UNIT 1 EXTENDED PRODUCER RESPONSIBILITY (EPR)

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1.1 Learning Objectives

After studying this unit, you should be able to

- Understand the concept of EPR and policy provisions
- Know its relevance and position in the Indian context
- Describe how to implement EPR, its benefits and limitations

1.2 INTRODUCTION

You have read about Corporate Social Responsibility (CSR) in India, its inception, the legislation and its implementation thus far. Amendment to the Companies Act in 2013 which led to enactment of the CSR provision has brought about a transformative wave into how social development is understood and driven in India with the active involvement of businesses.

While the CSR legislation binds companies to contribute to social development, the legislation falls short of revolutionizing the way business activities are strategized to become socially responsive. Social responsiveness is not limited to serving the bottom of the pyramid, it also implies looking into how businesses have an impact on the environment, climate and population at large.

Extended producer responsibility (EPR) as the name suggests puts the 'producer' at center stage of being socially responsive and responsible. While CSR only operates on investing a portion of a business's revenue in social activities, EPR targets the underlying impact of businesses and their products on the ecosystem in which they operate.

1.3 EPR: EVOLUTION OF THE CONCEPT

The earliest mention of EPR traces back to the year 1990 when Thomas Lindhqvist submitted his report to the Swedish Ministry of Environment as part of his research to ascertain how policies could promote cleaner production mechanism through better and more responsible management of waste being generated (Lindhqvist & Lidgren, 1991). In 1992, Lindhqvist defined the concept in a report which said that "*Extended producer responsibility is an environmental protection strategy to reach an environmental objective of a decreased total environmental impact from a product, by making the manufacturer of the product responsible for the entire life-cycle of the product and especially for the take-back, recycling and final disposal of the product"* (Lindhqvist, 1992). Figure 1 presents the models of interpreting EPR as described by Lindhqvist in 2000. The central premise is ownership where the producer/ manufacturer owns the project through its lifecycle. Along with ownership comes liability where the owner is responsible for any environmental damage that the product causes. Responsibilities are disaggregated into three types, viz.,

a. Physical Responsibility – which implies that the owner is involved in the physical management of waste generated and that it is disposed or recycled in an environmentally sustainable fashion;

b. Economic Responsibility – implies that producer may not physically manage the waste but pays for the safe disposal or recycle;

c. Informative Responsibility – which implies producer's responsibility to provide adequate information to the consumers about the environmental impact of the product.

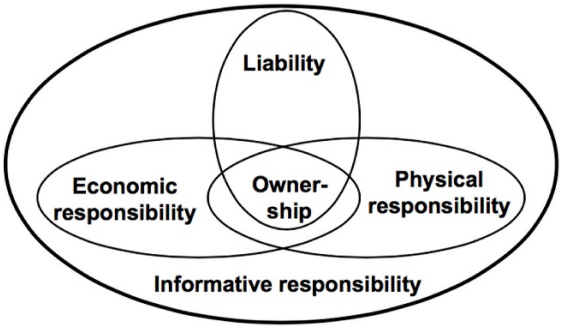

Figure 1: Models of Interpreting EPR

Ever since, several definitions of EPR and its forms have emerged. While some countries base it on the 'polluter pays' approach, there are several which term it as a 'cradle to grave' approach. The underlying idea however remains the same that how a product which is no longer usable by the intended consumer reaches its end of life without finding place in a landfill or ocean or anywhere else in the environment. The concept of EPR since its first mention in 1990 has undergone significant evolution and is now finding its place as a legislative provision in several countries. While in some regions, EPR focuses on management of electronic waste, in others, its scope has been expanded to include management of medical waste and plastic waste.

Activity 1: Write an example of any company which takes up any one of the three responsibilities in its policy.

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Check Your Progress – 1

Notes: a) Write your answers in about 50 words.

b) Check your answer with possible answers given at the end of the unit.

1) What is the meaning of EPR?

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2) Who coined the term 'EPR' and with what objective?

