Section V

Conclusion

11. Conclusions: Toward an Extended Producer Responsibility Policy with International Considerations

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As reflected in the title, this report focuses on extended producer responsibility (EPR) in Asia. Most of the existing literature on EPR deals with how this concept has been applied to policy development in Europe over the past two decades. Despite a growing interest in EPR among policymakers and stakeholders in Asia, there is still not much written on the experiences gained so far in this region and on the specific considerations that need to be taken when applying the EPR concept in developing countries in Asia. This report hopes to fill some of those gaps. This final section summarizes the key findings presented in the preceding chapters and identifies some common themes. This is done with the view to provide recommendations and advice specifically concerning EPR implementation in developing Asian countries. The section is divided into four parts discussing, in turn: (i) the general nature of the EPR concept and related policies; (ii) specific challenges met when applying EPR in the context of developing Asian countries; (iii) relationships between EPR and international trade; and (iv) the need for international collaboration to strengthen EPR implementation.

EPR – a flexible policy approach

The report clearly demonstrates that EPR is a general policy principle rather than a well-defined policy tool. In order to implement EPR effectively, policymakers first have to define what problems they are trying to address and develop a clear image of how EPR would be adopted to address those problems. Without a clear understanding of the problems and without a proper analysis of how EPR would contribute to solving those problems, the new policies are not likely to be of much benefit. In this process, it is necessary to define in detail what kind of EPR is needed (see more details below). Finally, policymakers need to devise a package of regulations and supporting policy tools, suitable to country-specific conditions, which assign clear responsibilities to all key actors and facilitate their compliance by providing appropriate incentives.

The chapters of this report illustrate the multi-faceted characteristics of EPR and show how

the concept has been interpreted in different countries and how it has been applied to different products. This review identifies a number of key questions that policymakers must consider if they are planning to develop EPR-based policies. These questions include the following:

- Should the EPR scheme focus only on the recycling of end-of-life products or should it have a broader scope, including the greening of supply chains and product life-cycles?
- In order for the EPR scheme to be effective, what kinds of responsibilities should be assigned to other actors, such as consumers, local authorities and waste hauling companies, in addition to producers?
- What kinds of responsibilities should be required of the producer (e.g. financial or physical responsibility for end-of-life treatment of products, liability for accidents or nuisance cased by products, responsibility to provide correct and adequate information to users and other actors handling the products)?
- Should the EPR scheme be based on voluntary initiatives and agreements between the government and the industry or based on proper legislation?
- Who should be considered the producer – the brand-owner, the manufacturer or the importer? In the case of packaging, who should be held responsible – the producer of the packaging materials or the manufacturer of the packaged goods (the filling company)?
- Should the scheme be based on an individual producer responsibility where each producer takes responsibility for their own products or should all companies in an industrial sector have a shared responsibility and be allowed to form a joint organizations in order to meet their obligations?
- How should the financing mechanism be designed? This question includes issues such as: Who should be paying? At what stage of the life-cycle should payments be made? Who should collect the payments? What principle should be used to determine the amount to be paid? And how should the collected resources be allocated and used?

Policymakers may be interested in EPR for different reasons and it is important to realize that specific forms of EPR are more suitable for meeting certain objectives than others. For example, a common objective of EPR is to reduce municipal costs for waste treatment. This could be achieved through a system where producers have a shared financial responsibility for the end-of-life treatment of their products. However, such a system creates weak incentives for product redesign, which is another commonly stated objective of EPR policies. In order to create incentives for producers to redesign their products for easy recycling, a system based on strict individual product take-back is likely to be more effective. Such an EPR scheme, on the other hand, is more difficult to implement and the overall costs (at least in the short run) are likely to be higher. This discussion illustrates the trade-offs that need to be made when considering different forms of EPR and the need to be clear about what problems the EPR system is expected to solve.

For EPR systems to work as intended, it is important to consider the economic incentives or disincentives for all actors concerned. An EPR system implies additional obligations and costs for certain actors, and it can be expected that at least some of them will try to avoid this

extra burden if possible. Policymakers need to anticipate such illegal behavior and prevent any loopholes to allow actors to escape their responsibilities. This manual indicates the need for additional supporting policies for the system to function properly. It also shows the importance of evaluating the performance of the EPR system at regular intervals in order to discover such weaknesses and to take appropriate remedial action.

However, it is equally important to try to reduce the overall costs of the EPR system. For certain functions of the system, such as collection from households, it might seem efficient to create monopolies. However, the influence of such decisions on the costs needs to be carefully considered. Similarly, if producers are allowed to charge a recycling fee to consumers, they may not have a strong incentive to try to reduce the costs of recycling by way of product redesign or through innovation in the recycling process.

