EaPGREEN
Partnership for Environment and Growth

This project is funded by the EU

Economic instruments for managing environmentally harmful products in Moldova

May 2015

Current practices and policy recommendations

TABLE OF CONTENTS

Tables

ACRONYMS

EaP GREEN	"Greening Economies in the Eastern Neighbourhood" initiative
EC	European Commission
EPR	extended producer responsibility
EU	European Union
EUR	euro
MDL	Moldovan leu
NEF	National Environmental Fund
OECD	Organisation for Economic Co-operation and Development
PRO	Producer Responsibility Organisation
UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environment Programme
UNIDO	United Nations Industrial Development Organisation
WEEE	waste electrical and electronic equipment

1. INTRODUCTION

The project "Economic instruments for managing environmentally harmful products in Moldova" is part of the European Union's initiative "Greening Economies in the Eastern Neighbourhood" (EaP GREEN) implemented by the OECD in partnership with UNEP, UNIDO and UNECE. The project's objective was to help the Government of the Republic of Moldova to improve the design of existing instruments and develop new ones in order to provide incentives for both reducing pollution by environmentally harmful products and introducing greener products. The regional Policy Manual for Eastern Partnership countries "Creating Market Incentives for Greener Products" developed by the OECD Secretariat in 2014 provided the analytical basis for the work.

The project was launched in October 2013 and included the following activities:

- A review of the existing policy and regulatory framework, as well as of the current practice of using product-related economic instruments;
- A series of stakeholder workshops to discuss options for the introduction or reform of product-related economic instrument and respective challenges;
- The development of policy recommendation on the key issues.

From the project's outset, the policy discussions focused on two principal policy instruments: environmentally related product taxes and extended producer responsibility (EPR) schemes. Moldova is one of the two Eastern Partnership countries (Armenia is the other one) with long-standing experience of using environmental taxes on harmful products. Moldova's interest in EPR schemes is driven to a large degree by the process of harmonisation of its legislation with that of the European Union, to which Moldova has committed itself under the Association Agreement.

The following sections describe Moldova's experience to-date with the design and implementation of each of these instruments and provide recommendations based on international best practices.

2. ENVIRONMENTALLY RELATED PRODUCT TAXES

Environmentally related product taxes include taxes levied on the sale of a product or group of products with an important environmental dimension to either production or consumption. They include both those taxes which have been explicitly introduced for environmental reasons (which is the case in Moldova) and the much broader group of taxes, such as those on motor fuels and other energy products, which have significant environmental implications, even if the principal purpose of the tax is revenue generation. Regardless of the original motivation of the tax, it can have environmental effects through its influence on the behaviour of producers and consumers.

2.1 Current practice

2.1.1 Excise taxes

Moldova imposes excise taxes on motor fuels at the 2014 rate of approximately EUR 190 per tonne of petrol and EUR 79 per tonne of diesel. These rates are significantly lower than the OECD average of over EUR 600 per tonne of petrol and about EUR 380 per tonne of diesel. Motor vehicles are subject to an excise tax that varies from EUR 0.30 to EUR 1.60 per cm^3 of cylinder volume, depending on the type and size of the engine. The average excise tax is about EUR 5,150 per vehicle. At the current stage of economic development there seems to be little space for a significant increase in the excise taxes, so this issue was not discussed further within the project.

In 2012, the revenue from excise taxes on fuel accounted for 3.4% of the total tax revenue, the motor vehicle import duty for 2%, and environmental product taxes for less than 1%. The total tax revenue contribution of environmentally-related taxes on products was a little over 6%, which is a bit higher than the OECD average of 5.6%.

2.1.2 Environmental taxes

Environmental taxes on harmful products were introduced in Moldova by 2002 amendments to Law No. 1540 of 25.02.1998 “On payments for environmental pollution” and have been in place since 2003. They are imposed on 20 product categories (Table 1) and apply to physical persons and legal entities *importing* such products and putting them on the domestic market. The Government of Moldova maintains that almost none of these products are manufactured domestically, so their exclusive application to imports does not create a competitive advantage for domestic producers.

The list of categories of environmentally harmful products was meant to be exhaustive and includes even products like cigarettes and chewing gum, which are not subject to environmental regulation anywhere else in the world. The environmental tax on motor fuels is levied under the label of “payments for air emissions from mobile sources”. Toxic products (e.g. containing asbestos and lead, organic chemicals) are also part of the list, although in OECD countries they are usually not regulated through taxation.