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3) How is EPR different from CSR?

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1.4 GLOBAL EPR PRACTICES

The fundamental tenet of the concept of EPR is to make the entire process of product design more environmentally responsive. It shifts the responsibility from governments and municipalities to the producers to enable a more environmentally constructive manufacturing and disposal process of the products they sell. Across the globe, countries and regions have customized the way EPR is understood and practiced. As per a report by OECD (2016), there are around 400 EPR based schemes operational around the world.

In the European Union, EPR is mandatory in the context of electronic waste especially batteries. The region puts the onus on the producers to finance the collection, recycling and end-of-life disposal of such products. Over time, additional waste streams have also earned focus which include tyres, waste oil, paper, construction and demolition waste. In the 2012 resolution of the EU Parliament envisioning a resource efficient Europe, the focus was placed on the EU commission to look for options to set up EU- wide EPR schemes to improve resource use efficiency across EU with specific focus on member states having below average reuse and recycling rates (European Commission, 2011). In fact, in recent years, the G20 countries identify EPR as one of the most widespread and successful policy measures to increase resource efficiency (OECD, 2021).

In the United States, around 70 EPR laws have been enacted in the span of two decades from 1991 until 2011. There have been instances of voluntary EPR practice which have emerged to be ineffective in tackling the volume of waste the states generate. There are found to be state wide variations in adoption and implementation of EPR laws across USA. However, the pace at which EPR is being adopted in USA is improving with some states going beyond EPR focused on electronic waste management to include other waste streams such as furniture and construction materials. Plus, the lack of stringent norms and absence of robust accountability mechanisms have prevented EPR from being fully implemented in its true spirit (Nash & Bosso, 2013).

Since 2009, the Chinese government issued a series of laws and regulations to establish an e-waste management system based on the principles of EPR. In the year 2017, China's State Council issued an EPR plan to better protect resources and environment. The plan carried a roadmap which indicated that an EPR policy framework will be formulated by 2020 and relevant laws and regulations will be formed by 2025 (Xinhua, 2017). However, a standardized EPR framework continues to go missing from the business ecosystem of China.

As is evident, governments across the world are faced with the problem of managing staggering volumes of waste and are finding pathways to resolve the incrementing issue. EPR emerges to be a sustainable option given that it uses the ecosystem approach holding everyone accountable.

1.5 EPR LEGISLATIVE FRAMEWORKS IN INDIA

The upsurge of use of electrical and electronic gadgets in India over the past three decades led to generation of large volumes of e-waste. The e-waste generation in India was estimated to be 0.8 million tons by the year 2012. A Central Pollution Control Board estimate indicated that 40% of 25,940 MT of plastic waste generated per day in India in the year 2010-12 remained uncollected. With no formal e-waste management system in place, a lot of the e-waste generated was either being dismantled in a crude manner resulting in toxic waste being left open in the environment which, owing to its hazardous nature could potentially cause damage to life. This growing realization led to the idea of management of e-waste in an environmentally sound manner.

The earliest efforts of the Government of India in managing waste, especially with the focus on plastic came with the Environment Protection Act in the year 1986 which notified several rules thereafter to handle issues pertaining to plastic manufacturing, usage, handling and management of its waste.

1.5.1 E-waste Management Rules, 2011

In the year 2011, Ministry of Environment and Forests notified e-waste rules to channelize the e-waste generated in the country and help the stakeholder ecosystem comply to the rules for effective management of e-waste. Placing the onus on the producer, the rules were based on the principle of EPR. The rules clearly highlighted that EPR is the main feature of the e-waste rules of 2011 wherein the producer manufacturing electronic or electrical equipment is responsible for managing the equipment after its end of life. The rules clearly laid out this practice as EPR stating that the producer is responsible to finance and organize a system to meet the costs in complying with EPR (MoEF, 2011).

