Waste management country profile

with a focus on municipal and packaging waste

Netherlands

March 2025

European Environment Agency

Key messages

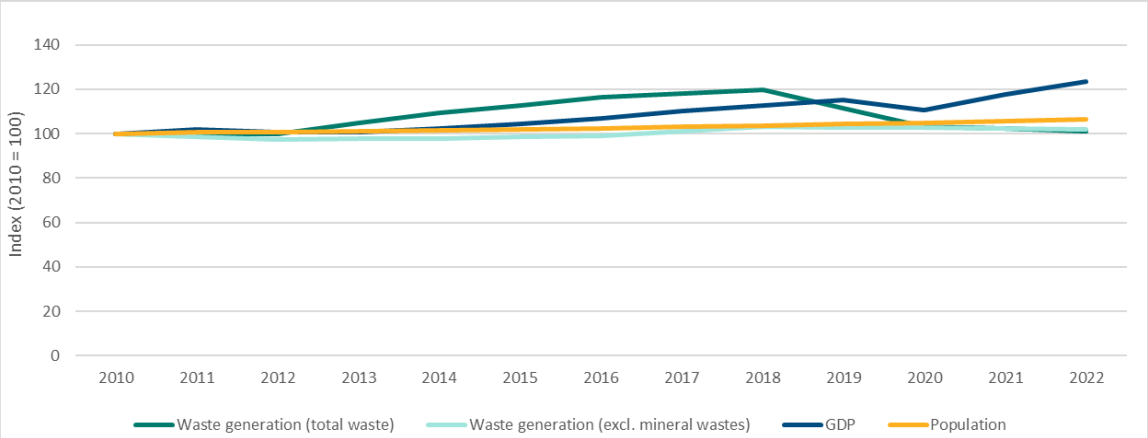
- Total waste generation in the Netherlands increased until 2018, driven by the increase in dredging spoils. If dredging spoils (and other major mineral wastes) are excluded, the waste generation remains rather stable. A slight decoupling of total waste generation from economic growth became apparent only after 2020.
- The Netherlands is considered to be on track to meet the 2025 recycling targets for municipal waste and packaging waste including all packaging materials, as well as the 2035 target for the landfilling of municipal waste.
- Looking at the latest available reported data, all packaging waste recycling rates are above the 2025 targets in the reference year 2022, except for plastic packaging (45.7%). For municipal waste, the preparing for reuse and recycling rate in 2022 (provisional data) was very close to or above the target to be met by 2025.
- The Netherlands has made progress in improving its municipal waste recycling rate and reduced its reliance on incineration.
- The success of separate collection for certain fractions seems to be fading, posing a challenge to meeting the EU waste targets in the future. There is still potential to expand the pay-as-you-throw system for residual waste to improve sorting and enhance recycling, or to implement enforcement mechanisms to address municipalities that fall behind.

Trends in waste generation and treatment

Total waste generation

The total amount of waste generated in the Netherlands increased until 2018, followed by a significant decrease (Figure 1). This trend is primarily driven by the by far largest single waste category, namely dredging spoils which accounts for 39-48% of total waste over the whole period. Excluding the major mineral waste categories (which include dredging spoils) results in a stabilisation of the overall waste generation trend. This is mainly due to a limited increase or stagnation of the largest waste categories namely, animal and vegetable wastes, recyclable wastes, and mixed wastes. More specifically, mixed and recyclable waste generation stagnated, while the generation of animal and vegetal waste only slightly increased. The Netherlands' GDP showed steady growth with a drop in 2020, most likely due to the Covid-19 outbreak. Only from 2020 onwards, a slight decoupling of total waste generation from economic growth could be observed.

