Plas

### Box 1.1: Deposit return systems explained

Deposit return systems (DRS) are a highly effective mechanism for collecting large volumes of empty containers in clean waste streams for use in high-quality recycling, or for setting up refill-or-reuse systems. Over 40 countries and states have implemented DRS, with many others in preliminary discussions, allowing hundreds of millions of people to return their bottles, cans and other containers and help reduce plastic pollution.<sup>1</sup>

#### How it works

First, a retailer buys the product from a distributor, paying for the product plus a fully refundable deposit. This deposit is forwarded to a system administrator, usually a non-profit organisation composed of stakeholders from retail and industry, which is responsible for managing the system.

When a customer buys the product, they pay a small deposit (usually around 10c), in addition to the product price, as an incentive to return it later. The retailer also sends this deposit to the system administrator. When the customer returns their empty container to the retailer, their deposit is refunded over the counter or at a reverse vending machine (RVM). The original deposit paid by the retailer is refunded to them by the system administrator, plus a handling fee to the retailer to cover any costs incurred. The system administrator then arranges for the returned containers to be sent on to recyclers and turned into new material - or, in the case of refill systems, returned to a bottler to be reused.

The system is paid for by three channels: first, by unredeemed deposits; second, from the revenues of the sales of the recyclable materials; and third, by licensing fees paid by beverage producers as part of an extended producer-responsibility policy. DRS can be tailored for different contexts, including to optimise refill and reuse, for low-tech systems without the need for RVMs, or as decentralised systems operated by retailers.<sup>2</sup>

#### **Benefits**

DRS is the most cost-effective and reliable way to achieve high collection rates of containers, with most systems reaching 90%+ return rates within a few years.<sup>3</sup> It also supplies clean waste streams of high-quality recyclables in comparison to kerbside collection, where items are mixed together, which leads to contamination. Clean recyclables from DRS can be easily and effectively recycled into new materials, reducing overall virgin plastic, aluminium and glass production, and improving closed-loop recycling. For European countries, having a reliable source of recycled material for use in new products helps producers hit their recycled-content targets - at least 25% in PET bottles by 2025 and 30% 'in all plastic bottles' by 2030, as stipulated in the EU SUP Directive. Beyond stimulating recycling markets, DRS has well-established benefits for the environment. By collecting out-of-home-consumed materials, studies in the US show that litter from drinks containers is reduced by 70-84%, as consumers are incentivised to return empty containers.<sup>4</sup>

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DRS is primarily used for drink containers in the beverage sector, but it could - and should - be expanded to other sectors, such as beauty and personal care, shipment and delivery, and other forms of packaging.<sup>7</sup> Finally, well-implemented DRS helps to underpin refill-and-reuse systems, and policy for introducing DRS should always include mechanisms to stimulate reuse.

DRS also makes economic sense. It creates jobs by providing greater volumes of material for recycling, and studies across 32 municipalities worldwide show that the introduction of DRS creates large cost savings by reducing clean-up costs and the tonnage of material needing to be collected through kerbside programmes.<sup>5</sup> Finally, DRS appeals to the public; opinion polls in countries looking to introduce DRS, those with systems already in place and those looking to expand current systems show high levels of support, typically above 80%.<sup>6</sup>

- Return and Earn public outdoor RVM for recycling of empty cans, bottles or carton drink containers in New South Wales, Australia
  - Credit: Shutterstock





# Deposit return systems around the world

OVER 40 JURISDICTIONS AROUND THE WORLD HAVE IMPLEMENTED CONTAINER DEPOSIT LEGISLATION WITH SIGNIFICANT ENVIRONMENTAL BENEFITS, COST SAVINGS FOR TAX-PAYERS AND STRONG SUPPORT FROM THE PUBLIC.

83%

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USA - VERMONT (2010)

 $\bigcirc$ JURISDICTIONS WITH DRS IN PLACE

CALIFORNIA

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MAINE

MICHIGAN

CONNECTICUT

MASSACHUSETTS

SWEDEN (1984)

ICELAND (1989)

NORWAY (1999)

GERMANY (2003)

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FINLAND (1996)

DENMARK (2002)

86.3%

89%

93%

98% 87.4%

PLASTIC BOTTLE COLLECTION RATE IN 9 EUROPEAN COUNTRIES WITH DEPOSIT RETURN SYSTEMS 2017/2018

92%

95% 88% 84.8%

THE NETHERLANDS (2005)

BRITISH COLOMBIA

(+) SASKATCHEWAN

(+) NEW BRUNSWICK

Sterew SOUNDLAND

IABRADOR

(+) NOVA SCOTIA

(+) ALBERTA

(+) MANITOBA

(+) ONTARIO

(+) QUEBEC

(+) YUKON



THE EFFECTS OF DRS ON LITTER REDUCTION

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