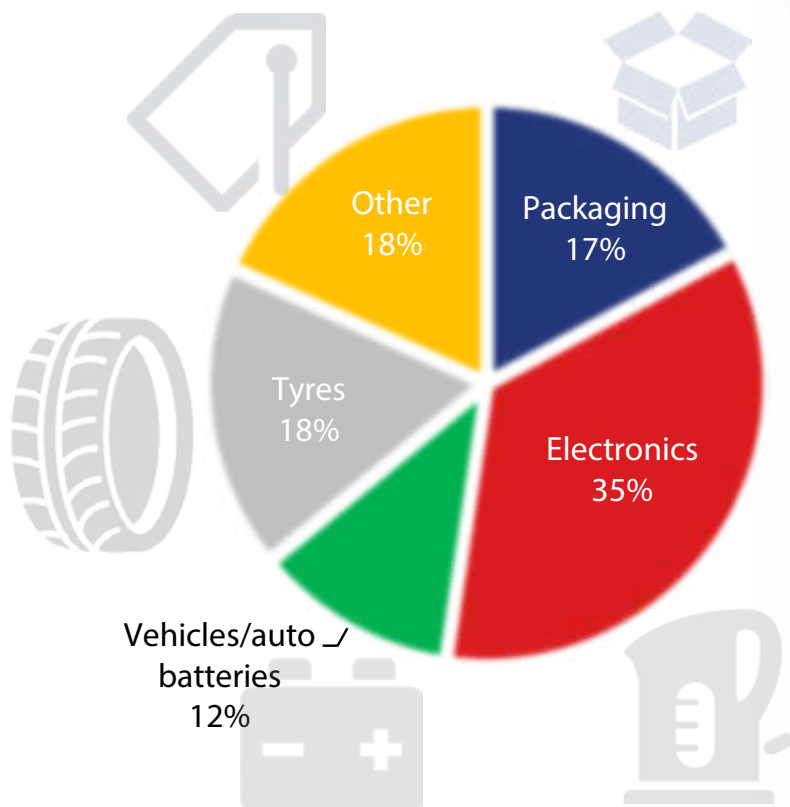


**Source:** OECD (2013), What have we learned about extended producer responsibility in the past decade? – A survey of the recent EPR economic literature, Paris.

## Evolution and impacts of EPRs

A recent survey identified about 400 EPR systems currently in operation. Nearly three-quarters were established since 2001. Legislation has been a major driver, and most EPRs appear to be mandatory rather than voluntary. Small consumer electronic equipment accounts for more than one-third of EPR systems, followed by packaging and tyres (each 17%), end-of-life vehicles, lead-acid batteries and a range of other products. Various forms of take-back requirements are the most commonly used instrument, accounting for nearly three-quarters of those surveyed. Advance disposal fees (ADF) and deposit/refund account for most of the rest. While in some cases individual firms have established their own systems, in most cases, producers have established collective EPR systems managed by Producer Responsibility Organisations (PROs).

Figure 2. **EPR by product type, worldwide**



**Source:** OECD (2013), What have we learned about extended producer responsibility in the past decade? – A survey of the recent EPR economic literature, Paris.