The rates for 19 product categories are set on the *ad valorem* basis, i.e. as a percentage of the product price. The rates are differentiated for petrol (based on lead content), heavy oil (based on sulphur content), pesticides and batteries (based on chemical content). In addition, Moldova has, since 2009, a product tax

on plastic packaging of ready products (dairy products are exempted) that is set in absolute values, between EUR 0.05 and EUR 0.2 per item[1].

Table 1. Taxes on environmentally harmful products: rates as a percentage of product price

Product category		Tax rate, %
1	Gum Arabic (chewing gum)	0.5
2	Tobacco products	0.5-1.0
3	Petrol-based fuel (gasoline)	0.5-1.0
4	Heavy-duty fuel	0.5-1.5
5	Ozone depleting organic chemical substances	0.5
6	Fertilisers	0.5-1.5
7	Paints	1.5-3.0
8	Surface treatment agents, lubricants	1.0
9	Pesticides, other chlorine and phosphorus-containing substances	1.5
10	Rubber-containing products (tyres, etc.)	0.5-1.5
11	Plastic packaging, incl. polyethylene and PCBs (bulk)	0.5-1.5
12	Paper, cardboard, tetra-pack packaging (bulk)	1.0-2.0
13	Asbestos-containing products	3.0
14	Batteries	1.5-3.0
15	Glass fibre products	1.5
16	Lead-containing products	2.0
17	Discs and other recording media	0.5
18	Electric bulbs	0.5-3.0
19	Used motor vehicles	0.5

Source: Ministry of Environment of Moldova

There is a draft law on amendments to the 1998 Law "On payments for environmental pollution" that is supposed to make equal the treatment of imported bulk (empty) packaging and packaging of ready products on the *ad valorem* basis (for ready products, based on the packaging cost declarations), but would still exempt domestic producers from it. As of early 2015, the draft law had not been considered by the Parliament.

In OECD countries similar taxes are usually set *ad quantum*: per kilogramme (or litre) or sometimes per item (e.g. for tyres or batteries)[2]. Therefore, it is difficult to compare most of the rates without more in-depth analysis of product prices. (The exception is the tax on plastic packaging in Moldova, which has a rate comparable with the one in Denmark, at EUR 0.11 per item).

[1] The plastic packaging tax is very broadly interpreted by the Customs Service and is levied on all kinds of packaging regardless of its size.

[2] There are very few examples of ad valorem product taxes, including the tax on pesticides in Denmark and the tax on plastic packaging in Poland.

The revenues are collected by the Customs Service and are channelled to the National Environmental Fund (NEF). The application of the tax to imported goods only and its collection by the Customs Service justifies the *ad valorem* rate setting. Given the administrative burden of operating these complex taxes with a multitude of parameters and rates, the Customs Service advocates transferring its collection responsibility to the tax authorities. However, the tax authorities are not equipped to control the product nomenclature (which is necessary to levy the tax), only the payments.

Table 2 presents the Customs Services 2012 revenue data for these taxes. Generally, these data have only indicative value: they are confusing, poorly maintained and do not correspond to that of the Ministry of Environment (the NEF revenue for 2012 is stated at 235.6 million MDL).

Table 2. Revenues from taxes on environmentally harmful products, 2012

Product category		Revenue, thousand MDL	% of total
1	Gum Arabic (chewing gum)	0.77	<1
2	Tobacco products	7,661	3.6
3	Petrol-based fuel (gasoline)	12,223	5.8
4	Heavy-duty fuel	26,766	12.8
5	Ozone depleting organic chemical substances	92	<1
6	Fertilisers	5,051	2.4
7	Paints	5,780	2.7
8	Surface treatment agents, lubricants	4,305	2.1
9	Pesticides, other chlorine and phosphorus-containing substances	10,355	4.9
10	Rubber-containing products (tyres, etc.)	8,617	4.1
11	Plastic packaging, incl. polyethylene and PCBs (bulk)	34,699	16.6
12	Paper, cardboard, tetra-pack packaging (bulk)	1,435	<1
13	Asbestos-containing products	1,649	<1
14	Batteries	3,036	1.4
15	Glass fibre products	704	<1
16	Lead-containing products	0.003	<1
17	Discs and other recording media	306	<1
18	Electric bulbs	751	<1
19	Used motor vehicles	10,595	5.1
20	Plastic, tetra-pack packaging of imported products	75,425	36.0
	Total	209,400	100

Source: Moldova Customs Service

As can be seen from Table 2, eight product categories out of 20 account each for less than 1% of the total revenue and together for only 2.5%. At the same time, the taxes on plastic packaging account for over 50% of the total revenue.

