Investments to Tackle Plastic Pollution, Country Fact Sheets – Glossary

About the Country Fact Sheets

The Country Fact Sheets ("fact sheets") highlight the key data points on plastic material flow, policies, and investments for 50 countries, to provide quick and easy access to a one-stop resource on tackling plastic pollution.

The top 50 countries were selected based on private investments in plastics circularity between 2018 and the first six months of 2023 (source: Plastics Circularity Investment Tracker).

Data for the plastic material flow and the status of various policies was collected through desktop research, based on information available at the time of research between February and March 2024. The data sources include government websites or databases; reports from leading organizations in the plastic pollution and circular economy space, such as the International Union for Conservation of Nature, United Nations Development Programme, and the World Bank; peer-reviewed journal or academic articles; and news articles.

In cases where multiple data sources were available for a single data point, the fact sheets present data from the source that is considered to be the most reliable. The links to the original sources and data publication dates are included for ease of reference.

The fact sheets comprise three sections. This document provides definitions of key terms used in each section.

I. Plastic Material Flow

II. Policies

III. Investments in Waste and Plastic Waste Management

I. Plastic Material Flow

This section provides an overview of the plastic material flow within the country, offering a snapshot of the plastic waste landscape.

Key term	Definitions and notes
Plastic Produced	Plastic produced primarily refers to polymer production within the country, either from a primary virgin source or secondary source (recycled plastic from the previous year). It typically does not include the manufacturing of final products in the country. (Environmental Action) The exact definition applied may vary for each country.
Plastic Consumed	Plastic consumed primarily refers to the amount of plastic that is used to produce packaging and items made out of plastic that will appear within the municipal solid waste stream at the end of the life cycle. (Global Partnership on Plastic Pollution and Marine Litter [GPML]) The exact definition applied may vary for each country. For some countries, depending on available data, plastic consumed can refer to the amount based on sales of plastic products, or total plastic demand.
Plastic Waste Generated	Plastic waste generated primarily refers to the amount of post-consumer plastic that enters the municipal solid waste stream, which comprises waste generated from households, commerce and trade, small businesses, office buildings, and institutions (schools, hospitals, and government buildings). (UN-Habitat) The exact definition applied may vary for each country.
Plastic Recycled	Plastic recycled primarily refers to the proportion of plastic waste collected for recycling or the proportion of plastic waste available as recycled plastics, after taking into account the disposal of recycling residues. (OECD) The exact definition applied may vary for each country.
Uncollected or Mismanaged Plastic, or Plastic Leakage	Depending on available data, either amounts of uncollected plastic, mismanaged plastic or plastic leakage is reflected. ‣ Uncollected plastic: Primarily refers to plastic that is not collected by the municipal waste collection services or the informal sector. ‣ Mismanaged plastic: Primarily refers to plastic that is not adequately collected and is improperly managed, such that it can or will end up in the environment. (IUCN-EA-Quantis, World Bank) ‣ Plastic leakage: Primarily refers to plastic that is released to the environment, specifically to rivers and oceans or terrestrial and aquatic environments. (IUCN-EA-Quantis, OECD) The exact definition applied may vary for each country.

Key term	Definitions and notes
Plastic Waste Imports	The amount of plastic waste imported by the country from around the world. The Harmonized System (HS) code, the international nomenclature for the classification of products, referenced is 3915 – waste, parings and scrap, of plastics. Data was primarily sourced from Trade Map, with the latest available data presented at the time of research.
Plastic Waste Exports	The amount of plastic waste exported by the country to the world. The HS code referenced is 3915 – waste, parings and scrap, of plastics. Data was primarily sourced from Trade Map, with the latest available data presented at the time of research.

Additional notes:

- "Not available" is indicated for data points where no data is found.
- Units are in metric tons.
- The year indicated is the year that the data was provided.

II. Policies

This section highlights selected policies that are imposed to manage plastic pollution in any country. Details on the status of development of the policy, where relevant, are also provided.

The policies featured have been classified as upstream, midstream or downstream policies according to which stage of the plastics value chain the policies are intended to impact.