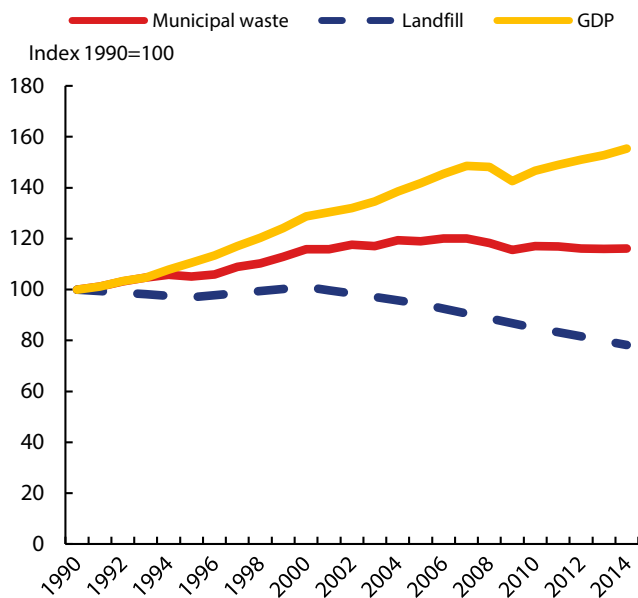
**DID YOU KNOW?**

**EPRs are now widely used with around 400 such systems in operation worldwide**

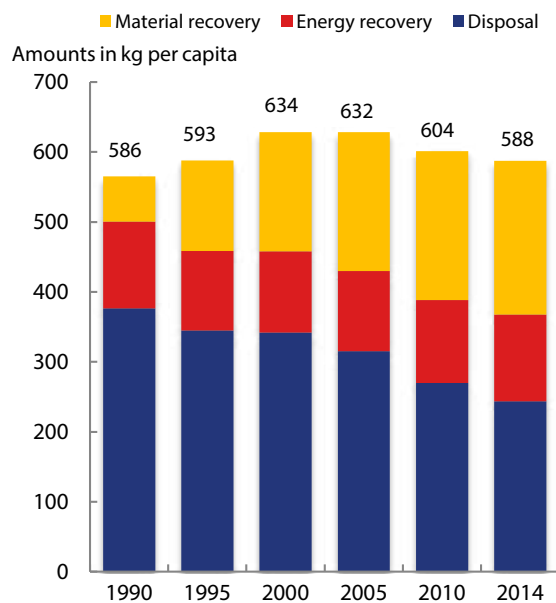
Assessing the impacts of EPR systems is difficult for several reasons: a considerable lack of data; analytical difficulties in distinguishing the impact of EPR systems from other factors; and the wide variety of EPR systems which limits comparison among them. Bearing in mind these caveats, there is evidence that in some countries (e.g. France), EPRs have helped to shift some of the financial burden for waste management from municipalities and taxpayers to producers, and to reduce the public costs of waste management. In addition, it seems likely that EPR systems have contributed to the decreased share of waste destined for final disposal and to the increased rates of recycling recorded in many OECD countries. However, progress in these areas varies very widely among countries, suggesting that there is scope in many countries to improve their performance by emulating the best performers. EPR systems are also likely to have contributed to the emergence of the multi-billion dollar waste and recycling industry, and the related investment and employment opportunities. On the other hand, the consensus appears to be that while EPR systems have contributed to waste prevention (e.g. eco-design) in some countries and some sectors, they are seldom sufficient to serve as the triggering factor.

**Figure 3. Trends in municipal solid waste management in the OECD**

Decoupling trend, municipal waste generation versus GDP, 1990-2014



Municipal waste management, recovery and disposal rates, 1990-2014



**Note:** Municipal solid waste only covers packaging and e-waste, but other types of waste covered by EPR, such as ELVs and tyres are not reflected in these numbers.

**Source:** OECD (2016), "Municipal waste generation and treatment", OECD Environment Statistics (database).

## Guidance and recommendations

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The OECD defines EPR as an environmental policy approach in which a producer's responsibility for a product is extended to the post-consumer stage of a product's life cycle. In practice, EPR involves producers taking responsibility for collecting end-of-life products, and for sorting them before their final treatment, ideally, recycling. EPR schemes can allow producers to exercise their responsibility either by providing the financial resources required and/or by assuming the operational and organisational aspects of the process from municipalities, e.g. in the case of packaging. They can do so individually or collectively through so-called producer responsibility organisations (PROs). Furthermore, EPR can be voluntary or mandated by law, and they can be implemented through a variety of instruments, such as product take-back requirements or economic and market-based instruments (e.g. deposit-refund systems or advance disposal fees), or a combination of these.



**While generally successful, the performance of EPR can be further improved, including by increasing costs effectiveness and their impact on product design**

Many of the recommendations regarding the good governance of EPR systems identified in the 2001 OECD Guidance Manual are still relevant and should be applied more systematically. For instance, the 2001 guiding principles for EPRs state that these systems should provide producers with incentives to change product designs; stimulate innovation; take a life-cycle approach; clearly define responsibilities; choose flexible policy instruments adapted to the particular product and waste stream; improve communication across the product chain; comprise a communication strategy; use stakeholder consultation (including local governments); consider both voluntary and mandatory approaches; be based on comprehensive analysis of the products and waste streams under consideration; undergo periodic evaluations; and avoid economic dislocations.

The 2001 Guidance Manual also provided more specific recommendations on a range of issues, the key elements of which have been integrated with the more recent experience.



## Design and governance of EPR

The design and governance of EPR are crucial to their performance. The issues range from target setting and monitoring & enforcement, to free-riding and financing.

- The targets of EPR policies should be periodically reviewed and adjusted, taking account of changes in market conditions and technology.
- In mandatory systems, governments should establish consistent and credible means for enforcing EPR obligations, including registers of producers, official accreditation of producer responsibility organisations (PROs) and appropriate sanctions.
- Adequately resourced monitoring systems need to be established; the performance of EPR operations should be regularly audited, preferably independently. In the same jurisdiction, EPR systems should be harmonised to the extent possible, and a means for checking the quality and comparability of data established.
- Free-riding, which still is a challenge to many EPR systems, should be addressed through peer pressure and strict enforcement.
- Governments should identify ways in which EPR systems can be financed in a sustainable manner. This should include analysis of how risks such as price volatility and leakage could be managed.