The fundamental problem with Moldova's system of environmental product taxes is that it does not target or affect producer or consumer behaviour but essentially serves to generate revenue for the NEF. The tax on packaging bears a very high administrative cost (partly due to the poor definition of packaging

in the law, partly due to the great number of entities subject to this tax) but no real impact – an ad valorem tax on packaging does not stimulate a shift to imported products using less packaging. Where a tax could be effective in changing producer or consumer behaviour – for fertilisers, pesticides, paints and lamps, the tax differentiation between dirtier and cleaner alternatives is either non-existent (for fertilisers) or too small (two percentage points). Taxes on batteries and motor vehicles, where the key environmental problem is their safe end-of-life collection, processing and/or disposal, are not optimal instruments and should be replaced by respective EPR schemes (see Section 3.2).

2.2 Recommendations

2.2.1 Institutional co-ordination

In most countries that have introduced successful and well-functioning environmentally related product taxes, the development of these taxes and their subsequent implementation has required co-ordination between the environment ministry and the ministry of finance. The effective policy reform in this area in Moldova should start with establishing an institutional mechanism for this crucial co-ordination and extend it to other key stakeholders.

> *The Government of Moldova should establish an Environmental Tax Reform Commission that would include the Ministry of Environment, the Ministry of Finance, the Ministry of Economy, the Customs Service, the Producers and Importers Association, etc.*

The Ministry of Environment should ensure that the taxes have a clear environmental goal of changing producer or consumer behaviour. The Ministry of Finance needs to ensure that the taxes are compatible with the rest of the tax system. The Ministry of Economy should contribute with an analysis of the impact of taxes on resource efficiency and key economic indicators.

2.2.2 Reform of the tax base

To be environmentally effective, the product tax needs to apply to clearly identified products that are associated with environmental damage in the course of production or consumption while not taxing products that are not associated with environmental damage, and to be levied at a high enough rate. If higher taxes on "dirty" products are passed on in higher prices for these products, compared with lower-taxed "green" products, this will tend to alter consumer choices, leading to a direct switch to greener products.

> *The Ministry of Environment should re-evaluate the environmental rationale of each environmentally related product tax and confine the taxes to those products where the price signal can lead to behavioural change and reduced consumption and production of the taxed product.*

In particular, it is advisable to:

- Retain environmental taxes on the following product groups: *motor fuel, fertilisers, pesticides, paints, and surface treatment agents* (with appropriate tax differentiation between more and less environmentally harmful alternatives).

- Temporarily retain environmental taxes on *all kinds of packaging, motor vehicles, tyres, batteries and electric bulbs*. These product categories should be subject to extended producer responsibility (EPR) schemes according to the draft Law on Waste and in line with Moldova's commitment to harmonise its environmental legislation with EU Directives. However, while the

EPR schemes for these products are being developed, the taxes should remain in place. Once the respective EPR schemes are fully operational, the taxes should be phased out.

- The tax on motor vehicles, currently applicable to used imported vehicles only, should be extended to *new vehicles*. The differentiation of excise taxes on motor vehicles based on age and/or the level of carbon dioxide emissions (and not just the engine type and size, as is currently the case) should be considered in the future.

- Eliminate environmental taxes on the following product groups: chewing gum and tobacco products and audio/video recording media (these should not be subject to environmental taxation), ozone depleting and asbestos and lead containing products (those should be banned or heavily restricted by law).

A detailed proposal on amendments, by product category, to Law No. 1540 of 25.02.1998 can be found in Annex 1 to this document.

2.2.3 Reform of tax rates

The tax rate needs to be large enough to make a real difference in the price of the environmentally harmful product, so that consumers notice the difference, and producers see a strong reason to change what they produce. According to economic theory, it is unlikely that a tax rate of less than about 10% will achieve any significant behavioural change in consumer purchasing or firms' production decisions, and environmental product taxes are unlikely to be worth introducing unless they are levied at 10% or more.

As a first step in reforming the environmental tax rates, the Government of Moldova should increase the tax rates for the retained product categories to 5% of the selling price of the least environmentally harmful alternative in the product category and to 10% of the selling price of the most environmentally harmful alternative in the product category. Annex 1 contains a detailed proposal of tax rates for specific product categories.

The environmental effectiveness of product taxes does not directly depend on the destination of their revenue. This is why this report does not make an explicit recommendation on whether the revenue from the environmental taxes on environmentally harmful products[3] should continue to be channelled to the NEF or revert to the state budget.

[3] A rough assessment (based on the largely unreliable revenue data from the Customs Service) of the projected revenue from the environmental taxes reformed following this report's recommendations has shown that the revenue would increase at least two-fold.