1.5.2 Plastic Waste Management Rules, 2016

On similar lines like e-waste, plastic waste in India is also managed by the formal and informal sector. The informal sector accounts for majority of environmental and occupational hazards related to poor waste segregation and handling mechanisms. In the year 2016, Ministry of Environment, Forest and Climate Change notified the Plastic Waste Management Rules which brought plastic waste management in the ambit of EPR. The rules emphasize the 'polluter's pay' principle through mandating EPR. The rules, employing the ecosystem approach to mitigate plastic waste puts the onus of management on producers, users and disposers. Taking the burden off municipalities, the rules prescribe an end to end approach involving:

a. Plastic waste minimization through innovation in design
b. Segregation at source
c. Collection of plastic waste through incentivization of waste pickers or segregation at household level
d. Recycling of waste through waste processers and recyclers

The rules prescribe that every producer should formulate an EPR Action Plan which should detail the model adopted with collection process and the sustainable disposal strategy of the product.

1.5.3 Uniform Framework for EPR

To further strengthen the rules notified in the year 2016, Ministry of Environment, Forest and Climate Change released a uniform framework for EPR in the year 2020 mandating several new provisions including the provision of EPR. The notification defines EPR as

'A policy principle to promote total life cycle environmental improvements of product systems by extending the responsibilities of the manufacturer of the product to various parts of the entire life cycle of the product, and especially the take-back, recycling and final disposal of the product'.

The uniform framework of EPR places the producer/importer/ brand owner at the center stage who should be involved in overall implementation of recycling process and not limited to collection. The framework necessitates three steps:

a. **Online registration and record keeping:** the EPR framework will be based on a national registration and database repository where registration of various stakeholders will be done online. This will serve as a repository where all registered members will update the requisite information timely. The monitoring system will be developed by the Central Pollution Control Board (CPCB) to monitor the implementation of EPR mechanism through the portal.

b. **Registration of producers/ recyclers and manufacturers:** without registration with CPCB, manufacturing of multilayered packaging cannot be undertaken. For the purpose of recycling, processing waste, or manufacturing any plastic, registration and prior approvals from the state pollution control board is necessary.

c. **Extended producer responsibility:** the rules clearly state that a universal EPR model may not be feasible in a country context like India. Therefore, different EPR models have been prescribed which include

    i) ***Fee based model:*** The fee based model proposes to create a EPR corpus fund at the central level to which all producers/ importers/ brand owners contribute. The contribution will be calculated based on the quantum of plastic waste generated and the efforts required, both financial and physical to manage the waste. This corpus will be used to fund the urban local bodies (ULB), assembler/recyclers and for conducting IEC activities. The disbursement of funds can happen through recommendation of State Level Advisory Boards (SLABs) constituted under the Solid Waste Management Rules, 2016.

    ii) ***PRO based model:*** This model recommends creating Producer Responsibility Organization (PRO) to lead implementation and make available funds needed under the rules to support plastic recycling while also promoting ease of doing business for all

stakeholders. The PRO can be an industry managed as local bodies or states may not be capacitated to design, implement and manage effective local waste management programmes. The PRO will act as a contractor service to the producers. In this scenario, a producer will obtain plastic credits upon recycling or recovery of the collected plastic through an accredited processor. The producer may directly take back plastic waste and directly take credit from the recycler. The PRO will handle collection, arrange for recycling and ensure recycling targets are met either by themselves or by engaging waste management agencies.

iii) ***Plastic credit model:*** Under this model, a producer is not required to recycle their own packaging but needs to ensure that an equal amount of packaging waste is recovered and recycled to meet their obligation. The producers are required to obtain credible evidence for the same from accredited processors or exporters. These credits can be obtained through the terms agreed between the two parties. A critical point in the process is accreditation and registration of the recycler/ processor on the EPR portal to also track credits and ensure that no plastic waste re-enters the value chain.