Effective implementation of EPR requires a set of coordinated policies. Especially crucial are regulations of environmental and health impacts of recycling and waste treatment and policies to facilitate the effective collection of end-of-life products from households and other users. EPR by itself does not contribute to improved end-of-life treatment. Producers will seek to meet their responsibility at the lowest possible cost; therefore, there is a need to introduce strict standards specifying in detail what kind of end-of-life treatment they are responsible for and what environmental standards this treatment must comply with. It is the role of government to regulate the quality of the recycling, based on its knowledge of best available technologies, and it is the role of producers and recycling companies to try to meet those standards at the lowest possible costs. However, recycling standards need to be regularly revised and updated in order to reflect technological advances.

In the collection stage, special supporting policies are also necessary. Under some EPR schemes, producers are made responsible for collecting end-of-life products directly from households. However, producers typically have no experience in setting up an efficient collection system, and they do not have any control over how household waste is disposed. This kind of collection system usually becomes costly and it can for several reasons be infeasible to require producers to develop a completely separate collection infrastructure just for one product category. Therefore, systems based on existing waste collection schemes handled by local authorities or contracted waste haulers seem to provide a more feasible solution. In such cases, an organization collecting the items covered by the EPR would be responsible for bringing the concerned waste to collection points, where the producers or their contractors can take care of them. Another common solution, especially for household appliances, is to give retailers the obligation to take back end-of-life items and transport them to designated collection points, from where the producers can take over the responsibility. Additional mechanisms, such as deposit-refund systems, can help secure a high recovery rate.

It is important to understand that EPR is neither a panacea for product-related environmental problems, nor a straightforward policy blueprint that can easily be copied and implemented. As

shown in the report, successful implementation requires careful consideration of local/national conditions and needs, the characteristics of the product in question, and the related actor network. Typically, a comprehensive package of coordinated policies is needed to make the system function as intended. In developing such a policy package, as discussed above, economic aspects are key, so appropriate incentives need to be carefully designed. It is also important for the government to play a continuous and active role in revising related policies and regulations if needed. This can be facilitated through monitoring and evaluating the effectiveness of the system, including the costs borne by different stakeholders.

EPR implementation in developing Asian countries

Most of the literature on EPR discusses European experiences and how this policy approach can be used in the context of OECD countries. This body of evidence shows that EPR has been successful to some extent, but it also indicates that effective implementation of EPR-based policies is challenging. The chapters in this report show that many of the challenges met in Europe apply also to Asia; they also show that the situation in developing Asian countries is in many ways different from OECD countries and this is expected to affect how EPR should be implemented.

In most countries where EPR legislation has been introduced – mainly in OECD countries – there was already a waste collection system in place, most often operated or commissioned by municipalities. In some cases, separate collection of certain waste items has been practiced and a recycling industry has been developed to handle these items. These end-of-life treatment services were typically paid for by citizens through taxes and waste collections fees. Under such conditions, introducing EPR systems mainly implied a shift of the financial burden from taxpayers to producers.

However, the current situation in developing countries is drastically different. Physical infrastructure for environmentally-appropriate recycling is not well developed, households' environmental awareness and knowledge about the benefits of source separation is low, there is a shortage of technical know-how and trained staff needed for proper recycling, governing institutions are weak or lacking, and waste collection and transportation systems are insufficient. Under such conditions, substantial investments are needed before an EPR system can become operational. The management and financing needed to improve capacity requires additional resources, which might be too high to be generated from the EPR scheme itself. Thus, financial support from the government would typically be required to establish an EPR system

In some countries, a new EPR collection system for end-of-life products would compete with an established informal sector operating at low costs. Such informal collection activities are commonly connected with polluting and hazardous, but profitable, recycling operations. Income from these practices, most of which are considered illegal, makes it possible for the informal sector to offer households cash payment for end-of-life items. With such a system widely established, and with households expecting to

be paid for their discarded products, new formal collection schemes developed as a part of the EPR system will face strong competition and may have to involve paying households in order to get access to their end-of life products. These payments naturally make the operation of the whole EPR system more costly.

An effective EPR system requires clear identification of the producer of products concerned. This is the reason why some EPR-based legislation, such as the WEEE Directive, mandate that the producer's name be clearly marked on the products. However, consumer goods in developing countries often lack brands or are sold under brand names that cannot be traced back to any producer. Counterfeit products are also common. In addition, there is an abundance of reassembled products composed of parts from different brands and manufacturers. This practice is common for electronic articles, but in some countries also for vehicles. Finally, there are a relatively large number of old products where the manufacturer has gone out of business. In such conditions, an EPR system cannot be easily introduced. Large and well-established producers are likely to resist having to pay for the treatment of these anonymous products. This means that costs for end-of-life treatment for such products will most likely have to be borne by local or national governments through taxes.