3. EXTENDED PRODUCER RESPONSIBILITY

Extended producer responsibility (EPR) is an economic instrument used to extend producers' responsibility for a product to the post-consumer stage of a product's life cycle. Most EPR systems aim to encourage separate collection of substances or products to permit cost-effective re-use, or higher rates of recycling or materials recovery. Another objective of EPR systems is to ensure secure and safe collection and disposal of substances or products that would otherwise be hazardous or harmful within the general waste stream. Compared to the traditional solid waste management approach, EPR involves a shift in responsibility for managing product waste (administratively or financially) from governments or municipalities (and thus taxpayers) to the entities that produce and market the products that are destined to become waste. EPR can be implemented individually (individual compliance scheme) when a producer organises its own system, and collectively (collective compliance scheme) when several producers of similar products decide to collaborate and thus transfer their responsibility to a specific Producer Responsibility Organisation (a PRO) that manages the scheme, including collection, recycling and safe treatment and disposal.

The legislative framework for the development of Extended Producer Responsibility at the European Union level is composed both by general legislation on waste management (the Waste Framework Directive 2008/98/EC), and specific directives framing the recovery and recycling of specific waste streams: relating to packaging waste (2004/12/EC), batteries (2006/66/EC), waste electrical and electronic equipment (2012/19/EC) and end-of-life vehicles (2000/53/EC) – and subsequently transposed into the corresponding national legislation. The latter three directives specifically require or encourage EU member states to set up EPR schemes for the products they cover. For packaging, although there is no obligation to impose EPR, most member states have chosen this option.

In addition to the main EPR schemes, other product streams are covered by EPR schemes in some Member States: pharmaceuticals, textiles, furniture, mobile homes, fluorinated refrigerant fluids, lubricants, infectious healthcare waste, plant protection product packaging and unused products, fertiliser and soil amendment packaging, seed and plant packaging, and office equipment ink cartridges.

3.1 Current practice

The Waste Management Strategy of the Republic of Moldova for 2013-2017 (Government Resolution 248 of 10.04.2013) envisages the development, in 2014-2016, of an EPR system for "all types of waste". However, according to the draft Law on Waste, priority would be given to five waste streams: *waste electrical and electronic equipment (WEEE), end-of-life vehicles, used oil, batteries, and packaging waste*[4]. The EPR should ensure "a far distribution of the cost burden between producers and consumers". The draft Law on Waste was submitted to the Parliament in April 2013 but has not advanced there.

Art. 12 of the draft Law on Waste currently stipulates that "every physical person or legal entity engaged in the production, processing, distribution or trade of goods" should be subject to the EPR regime.

[4] There are currently no deposit-refund schemes in Moldova. However, a private recycling system for polyethylene terephthalate (PET) bottles has been operating successfully for nearly a decade. The ABS company has put collection containers in the streets of Chisinau and has built its own recycling plant.

The same article establishes norms for manufacturers and distributors of products subject to an EPR regime, including registration, reporting and record-keeping requirements. Article 50 deals specifically with the management of electric and electronic equipment waste.

The system would be introduced through a number of government regulations that are expected to specify recycling targets. A technical regulation was prepared several years ago on EPR for packaging, but it was not adopted because of the lack of framework legislation. A few years ago, the Ministry of Environment commissioned a draft regulation on EPR for waste oils from the Institute of Ecology (with resources from the National Environmental Fund), but this draft has not yet been produced.

The Ministry of Environment is in the process of creating a three-tier information system for waste management which would constitute an important element of the future EPR schemes. It will include a database of waste types (according to the international classification), a register of waste producers and a register of accredited waste recyclers.

There is currently a Slovak bilateral pilot project on the development of an EPR scheme for WEEE. There are about 2,000 importers of electric and electronic equipment in Moldova. It is estimated that 3.5 kg of electric and electronic equipment per person are imported per year (plus 1 kg in Transnistria), so the initial collection target is expected to be 1 kg per person per year.

The Slovak-funded project produced a draft implementing regulation of the EPR scheme for WEEE in 2014. The draft regulation envisages that the scheme would be privately operated, with a mixture of collective and individual deposit-refund schemes for WEEE collection, recovery and recycling[5]. This decision was a result of extensive consultation with the business community.

A collective scheme would imply the establishment, on a voluntary basis, by producers or importers of non-profit companies charged with separate collection, recovery and recycling of WEEE as well as respective reporting and record-keeping. An agreement would be signed between producers (importers) – in a collective scheme, through a Producer Responsibility Organisation (PRO) – and municipalities on the conditions and financing of WEEE collection. Producers (importers) of the PRO would also be responsible for offering take-back points in stores selling their electric and electronic products. The government's role would be limited to monitoring (of invoices, weight certificates, bills of delivery, etc.) and enforcement by the State Environmental Inspectorate of compliance by individual economic agents and the PRO.