1.5.4 Comprehensive Guidelines on EPR, 2022

In due course, the rules have undergone change given that the proposed models neither promoted innovations aimed at creating alternates to plastic packaging nor discouraged the production of single use plastics. Therefore, in the year 2022, the Ministry of Environment, Forests and Climate Change released comprehensive guidelines on extended producer responsibility on plastic packaging. The new guidelines aim to strengthen the circular economy with respect to plastic waste management and also promote development of new alternatives to plastic. Some of the key provisions of the revised guidelines are:

a. Reuse of rigid plastic packaging material is mandated in order to reduce the use of fresh plastic material for packaging.

b. Sale and purchase of surplus EPR certificates is provisioned thereby setting up a market mechanism for plastic waste management. This means if a company recycles more than the mandated percentage of plastic, it can sell it to other companies.

c. The implementation will be done through an online platform which will allow tracking and monitoring of EPR obligations and will reduce compliance burden for companies through online registration and filing of returns.

d. The guidelines outline a framework for levy of environmental compensation with respect to non fulfilment of EPR targets by producers, importers and brand owners in order to protect and improve the environment quality and abate environment pollution.

e. The new rules make it compulsory for producers/importers/brand owners to register with the central and state pollution control boards.

Activity 2: Write short note on the products for which EPR is present in India.

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Check Your Progress - 2

Notes: a) Write your answers in about 50 words.

b) Check your answer with possible answers given at the end of the unit.

1) When did EPR come into picture in the Indian waste management regime and how?

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2) How have the EPR guidelines evolved over time in India?

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1.6 IMPLEMENTATION OF EPR

EPR rules in India have undergone considerable evolution in recent decades. However, there continue to be enforcement and management issues given the burgeoning demand and supply. The rules notified by Ministry of Environment, Forest and Climate Change, Government of India in February, 2022 outline the targets and obligations for every category including the producer, importer and brand owner.

1.6.1 Producer

For a producer, the EPR obligations are disaggregated into four dimensions as per the notification of Ministry of Environment, Forest and Climate Change, 2022:

a. EPR Target: The EPR target for producers is set incrementally to achieve 100% target within a span of two years. The target metric tons of

waste that a producer needs to recycle is calculated on a standardized formula. The eligible quantity is the average weight of plastic packaging material sold in the last two financial years (A) plus average quantity of pre-consumer plastic packaging waste in the last two financial years (B) minus the annual quantity (C) supplied to the entities which include online platforms/ marketplaces and supermarkets/retail chains, micro and small enterprises as per the criteria of Ministry of Micro, Small and Medium Enterprises, Government of India. The targets are set in such a way that from the notification of the order by the Ministry, 25% target is kept for the first year progressing to 70% in the next year followed by 100% in the year 2023-24. The plan for the same is to be uploaded by the producer on the centralized online portal managed by the Central Pollution Control Board.

b. **Obligation for recycling**: The producer needs to ensure minimum level of recycling of plastic packaging waste collected under the EPR target. This is divided into four categories of plastics notified under the rules

Table 1: Minimum level of recycling (% of EPR Target)

Plastic packaging category	2024-25	2025-26	2026-27	2027-28 onwards
Category I: Rigid plastic packaging	50	60	70	80
Category II: Flexible plastic packaging	30	40	50	60
Category III: Multilayered plastic packaging	30	40	50	60
Category IV: Plastic sheet and compostable plastics	50	60	70	80

Source: Ministry of Environment, Forest and Climate Change, 2022.

c. **End of life disposal**: The producers shall ensure end of life disposal of the plastic packaging waste only through methodologies prescribed under waste management rules of 2016. The notification prescribes that only those plastics which cannot be recycled will be sent for end of life disposal such as waste to oil, cement kilns as per relevant guidelines from CPCB.

d. **Obligation for use of recycled plastic content:** the producer needs to ensure the use of recycled plastic in plastic packaging. The quantum has been specified based on the percentage of plastic manufactured by the producer in a year.