Policy Categories

Type of policy	Description	Relevant policy examples
Upstream	‣ Policies that relate to the production phase of plastics.	‣ Tax on Single-Use Virgin Plastics ‣ Ban on Single-Use Plastics
Midstream	‣ Policies that address the use phase of plastics.	‣ Deposit Return System Legislation
Downstream	‣ Policies that address plastics' end of life, including plastic waste management and recycling.	‣ Waste Segregation ‣ Extended Producer Responsibility ‣ Plastic Waste Trade Restrictions ‣ Recycled Content Mandates ‣ Mandatory Recycling Targets ‣ Disposal Bans/Landfill Taxes

Description of Policies

Policies	Description
Tax on Virgin Plastics	Tax charged on packaging material made from virgin plastics. The tax can be placed on virgin plastic materials either at the consumption level, such as tax on single-use plastic products, or at the manufacturing level, to reduce the use of virgin plastic resins and create a greater demand for recycled plastics upstream in the supply chain. (GIZ, International Centre for Tax & Development)
Ban on Single-Use Plastics	Bans on single-use plastics can include the prohibition of the product, its production, importation, use, sale, and/or possession. (WRI)
Deposit Return System Legislation	The deposit return system typically involves the imposition of additional fees on plastic items when purchased by consumers, and the fees can be redeemed on return of the item to a recognized recycling destination/scheme. (The Circulate Initiative)
Waste Segregation	Mandatory source segregation or separate collection of specified waste streams to facilitate the recycling of these waste types.

Policies	Description
Extended Producer Responsibility	An environmental policy approach whereby producers are made responsible (either financially or physically) for the end-of-life management of the products and/or packaging they sell. This includes the collection, pre-treatment, reuse and recovery, or final disposal of the product. (The Circulate Initiative, UNEP & International Solid Waste Association)
Plastic Waste Trade Restrictions	Includes bans on imports or exports of plastic waste or scrap into or out of a country or several countries; or restrictions placed on certain types of plastic waste that can be imported or exported based on a set of criteria or requirements.
Recycled Content Mandates	Requirement for producers to use a specified amount of recycled content in their products or packaging. (Circularity Concepts)
Mandatory Recycling Targets	Recycling targets imposed on either different plastic types, plastic packaging categories or different types of waste generators.
Disposal Bans/Landfill Taxes	‣ Disposal bans or landfill bans refer to a range of measures to prevent or restrict waste disposal to landfills. The bans may apply to all waste, to particular waste streams (such as municipal waste), or to individual products or materials. (Circularity Concepts, Australia's Department of Climate Change, Energy, the Environment and Water) ‣ Landfill taxes: Environmental tax paid on top of normal landfill rates by a company, local authority or organization that wants to dispose of waste in a landfill. (WWF Plastic Smart Cities)

Status of Policies

The status of policies are determined solely based on whether they have been implemented in the country and is not an assessment of the effectiveness of policies. We recognize that the effectiveness of policies implemented may vary between the different regions in the country.

Status	Description
Implemented	The policy has been rolled out and is being mandated.
In Progress	The policy has been announced but may not have been implemented or may only be put into force at a later date. This status can also refer to policies that are not currently adopted uniformly across the country but are only implemented in certain states or provinces, or plans and targets to implement a particular policy simply being outlined in relevant roadmaps.
Not Available	There is no available information on the policy being announced or implemented.

III. Investments

This section provides a summary of public and private investments in waste management, plastic waste management, and plastics circularity.

Investments in Waste and Plastic Waste Management

Total investments reflect the sum of waste management expenditure, development finance for waste and plastic waste management, and private investments.

Waste Management Expenditure

Waste management expenditure primarily refers to the government expenditure on the collection, transportation, and disposal of waste.

The data was primarily sourced from the International Monetary Fund (IMF) Statistics Department's dataset on Environmental Protection Expenditures for 2018 to 2021. The years covered for waste management expenditure vary by country as data is not consistently available for all four years for all countries. In cases where the data for the country is not available from the IMF, other sources were referenced, if available.

Data was converted from local currency units to United States dollars (US$), based on exchange rates referenced from the World Bank. For Euro to US$, exchange rates from the European Central Bank's dataset were used.