A regulatory impact assessment for a privately-run WEEE scheme has been approved by the Ministry of Economy. However, a different arrangement may be envisaged for other waste streams.

3.2 Recommendations

3.2.1 Establishing a legal framework

In order to create a legal basis for the implementation of EPR schemes, the Government of Moldova should, as a first step, finalise the draft new Law on Waste, including its EPR-related provisions, and ensure its adoption in the Parliament.

> *Following the adoption of the Law on Waste, the Ministry of Environment should draft stand-alone regulations based on EPR principles (recovery and recycling targets, labelling, fees,*

[5] This decision was supported by the analysis of the negative experience of state-operated EPR systems in Bulgaria, Latvia, Slovakia (now moving towards a private system) and Romania.

reporting, etc.) for the five priority waste streams – WEEE (currently being drafted), end-of-life vehicles, used oil, batteries, and packaging waste – with a common design.

The EPR legislation should define clearly the EPR scheme and its objectives. The European Commissions' study "Development of Guidance on Extended Producer Responsibility"[6] has shown that the differences in EPR implementation in different EU Member States arise from the varied interpretation in terms of scope and exact definition.

The scope of the EPR legislation should be clear and explicit; otherwise it may create uncertainty for business and lead to costly and wasteful litigation disputing the scope of application of the policy. In particular, it should specify the products covered by the scheme and the categories of firms subject to its requirements (only manufacturers and importers or wholesale or retail firms involved in selling the product as well).

Even if EPR focuses on the responsibility of the producers/importers for products which are placed on the market, many other actors play a role in reaching the objectives of the scheme (consumers, local authorities, waste management companies, social economy actors, retailers etc.). The EPR legislation should also clarify and define the responsibilities (organisational and/or financial) and roles of each actor throughout the whole product life cycle as recommended in the Annex of the "Legislative proposal to review recycling and other waste-related targets in the EU".[7] Generally, there is no "one size fits all" solution when allocating the responsibilities as it depends on the local context and the type of products. However precise roles should be defined at the national scale, in accordance with the respective financial and/or operational obligations.

The individual responsibilities of all actors could be defined along these lines:

- Producers/distributors: Responsible for the products they put on the market, for executing take-back or financial obligations, for low-environmental-impact treatment of their waste products and for meeting recovery and recycling targets;

- Producer Responsibility Organisations: Act collectively on member producers' behalf, to collectively implement their take-back or financial obligations;

- National authorities: Responsible for implementing legislation, reaching mandatory legal targets, defining regulations and operational requirements, monitoring and enforcing the proper implementation of the EPR principle by all stakeholders as well as establishing additional economic instruments like landfill taxes or disposal fees (Pay-As-You-Throw schemes);

- Consumers/citizens: Responsible for participating in the separate collection schemes through effective sorting and using the provided infrastructure for separate collection to the fullest extent possible;

- Local authorities: In charge, in certain cases (e.g. for certain types of household waste covered by EPR) of waste collection and/or certain transport and treatment operations, achieving environmental objectives in direct collaboration with citizens-sorters/tax-payers and in charge of setting up local incentives fostering separate collection and efficient recovery schemes (including disposal fees).

[6] http://ec.europa.eu/environment/waste/pdf/target_review/Guidance%20on%20EPR%20-%20Final%20Report.pdf

[7] The adoption of the Proposal and its Annex is expected by end of 2015.

In addition to the definition of responsibilities within EPR schemes, one important and related feature is the way that dialogue is organised among co-responsible stakeholders. Over time, the waste management chain may evolve along with stakeholders' responsibilities. This may require an institutional co-ordination mechanism through which stakeholders can interact on a regular basis.

3.2.2 Rules for Producer Responsibility Organisations

Producers or importers are generally assigned certain obligations concerning the collection ("take-back") of product packaging or end-of-life products, either at the level of individual firms or, more commonly, through a collective agency – a PRO. PROs potentially exert three main functions: financing the collection and treatment of the targeted stream of end-of-life products by collecting fees and redistributing the revenue; managing the corresponding data; organising and/or supervising these activities. However their role can vary according to the type of product. For example, at the EU level, the most common role for PROs in EPR schemes for batteries includes a partial organisation of the waste battery collection system. Regarding end-of-life vehicles and waste oils, the majority of PROs mostly bear a mere financial responsibility. Finally, in the case of WEEE, the responsibility of PROs is either partially or fully organisational.

The different types of producers' responsibilities in 36 EPR schemes covering six waste streams identified by the European Commission in the study "Development of Guidance on Extended Producer Responsibility" are illustrated in Table 3. This table shows that there is no 'one size fits all' solution at the EU level.