It can be concluded that there are a number of challenges related to the application of EPR in developing Asian countries. This does not mean that EPR is not suitable for this region. Rather, it implies that policymakers need to be extra careful about how an EPR system is designed for proper implementation and that close monitoring of the system's progress and gradual modification of related policies and regulations are particularly important. Voluntary action by industry, described in a couple of chapters in this report, may also have a role to play, and governments can try to facilitate such initiatives as a complementary approach to strict regulations. For certain products, though, voluntary approaches may be more feasible to implement.

EPR and international trade

The third aspect to be discussed in this concluding chapter is the relationship between EPR and international trade, mainly in used products and wastes. The chapters have shown how introducing EPR systems can influence such trade, but also how international trade in secondary products affects conditions for successful implementation of EPR.

Over the last few decades it has become a common practice for developed countries to ship waste and recyclable materials to developing countries for treatment. Differences in labour costs, and possibly in environmental regulations, create economic drivers for this trade. Strong demand for raw materials in rapidly industrializing economies contributes further to these drivers. Some of the end-of-life treatment in developing countries is carried out with simple methods and without basic environmental protection measures. As a result, these operations expose workers and residents living near the facilities to serious environmental hazards.

Introducing EPR in developed countries has inadvertently stimulated export of used products

and wastes. There are several reasons behind this. Increasing separate collection makes more used products and waste available for trade, and stricter standards increases the costs for recycling and waste treatment. This then provides actors handling regulated items an incentive to avoid the responsibilities under the EPR system by exporting used products. Both European and Japanese experiences show that policymakers have had difficulties in closing such loopholes in their EPR systems.

The outflow of used products and wastes is not only contributing to pollution and hazards in developing countries, but also causing other problems. The recycling industry in developed countries is facing difficulties due to decreasing amounts of waste for domestic recycling. Many companies invested in recycling facilities, expecting that the EPR system would create good business opportunities, but some of these have met economic difficulties when the markets turned out to be smaller than expected.

Another negative effect is a weakening of incentives for producers to promote design for the environment. Because of the outflow from the EPR system, producers only have to pay for the end-of-life treatment of only certain products – those items that remain in the country – and not for the whole volume of goods put on the market. This reduces the effect of the EPR system in those cases where product redesign was among the objectives of the EPR system.

In order to deal with these problems, new policy mechanisms are needed. Some of the chapters in this report discuss what kinds of measures are available and likely to be effective. Some of the ideas discussed are:

- Mechanisms to strengthen the governance structure in developing countries and to establish appropriate infrastructure for end-of-life treatment,
- Measures that aim to reduce export of products covered by EPR legislation, and
- An extension of producers' responsibility to cover exported products.

International collaboration for strengthened EPR implementation

The chapters in this report show some of the major challenges met by national governments trying to implement EPR-based systems and illustrate the need for international collaboration to strengthen such efforts. From the analyses presented, it is also clear that effective implementation of EPR requires more than developing legislation and establishing physical infrastructure. Broad capacity development, including training and education, and the establishment of appropriate institutions are also needed. International collaborative initiatives need to reflect this finding and include soft measures such as capacity development, in addition to technology transfer.

While bilateral collaboration in the form of official development assistance remains essential for capacity development, multilateral initiatives and regional collaboration are expected to play increasingly important roles. This is especially true for capacity building efforts mentioned above, as the exchange of experiences among developing countries can be as important as the transfer of

technology from North to South.

A conclusion of this report is that EPR comes in many forms and that there is no right or wrong way to implement it. This observation points to the need for countries to learn from each others' experiences, including successful approaches as well as initiatives that for some reason have fallen short of delivering expected outcomes. Regional policy platforms on waste management and resource efficiency can be suitable forums for mutual learning for improved implementation of EPR.

The need for international collaboration was also noted in the preceding section on issues related to national EPR systems and transboundary trade. A regional policy platform could be instrumental in addressing some of those issues. For example, such a platform may be able to work out regional agreements that can make EPR-based policies more effective in dealing with products and end-of-life items that are shipped across borders. Such regional policy development can be regarded as complementary to the Basel Convention, making it easier to reach the objectives of that international agreement while at the same time promoting more sustainable utilization of natural resources.