Development Finance for Waste and Plastic Waste Management

There are two categories of development finance in this section:

1. ODA for the ocean economy (waste management)

Official development assistance (ODA) refers to financial support, either grants or "concessional" loans from the Organisation for Economic Co-operation and Development's Development Assistance Committee (OECD-DAC) member countries to developing countries. These funds are provided to advance development in areas such as health, sanitation, education, infrastructure, and strengthening tax systems and administrative capacity, among others.[1]

Data was filtered for waste management, which captures projects related to improving infrastructure and solid waste management practices in recipient countries.[2] The data reflects the disbursement amount for 2018 to 2021 from the dataset linked here.

ODA for "high-income economies" (following the World Bank's classification of countries) is indicated as "not applicable."

2. Development finance to curb plastic pollution

Development finance to curb plastic pollution captures projects that make explicit reference to the management, reduction, recycling, and cleaning up of plastic. The data reflects the disbursement amount for 2018 to 2021 from the dataset linked here.

[1] https://www.oecd.org/development/understanding-development-finance.htm
[2] https://oecd-main.shinyapps.io/ocean/

The development finance for "high-income economies" (following the World Bank's classification of countries) is indicated as "not applicable."

Private Investments

Private investments refer to private financing in the form of grants, equity/quasi-equity, debt, and blended finance structures, including credit guarantees and other similar financial instruments.

The data is based on The Circulate Initiative's research (through the Plastics Circularity Investment Tracker), and reflects the sum of deal values in the country from 2018 to 2021. The data captures the allocation of capital flows to companies, and technical assistance accompanying other forms of investment rather than the provision of in-kind "investments," such as non-monetary technical assistance.

Plastics Circularity Archetypes

The data for the breakdown of private investments by archetypes from 2018 to the first half of 2023 is based on The Circulate Initiative's research (through the Plastics Circularity Investment Tracker). A "0%" could either mean that there is no deal value, the deal values are undisclosed, or the values are small and thus rounded off to 0%.

Plastics circularity is defined as a system that drives a circular economy for plastics. This includes technologies, business models or other solutions that tackle the plastic pollution challenge by eliminating, reducing or reusing plastic, or by keeping plastic materials in circulation without them leaking into the environment.

The plastics circularity archetypes can be classified as upstream, midstream or downstream solutions according to where they lie along the value chain.

- **Upstream solution:** One that may eliminate or reduce the use of plastic, such as the development of a new compostable material for use in foodservice packaging. Example archetypes: Materials, Redesign.
- **Midstream solution:** One that requires the participation of a consumer to realize its plastic reduction strategy. Examples might include zero waste stores that depend on consumers bringing their own packaging or refill systems that require consumers to return a package for refill. If the consumer does not fulfill the action, the innovation is unlikely to reduce the use of plastic. Example archetype: Refill/Reuse.
- **Downstream solution:** One that occurs after a package or product becomes waste. Downstream solutions include operational platforms that seek to connect plastic waste generators (i.e., consumers) with informal collectors or mobile apps that track and report waste plastic for the purposes of EPR reporting. Other downstream solutions might include reverse vending machines that collect recyclable plastics and reimburse the user with awards or points that can be redeemed for other products. Example archetypes: Recycling, Recovery.

Note that some archetypes may be cross-cutting; e.g., they may fall under the downstream and midstream, or midstream and downstream parts of the value chain.