Table 3. PRO responsibilities in EPR schemes across the EU

						
Financial responsibility	Austria Netherlands Slovakia Sweden	Italy Portugal Spain	United Kingdom			
Financial responsibility through contracts with municipalities		Belgium	Czech Republic France Netherlands	France		
Financial responsibility with partial organisational responsibility			Belgium		Austria Belgium Denmark France Netherlands Switzerland	Ireland Sweden United Kingdom
Financial responsibility with full organisational responsibility	Germany Finland		Austria Germany	Sweden Finland		Denmark Finland France Latvia

Source: Development of Guidance on Extended Producer Responsibility, European Commission, 2014

EPR legislation should include provisions which allow producers to choose between setting up a PRO or an individual responsibility scheme. In some cases, an individual responsibility scheme is more relevant. These might be cases where the corresponding products market is highly concentrated or where producers can implement a take-back system to their consumers. Given the high share of imported products in Moldova, it is expected that most producers will set up a PRO. However, in some cases (e.g. large professional equipment) an importer may be in direct contact with its customers and therefore consider to set up an individual scheme.

> *Moldova should establish regulatory provisions allowing producers to choose between setting up a PRO or an individual responsibility scheme while ensuring a level-playing field among all producers and importers.*

All PROs, and single-firm collection and recycling operations, should be subject to equivalent targets and effective monitoring of compliance, with meaningful sanctions for non-compliance. Individual schemes should not offer an opportunity for non-compliance or lower compliance. PROs should also face equivalent financial conditions, based on cost-sharing by the participating firms. PROs should not be given competitive advantage by public subsidy, nor should they be burdened with responsibilities that are more onerous than those applying to individual schemes.

3.2.3 Rules for PRO financing

Typically, a PRO levies charges on participating firms to cover partly or fully the net costs for the management of waste that has been separately collected (e.g. costs for collection and treatment, minus revenues from the sales of recovered materials); collection, transport and treatment costs for non-separately collected waste; as well as administrative, reporting, monitoring and enforcement, and public information and awareness raising costs relative to the operation of collective schemes.

In addition, for those costs explicitly covered by the EPR system, the level of coverage (full or partial) by the producers varies. This level of coverage is closely linked to the share of responsibilities between stakeholders as well as to the national framework for EPR. For instance, in most cases for battery waste, the financial responsibility assumed by battery producers covers 100% of collection and treatment costs. For WEEE, PROs cover 100% of transportation (pick-up from public amenity centres) and treatment costs. However, only few PROs reimburse 100% of the collection costs to local public authorities.

The EPR legislation should include provisions to clarify the level of cost coverage by the EPR systems.[8] When the costs that need to be covered by EPR do not fall within the operational responsibility of producers, nor within the direct functioning costs of PROs, some EPR systems use a reference formula (or reference cost) to estimate the amounts to be covered, and to determine how much producers should contribute (e.g. by reimbursing local authorities).

The charge levied on a firm should reflect as faithfully as possible the end-of-life cost of his own products. For example, with regards to packaging, a different fee should be applied for different materials. Similarly, a higher fee should be applied for WEEE arising from products containing hazardous substances which go through complementary waste treatment.

At a later stage, these schemes could introduce a form of fees "modulation" based on certain eco-design criteria. More globally, the modulation of fees aims at promoting the true cost principle which aims at individualising the producer responsibility by linking the financial responsibility with the true costs of

[8] As recommended by the European Commission in the Annex of the "Legislative proposal to review recycling and other waste-related targets in the EU", 03.07.2014

the management of the products put on the market by a specific producer. For instance, in France, PROs have introduced a fee modulation depending on the batteries' respective environmental impacts and accompanied by technical adaptation propositions. In Belgium, fees are set to reflect the realistic costs of collecting and treating various types of packaging material.

> *Moldova's EPR regulations should specify the basis for calculating annual fees to be paid by producers and importers to contribute to the running costs of the PRO – producers' fees should reflect the actual waste management costs of the products put on the market.*

In some industries that have undergone major restructuring, a high proportion of current wastes may be the products of manufacturers who are no longer in business. These "orphan" products, being older, may have relatively high waste management costs. Requiring existing producers to pay for managing these wastes is likely to meet with a lot of opposition on the grounds that the burden is excessive and unjust. It is recommended to undergo a cost-benefit analysis for relevant product category with long lifetime (such as WEEE) in order to establish whether some element of public subsidy to the operating costs of the PRO, based on the proportion of orphan products that it handles is necessary.