The updated OECD guidance focuses on the design and governance of EPRs, competition issues, design for environment incentives and the role of the informal sector

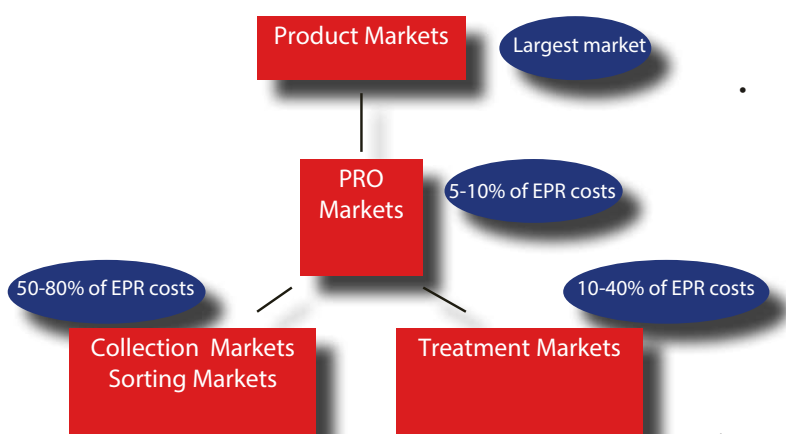
## Promote the integration of competition policy and EPR

As the recycling and waste management industries have grown and become more concentrated, the potential financial gains for producers, as well as the additional costs to society that result from collusion among producers and other forms of anti-competitive behaviour, have become more significant. Since 2001, some competition authorities and courts have reviewed alleged anti-competitive behaviour within EPR systems.

- Most attention should be placed on competition issues in product markets, where the welfare effects are potentially largest, followed by collection and sorting markets, recovery and disposal markets, and the market of producer responsibility services.
- Concerns persist about collusion among producers and about the potential abuse of vertical agreements between PROs and companies involved in downstream operations. An important means for minimising anti-competitive behaviour is to consult competition authorities when EPR systems are being established.
- Services such as waste collection, sorting, as well as material recovery and disposal should be procured by transparent, non-discriminatory and competitive tenders.
- EPR schemes should allow single PROs only when it can be demonstrated that the benefits (e.g. the capacity to manage the waste would otherwise not be built) outweigh the costs of less competition.

Figure 4. Relationship among markets and actors

PROs with operational responsibility



**Note:** In some countries collection, sorting and sometimes recycling is the responsibility of municipalities. As a consequence they decide with whom to contract for these services not the PROs.

## *Incentives for design for environment*

Better internalisation of end-of-life costs and stricter enforcement would also strengthen incentives for improving the eco-design of products and packaging. Setting fees at a level where they recover the full cost of the end-of-life management of the products covered by the EPR is therefore a key measure.

- Ideally, producer responsibility would be implemented at the level of individual producers, but due to the significant economies of scale and scope that are often available, most EPR systems apply collective producer responsibility, which dilutes incentives for eco-design.
- Where possible, producers' fees should therefore be more closely linked to the actual end-of-life treatment costs of their products, for instance through the use of variable (e.g. weight-based) rather than fixed (e.g., unit-based) fees, and/or modulated fees that differ according to specific design features that make products more easily recyclable.
- In the case of globally-traded products, better eco-design incentives could also be achieved by harmonising environmentally-sensitive design.

## *Integrating informal workers in EPRs in emerging and developing countries*

Since 2001, EPR systems have been established in many developing and emerging economies. In contrast to the most developed OECD countries, there are large numbers of informal waste workers engaged in recycling; an estimated 20 million globally. Waste picking is often hard, dangerous and socially precarious. While there are serious concerns about downstream informal dismantling and recycling which can generate negative economic and environmental impacts, the potentially positive contribution of informal waste collection and sorting activities is increasingly recognised.

- EPR systems need to find ways for informal operators to work with rather than against formal waste management systems, unless there is a risk that they will be undermined by them.
- However, this is not always easy or possible, and it will be important to draw lessons from current initiatives to guide further policy development in this area.

The global context has evolved significantly since the development of the first EPR policies. New economic powers have emerged in the global economy, product value chains have become more complex and extended across national boundaries, technological changes are altering patterns of communication and consumption, not least due to the internet, and markets for some materials and waste streams have been highly volatile. In such a context, EPR systems will have to continue to evolve if they are to become more effective waste management policy tools and to support the transition to more resource-efficient economies.



For further reading see the following OECD report on which these Policy Highlights are based:

OECD (2016), Extended Producer Responsibility: Updated Guidance for Efficient Waste Management, OECD Publishing, Paris.

DOI: <http://dx.doi.org/10.1787/9789264256385-en>.

For more information:

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