Table 2: Mandatory use of recycled plastic (% of plastic manufactured for the year)

Plastic packaging category	2025-26	2026-27	2027-28	2028-29 onwards
Category I: Rigid plastic packaging	30	40	50	60
Category II: Flexible plastic packaging	10	10	20	20
Category III: Multilayered plastic packaging	5	5	10	10

Source: Ministry of Environment, Forest and Climate Change, 2022.

In the event of a producer being unable to meet this obligation, exemption will be granted by CPCB on a case to case basis along with the obligation of fulfilling the target through purchase of certificate of equivalent quantity from producers, importers or brand owners who have used recycled content in excess of their obligation.

1.6.2 Importer

In the case of importers as well, the EPR obligations are disaggregated into four dimensions:

a. **EPR Target**: The eligible quantity is calculated accounting in the average weight of all plastic packaging material and/or of imported products and sold in the last two financial years (A) plus average quantity of pre-consumer plastic packaging in the last two financial years (B) waste minus the annual quantity (C) supplied to the entities covered which include online platforms/ marketplaces and supermarkets/retail chains, micro and small enterprises as per the criteria of Ministry of Micro, Small and Medium Enterprises, Government of India. The incremental targets are similar to those of producers. The action plan needs to be uploaded on the centralized portal managed by CPCB.

b. **Obligation for recycling**: The importer needs to ensure minimum level of recycling of plastic packaging waste collected under the EPR target. This is divided into four categories of plastics notified under the rules.

Table 3: Minimum level of recycling (% of EPR Target)

Plastic packaging category	2024-25	2025-26	2026-27	2027-28 onwards
Category I: Rigid plastic packaging	50	60	70	80
Category II: Flexible plastic packaging	30	40	50	60
Category III: Multilayered plastic packaging	30	40	50	60
Category IV: Plastic sheet and compostable plastics	50	60	70	80

Source: Ministry of Environment, Forest and Climate Change, 2022.

c. **End of life disposal**: The importers shall ensure end of life disposal of the plastic packaging waste only through methodologies prescribed under waste management rules of 2016. The notification prescribes that only those plastics which cannot be recycled will be sent for end of life disposal such as waste to oil, cement kilns as per relevant guidelines from CPCB.

d. **Obligation for use of recycled plastic content:** the importer needs to ensure the use of recycled plastic in plastic packaging. The quantum has been specified based on the percentage of plastic manufactured by the producer in a year.

Table 4: Mandatory use of recycled plastic (% of plastic manufactured for the year)

Plastic packaging category	2025-26	2026-27	2027-28	2028-29 onwards
Category I: Rigid plastic packaging	30	40	50	60
Category II: Flexible plastic packaging	10	10	20	20
Category III: Multilayered plastic packaging	5	5	10	10

Source: Ministry of Environment, Forest and Climate Change, 2022.

Any recycled plastic used in imported material will not be counted towards fulfilment of this obligation. The importer will have to meet this obligation through purchase of certificate of equivalent quantity from producers, importers or brand owners who have used recycled content in excess of their obligation.

1.6.3 Brand owner

a. **EPR Target:** The brand owner calculates its EPR target using the average weight of virgin plastic packaging material purchased and introduced in the market in the last two financial years (A) plus the average quantity of pre-consumer plastic packaging in the last two financial years (B). The incremental EPR target remains as for the other two categories. The brand owner is required to upload the action plan for achieving the target on the centralized portal managed by CPCB.

b. **Obligation for reuse:** In the case of brand owners, the rules specify minimum obligations for reuse of category 1 rigid plastic category which are further subject to regulation of Food Safety and Standards Authority of India.

Table 5: Minimum Obligation to Reuse for Category 1

Plastic packaging category	2025-26	2026-27	2027-28	2028-29 onwards
Category I: Rigid plastic packaging with volume or weight equal or more than 0.9	10	15	20	25

liter/kg but less than 4.9 liter/kg				
Category I: Rigid plastic packaging with volume or weight equal or more than 4.9 liter/kg	70	75	80	85

Source: Ministry of Environment, Forest and Climate Change, 2022.