3.2.4 Setting and ensuring compliance with performance targets

The legislation needs to contain a clear specification of the standards of waste management that producers are expected to achieve, either through individual management of their wastes or through the operations of the PRO which they finance and control. It should stipulate targets for the proportion of waste products to be collected through the EPR system as well as for the proportion of the waste to be recycled. The proposed minimum targets could be those already required by the European Commission in the specific directives framing the recovery and recycling of specific waste streams[9] or those recently outlined in the "Legislative proposal to review recycling and other waste-related targets in the EU".[10]

The legislation may specify the targets directly or define a clear process for subsequent target-setting by the government. The latter option has the advantage that waste recovery and recycling targets can be adjusted more flexibly in the light of experience, though firms may fear that it increases the risks that they will face sudden and unrealistic demands to meet more stringent targets.

Both the public authorities and any collective industry-run PRO need to collect regular information on the performance of the system and on the relevant activities (sales, etc.) of individual participating firms. Two main performance indicators could be used to assess their performance:

- Recycling rate (the ration between the quantities of waste recycled and the quantities of waste produced;
- Costs (full costs for the management of the end-of-life products, including those that may not be directly covered by the producers).

However, the EU study has shown that assessing the well-functioning of EPR schemes in the EU is made very difficult due to the lack of transparency and availability of reliable data. Most of the time, scope, definitions, and calculation methods differ from one country to another. The EPR legislation should

[9] Packaging waste (2004/12/EC), batteries (2006/66/EC), waste electrical and electronic equipment (2012/19/EC) and end-of-life vehicles (2000/53/EC).

[10] http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52014PC0397. The adoption of this proposal is expected by end of 2015.

contain clear provision for producers regarding the transparency regarding the costs, benefits and flows of data.

Although surveillance specifications generally exist for each stream in almost all EU member states, freeriding is a common problem in the implementation of EPR. Freeriding refers to producers who do not finance the end-of-life management costs, although they put a share of the corresponding products on the market. In the case of packaging schemes, the free riders phenomenon is frequently an important issue. Another form of freeriding is non-compliance. This refers to producers who contribute to the PRO but do not fulfil all obligations that they have agreed to respect or provide erroneous data about quantities put on the market.

EPR legislation should contain clear provisions for monitoring compliance so that firms that fail to meet their obligations can be clearly identified, and corrective action taken.

> *The EPR regulations should specify how the collection and recycling performance targets for the PRO will be set (e.g. via decrees of the Ministry of Environment) and establish arrangements for annual financial audit and performance monitoring of participating firms.*
>
> *Sanctions that would be applied to the PRO and its shareholder firms in the event of non-compliance with the performance targets should be included in Moldova's Code of Administrative Offences. They should be set at a level high enough so that they are likely to exceed the financial savings that firms might make through non-compliance.*

ANNEX 1. PROPOSALS FOR AMENDMENTS TO APPENDIX 8 OF LAW NO. 1540 "ON PAYMENTS FOR ENVIRONMENTAL POLLUTION" OF 25.02.1998

Product code according to Product Nomenclature of the Republic of Moldova	Product category	Current rate, %	Proposed rate, %
1301 20000	Gum Arabic (chewing gum)	0.5	delete
2402, 2403	Cigars, cigarettes, other tobacco	0.5-1.0	delete
2524	Asbestos	5	delete
2707	Coal tar distillates	1.0	5
2709	Crude oil and petroleum products	0.5	5
2710	Petroleum products		
2710 11210, 2710 11250	White spirit, etc.	0.5	10
2710 11310	Gasoline for aviation	0.5	5
2710 11410, 450, 490	Gasoline with lead content not exceeding 0.013 g/l	0.5	5
2710 11510, 590, 700	Gasoline with lead content exceeding 0.013 g/l	1.0	10
2710 19210, 250	Kerosene	0.5	5
2710 19410, 450	Diesel fuel with sulphur content not exceeding 0.2 % of mass	0.5	5
2710 19490	Diesel fuel with sulphur content exceeding 0.2 % of mass	1.0	10
2710 19610, 630	Fuel oil with sulphur content not exceeding 2 % of mass	0.5	5
2710 19650, 690	Fuel oil with sulphur content exceeding 2 % of mass	1-1.5	10
2711 14000	Ethylene, propylene, butylene, butadiene	1.0	5
2713 20000, 2714	Bitumen	1.5	10
2901, 2902, 2903, 2907	Hydrocarbons and their halogenated, nitrated or nitrosated derivatives	0.5	5
3102, 3102, 3103, 3104, 3105	Fertilisers	0.5-1.5	10
3204	Synthetic organic colouring matter	1.5	5
3205	Coloured varnishes	1.5	5
3206 11000, 19000, 20000, 49300	Pigments based on titanium dioxide, cadmium and chromium compounds	3.0	10
3206 41000, 49100, 49800	Other pigments and dyes	1.5	5