Solution	Description and examples of companies focusing on the solution
Materials and Redesign	**Materials**: Firms that focus on the production or use of alternative materials for single-use plastics or other applications. *Example(s):* Fiber-based alternatives, such as molded bagasse, or other compostable substitutes for takeout foodservice ware. **Redesign**: Firms that redesign an existing product and/or packaging system with consideration of its performance and value, resulting in products and packaging that are more reusable or recyclable than typical models. Firms included may also redesign existing systems to improve reuse or recycling, such as for the segregation of materials. *Example(s)***:** Eliminating polyvinyl chloride (PVC) labels from PET bottles, or shifting from multilayered packaging to mono-material.
Refill/Reuse	Firms that substitute or eliminate single-use and other plastic products through reuse, refill or product-as-a-service business models. These firms reflect a diversity of business models intended to eliminate single-use plastics. *Example(s):* Zero waste or bulk stores that offer refill services if consumers bring their own packaging, or reuse and refill systems that might require a deposit to incentivize the return of packaging.
Services and Others	Services and Others include services, operational platforms, and digital mapping firms. **Services**: Firms that support, through their services, the actors involved in driving a circular economy for plastics along the entire plastics value chain. These include, for example, firms that offer services that facilitate alternatives to plastics; enable or promote reuse; account for plastic usage, audit and offer assurance of plastic waste flows; and/or quantify collected waste plastics in line with EPR regulations or voluntarily. *Example(s):* Service providers that enable organizations to calculate their plastic footprint, or firms that offer EPR accounting and reporting services. **Operational Platforms:** Firms that offer "on-demand" software, technology platforms or mobile applications that specifically support a circular economy for plastics. These platforms, for example, allow individual consumers and/or companies to request at-home or business collection of recyclable plastics. *Example(s):* Operational platforms that facilitate waste collection and recycling or marketplaces. **Digital Mapping:** Firms that offer digital technology or platforms that are intended to map and/or trace material flows, document the location of waste management infrastructure, or provide insights on waste volumes or composition. *Example(s):* Blockchain ledger technology that maps and traces the flow of waste plastics from the source of collection through reclamation and end products, or the location of waste management infrastructure.

Solution	Description and examples of companies focusing on the solution
Recovery and Recycling	**Recovery:** Firms that directly recover municipal solid waste or plastic waste for various purposes, including for recycling. While the principal focus is to ensure collection for disposal rather than for recycling, these businesses support plastics circularity through collection and sorting of plastic waste prior to disposal. *Example(s):* Plastic litter and waste collection services and riverine cleanup technologies. **Recycling:** Firms that offer informal and formal collection, processing or sorting, and reclamation of waste plastics for recycling, as well as firms with technologies to recycle waste plastics into flakes, pellets or finished products. *Example(s):* Waste management companies and non-profit organizations working with the informal sector to collect waste plastics, reverse vending machines to collect bottles, and companies that recycle and reclaim plastics.

Investment Categories

The data for the breakdown of private investments by investment categories from 2018 to the first half of 2023 is based on The Circulate Initiative's research (through the Plastics Circularity Investment Tracker). A "0%" could either mean that there is no deal value, the deal values are undisclosed, or the values are small and thus rounded off to 0%.

Investment categories are based on the provider of capital for plastics circularity transactions. These include accelerators, incubators, banks, foundations, family offices, corporates, individuals, investment firms such as private equity and venture capital firms, and the general public through initial public offerings (IPOs). Public funding sources, such as from national/local governments or government departments and agencies, are excluded.

Investment category	Definition
Accelerator/Incubator Investments	Cash, or recoverable or non-recoverable funding provided by accelerators, incubators or entrepreneurship support organizations or allocated as award monies (other than directly by corporate) as part of the early stage of development. An equity component in return for financing may or may not be involved.
Financing by Banks	Financing in the form of loans (secured or unsecured), or bonds provided by commercial or multilateral development banks.
Corporate Investments	These include investments effected through joint venture, merger, acquisition, secondary transaction involving minority equity purchases from another investor, asset purchases, and/or direct funding. Bonds issued by corporations are included here, as are grants provided by corporates to startups involved in plastics circularity.

Investment category	Definition
Individual/Crowdfunding/ Philanthropic Investments	Investment of a philanthropic nature or otherwise received from an individual, a group of individuals or private foundations. An equity component in return for financing may or may not be involved.
Private Equity	Private equity (PE) is a form of financing where money or capital is invested in a company. Typically, PE investments are made in mature businesses in traditional industries in exchange for an equity or ownership stake. PE is a major subset of a larger, more complex piece of the financial landscape known as the private markets.
Public Investment/IPO	An initial public offering (IPO) refers to the process of offering shares in a private corporation to the public for the first time. An IPO allows a company to raise equity capital from public investors. Secondary offering is also included here.
Venture Capital	Venture capital (VC) is a form of financing where capital is invested in a company, usually a startup or small business, in exchange for equity, debt or quasi-equity in the company. It is also a major subset of a much larger, complex part of the financial landscape known as the private markets.