The quantity of rigid packaging reused by the brand owner will be calculated by reducing the virgin plastic packaging manufactured or imported in that year from the sales of the brand owner.

c. **Obligation for recycling**: The brand owners need to ensure minimum level of recycling of plastic packaging waste collected under the EPR target.

Table 6: Minimum level of recycling (% of EPR Target)

Plastic packaging category	2024-25	2025-26	2026-27	2027-28 onwards
Category I: Rigid plastic packaging	50	60	70	80
Category II: Flexible plastic packaging	30	40	50	60
Category III: Multilayered plastic packaging	30	40	50	60
Category IV: Plastic sheet and compostable plastics	50	60	70	80

Source: Ministry of Environment, Forest and Climate Change, 2022.

d. **End of life disposal:** The brand owners shall ensure end of life disposal of the plastic packaging waste only through methodologies prescribed under waste management rules of 2016. The notification prescribes that only those plastics which cannot be recycled will be sent for end of life disposal such as waste to oil, cement kilns as per relevant guidelines from CPCB.

e. **Obligation for use of recycled plastic content**: The brand owners need to ensure the use of recycled plastic in plastic packaging.

Table 7: Mandatory use of recycled plastic (% of plastic manufactured for the year)

Plastic packaging category	2025-26	2026-27	2027-28	2028-29 onwards
Category I: Rigid plastic packaging	30	40	50	60
Category II: Flexible plastic packaging	10	10	20	20
Category III: Multilayered plastic packaging	5	5	10	10

Source: Ministry of Environment, Forest and Climate Change, 2022.

In the event of a brand owner being unable to meet this obligation, exemption will be granted by CPCB on a case to case basis along with the obligation of fulfilling the target through purchase of certificate of equivalent quantity from producers, importers or brand owners who have used recycled content in excess of their obligation.

Activity 3: Briefly discuss the EPR rules related to plastic packaging in a country other than India.

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Check Your Progress - 3

Notes: a) Write your answers in about 50 words.

b) Check your answer with possible answers given at the end of the unit.

1) How are the EPR targets calculated for producers and importers?

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2) How do the norms differ for use of recycled plastic content for importers?

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1.7 BENEFITS, LIMITATIONS AND CHALLENGERS OF EPR

1.7.1 Benefits of EPR

One of the core benefits of EPR is that it financially encourages manufacturers to design products in a way that last longer and can be recycled. Developed nations traditionally have been exporting their e-waste. However, EPR policy puts pressure on such countries that export e-waste.

These countries lack the infrastructure to recycle the waste they generate thereby putting the recycling pressure on countries that import this waste. For instance, when China stopped importing e-waste from USA, lack of infrastructure due to negligence of producers led to waste pile up at US ports (Eng, 2021). Ever since, several EPR legislations and systems have been put in place to streamline waste management within US.

1.7.2 Limitations of EPR

While EPR promotes environment friendly product design and shifts the onus of disposal of a product to the producer or manufacturer, it does not reduce the volume of waste created. The focus of EPR is limited to reducing the waste that lands in incinerators or landfills. It does not promote adoption of more lasting alternatives to plastic.

Putting the onus of product disposal on the producer also eliminates the scope of consumer acceptability to the practice of EPR. The demand therefore continues to incrementally rise with the consumer not realizing the quantum of plastic waste being unleashed into the market.

1.7.3 Challenges of implementing EPR

In the Indian context, EPR is a totally new concept especially from the point of view of waste management sector which is largely informal. EPR offers a fundamental approach shift where impact of every product manufactured in the country is pre-determined thereby offering opportunities for design and innovation to minimize post-use environmental impacts. EPR places the financial, physical and information onus on businesses which were earlier operating in a singular demand-supply environment. The recent EPR policy notification of 2022 outlines standardized targets and obligations of every category of plastic manufacturers/ importers/ recyclers. However, there continue to be few challenges that will need to be addressed as the rules are implemented. Some of these are:

a. **Monitoring and auditing:** Even though, roles and responsibilities of Central and State pollution control boards have been clearly outlined in the notification, there continue to remain challenges with respect to vigilant monitoring of adherence to rules by the entities that come in its ambit.