Product code according to Product Nomenclature of the Republic of Moldova	Product category	Current rate, %	Proposed rate, %
3207	Pigments used in ceramic, enamel, glass	1.5	5
3208, 3209	Varnishes based on synthetic polymers	3.0	10
3210	Paints and varnishes used for finishing leather	3.0	10
3211	Prepared driers	1.5	5
3212	Other pigments	0.5	5
3402	Surface-active agents other than soaps	1.0	5
3402	Surface-active agents (detergents) containing phosphorus	1.0	10
3403	Lubricants	1.0	5
3808	Insecticides, rodenticides, fungicides, herbicides	1.5	10
3811	Antidetonators, antioxidants	1.5	delete
3812	Rubber accelerators	1.5	delete
3814	Complex organic solvents and thinners	1.5	5
3819	Hydraulic brake liquids	1.5	5
3820	Anti-freeze liquids	1.5	5
3823	Industrial monocarboxylic fatty acids	1.5	delete
3901-3926	Plastics and articles thereof	0.5-3.0	delete, except 3923 (packaging)
3923	Plastic articles for the transport or packing of goods	0.5-1.5	5 (until introduction of EPR, then delete)
4001-4017	Rubber and articles thereof	0.5-1.5	delete, except 4011-4012
4011-4012	Pneumatic rubber tires, new and second-hand	1.5-3.0	5 (until introduction of EPR, then delete)
4811, 4819	Paper and cardboard; articles made of paper pulp, paper or cardboard	1.0-2.0	5 (until introduction of EPR, then delete)
5003	Silk waste	1.5	delete
6806, 6811-6813	Articles of stone, plaster, cement, asbestos, mica or similar materials	0.5-3.0	delete
7019	Fiberglass and articles thereof	1.5	delete
7804	Lead and articles thereof	2	delete
8506	Primary cells and primary batteries, except the following	1.5	5 (until introduction of EPR, then delete)
8506 30, 60, 80 050	Batteries: mercury oxide, zinc air and zinc-carbon	3.0	10 (until introduction of EPR, then delete)

Product code according to Product Nomenclature of the Republic of Moldova	Product category	Current rate, %	Proposed rate, %
8507	Electric accumulators, except the following	1.5	5 (until introduction of EPR, then delete)
8507 10, 20, 30, 8548	Lead and cadmium-nickel batteries, waste and scrap of primary cells, batteries and accumulators	3.0	10 (until introduction of EPR, then delete)
8523, 8524	Audio recording media	0.5	delete
8539	Incandescent lamps, except the following	0.5	5
8539 31, 8539 32, 8540	Thermionic, mercury, sodium, and metal halide fluorescent lamps	3.0	10
8702	Motor vehicles for the transport of 10 or more persons, including the driver (new and used ones)	0.5	5 (until introduction of EPR, then delete)
8703 21, 22, 31	Passenger cars (new and used ones) with a cylinder capacity not exceeding 1500 cm^3	0.5	5 (until introduction of EPR, then delete)
8703 23, 24, 32, 33	Passenger cars (new and used ones) with a cylinder capacity exceeding 1500 cm^3	0.5	10 (until introduction of EPR, then delete)
8704 21, 31	Motor vehicles (new and used ones) for the transport of goods with gross vehicle weight not exceeding 5 tonnes	0.5	5 (until introduction of EPR, then delete)
8704 22, 23, 32	Motor vehicles (new and used ones) for the transport of goods with gross vehicle weight exceeding 5 tonnes	0.5	10 (until introduction of EPR, then delete)

The project "Economic instruments for managing environmentally harmful products in Moldova" is part of the European Union's initiative "Greening Economies in the Eastern Neighbourhood" (EaP GREEN) implemented by the OECD in partnership with UNEP, UNIDO and UNECE. The project's objective was to help the Government of the Republic of Moldova to improve the design of existing instruments and develop new ones in order to provide incentives for both reducing pollution by environmentally harmful products and introducing greener products. The regional Policy Manual for Eastern Partnership countries "Creating Market Incentives for Greener Products" developed by the OECD Secretariat in 2014 provided the analytical basis for the work.

OECD
BETTER POLICIES FOR BETTER LIVES

UNECE

UNEP

UNIDO

EaP GREEN is funded by the European Union and other donors, and is jointly implemented by four international organisations - OECD, UNECE, UNEP and UNIDO.

For more information:
www.greening-economies-eap.org