b. **Missing integrated approach:** According to (Aggarwal, no date), about 70% of plastic waste in India is recycled in the informal sector. This percentage rises to 95 in case of electronic e-waste. Despite rampant recycling done by the informal sector which is hazardous and unsafe for the environment, the rules do not indicate measures to mainstream the informal sector workers.

c. **No mention of waste minimization:** As per the CPCB guidelines, waste minimization is the most preferred option for waste management. However, waste minimization does not feature in the ambit of EPR rules notified in 2022. Management of waste from reuse to end of life disposal is prescribed. However, incentivization to use alternatives to plastics is missing (Singh, 2021).

1.7.4 Penal Provisions for Non-compliance with EPR

The 2022 EPR rules on plastic waste management issued by the Ministry of Environment, Forest and Climate Change clearly outline the provision of environmental compensation that will be levied on producers, importers and brand owners who will be unable to fulfill their EPR targets. The compensation will be based on the polluter pays principle and will be used to further the purpose of improving the quality of the environment and managing environmental pollution. The compensation will be levied by the Central Pollution Control Board on producers, importers and brand owners who are operating in more than two states and who are unable to fulfill their EPR targets and obligations as specified in the previous section.

For state run entities, the environmental compensation will be levied by the respective state pollution control board on producers, importers, brand owners along with plastic waste processers including recyclers and other waste processers who are not able to meet their EPR targets or fulfill their EPR obligations. The CPCB will intervene in instances where SPCBs will fail to take action in reasonable time.

It is important to note that environmental compensation will not relieve the producers, importers and brand owners of the obligations specified above. The unfulfilled targets and obligations of a financial year will be carried forward to the next year for a period of three years. In case the shortfall of the targets and obligations is addressed within three years, the compensation levied will be returned as per the following norms:

a. Fulfillment of obligations within one year of levying environmental compensation: 75% return
b. Within two years: 60% return
c. Within three years: 40% return

If the due obligations and targets are not achieved in the said period of three years, the compensation amount will be forfeited.

1.8 CASE STUDIES

While EPR in India continues to face challenges requiring strengthening of the stakeholder ecosystem, good progress is evident across sectors. Minimizing the quantum of plastic waste unleashed into the environment, Hyatt Regency Delhi announced the launch of an in-house bottling plant. The water bottling plant is estimated to replace the use of 1.08 million plastic bottles annually with reusable glass bottles. This step will save an estimated quantum of 28 tons of plastic waste every year. Similarly, Nestle has committed to make 100% of their product packaging recyclable by the year 2025. Towards achieving this aim, in 2019, Nestle's 87% of total packaging by weight and 66% of total plastic packaging was recyclable or reusable (Sharma, 2021).

Another example where waste segregation at source has proven to be a successful model of EPR is Indore. Indore generates over 1,115 MT of

garbage in a day and all if it is collected from source. This was initiated as a pilot project in 84 wards of the city in the year 2016 and it took almost a year to achieve 100% doorstep collection. Doorstep collection implies that all the waste is segregated at source. Indore municipal corporation set up a material recovery facility which has also provided livelihood to rag pickers. The segregated waste at source is transported to transfer stations where the waste is compacted in 20 ton compactors. This gets transported to material recovery facility where waste pickers segregate the waste into 18-20 streams. The waste pickers sell the sorted waste to the material recovery facility thereby earning good money. The sorted waste is further sold to recyclers who are assured of quality and quantity (MoEF, 2020).

Activity 4: Give an example of successful model of EPR in India which has not been mentioned in this chapter.

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Check Your Progress - 4

Notes: a) Write your answers in about 50 words.

b) Check your answer with possible answers given at the end of the unit.

1) What is a major limitation of EPR in terms of its implication on the environment?

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2) What is environmental compensation as per EPR rules of 2022?

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1.9 LET US SUM UP

Sustainability is not only needed in development projects but is also an important component of running a business. Extended Producer Responsibility (EPR) is a step towards creating sustainable business practices that are environmentally responsive. The concept shifts the focus of management of a product at the end of its life to its producer from a municipality. EPR is important for a business not only from the perspective of reducing the environmental impact of a product at the end of its life but also promoting innovation at the product design stage to minimize its eventual journey to a landfill. EPR policy in India presents a robust framework to manage waste of several kinds more importantly, plastic, electronic and e-waste. Standardizing EPR targets and obligations for each category of producer, importer and brand owner, the new rules spell out demarcated processes and structures in place to align businesses to the practice of EPR.

1.10 KEYWORDS

EPR: Extended producer responsibility is a policy approach which puts the responsibility of end of life management of a product on the producer.

Producer: Producer includes any entity which manufactures products to be traded in the market for consumption. In the context of EPR, these include persons engaged in manufacture or import of carry bags or multilayered packaging or plastic sheets.

Importer: Importer implies any entity or individual who imports or intends to import and holds an importer-exporter code number.

Brand Owner: Brand owner means a person or company who sells any commodity under a registered brand label.

Recycler: Recycler means any entity or individual involved in formal recycling of products as per the environmental rules.

Recycling: Recycling means the process of transforming plastic waste into a product or raw material for producing new products.

Plastic Waste: Plastic waste means any form of plastic discarded after its intended use.

1.11 BIBLIOGRAPHY AND SELECTED READINGS

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1.12 CHECK YOUR PROGRESS- POSSIBLE ANSWERS

Check Your Progress - 1

Answer 1: Extended producer responsibility is an environmental protection strategy to reach an environmental objective of a decreased total environmental impact from a product, by making the manufacturer of the product responsible for the entire life-cycle of the product and especially for the take-back, recycling and final disposal of the product.

Answer 2: The earliest mention of EPR traces back to the year 1990 when Thomas Lindhqvist submitted his report to the Swedish Ministry of Environment as part of his research to ascertain how policies could promote cleaner production mechanism through better and more responsible management of waste being generated.

Answer 3: While CSR only operates on investing a portion of a business’s revenue in social activities, EPR targets the underlying impact of businesses and their products on the ecosystem in which they operate.

Check Your Progress - 2

Answer 1: In the year 2011 with the notification of e-waste management rules.

Answer 2: EPR guidelines have included other streams such as plastic waste management besides electronic and e-waste in India over time. The brand owners have also been included in the recent EPR guidelines. EPR targets and obligations have now been clearly defined with a centralized portal being operated by Central Pollution Control Board to ensure transparency and accountability.

Check Your Progress - 3

Answer 1: The eligible quantity is calculated accounting in the average weight of all plastic packaging material and/or of imported products and sold in the last two financial years (A) plus average quantity of pre-consumer plastic packaging in the last two financial years (B) waste minus the annual quantity (C) supplied to the entities covered which include online platforms/

marketplaces and supermarkets/retail chains, micro and small enterprises as per the criteria of Ministry of Micro, Small and Medium Enterprises, Government of India.

Answer 2: In the case of importers, any recycled plastic used in imported material will not be counted towards fulfilment of this obligation. The importer will have to meet this obligation through purchase of certificate of equivalent quantity from producers, importers or brand owners who have used recycled content in excess of their obligation.

Check Your Progress - 4

Answer 1: While EPR promotes environment friendly product design and shifts the onus of disposal of a product to the producer or manufacturer, it does not reduce the volume of waste created.

Answer 2: The 2022 EPR rules on plastic waste management issued by the Ministry of Environment, Forest and Climate Change clearly outline the provision of environmental compensation that will be levied on producers, importers and brand owners who will be unable to fulfill their EPR targets. The compensation will be based on the polluter pays principle and will be to further the purpose of improving the quality of the environment and managing environmental pollution.

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