Figure 1 Generation of waste (total and excluding major mineral wastes), population and economic development, 2010-2022



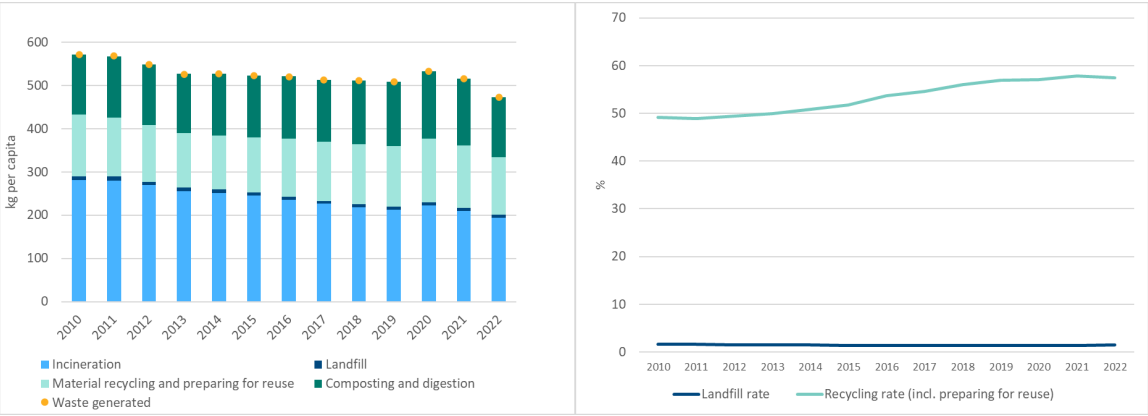
Source: Eurostat (2024a, 2024b, 2024f)

Note: Waste generation data for odd years are interpolated.

Municipal waste

Municipal waste generation in the Netherlands decreased between 2010 and 2022 (Figure 2, left). In 2022, the country generated 473 kg/cap of municipal waste, which is significantly below the (estimated) EU-27 average of 513 kg/cap.

Figure 2 Municipal waste management (left) and rates of recycling (incl. preparing for reuse) and landfill (right), 2010-2022



Source: Eurostat (2024d)

Note: As of the reference year 2020, new reporting rules apply for calculating recycled municipal waste pursuant to the targets laid down in Article 11.2(c-e) of Directive 2008/98/EC. However, it is unclear based on the information available whether these new reporting rules have been implemented in the Netherlands yet.

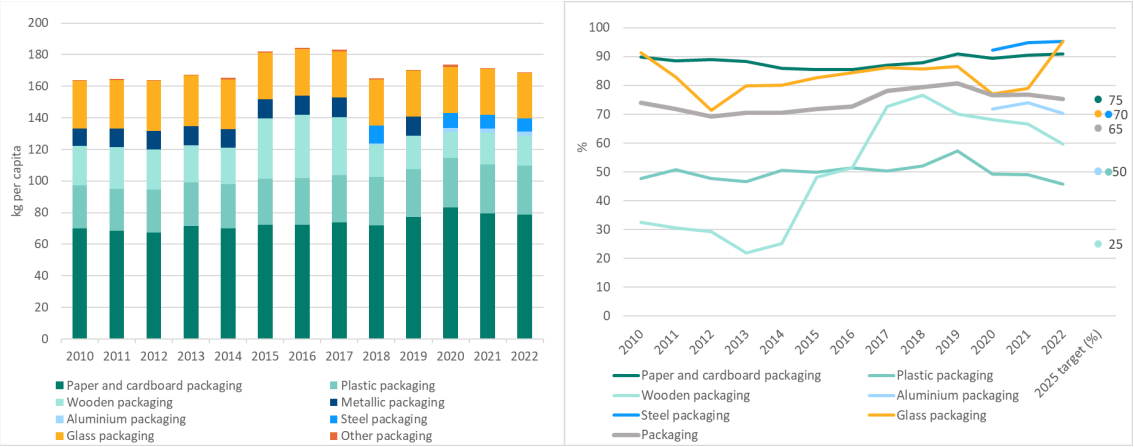
The preparing for reuse and recycling rate of municipal waste in the Netherlands slightly increased over the past years (Figure 2, right), while at the same time, the incineration rate decreased. In 2022, the preparing for reuse and recycling rate was 58%, which is slightly above the (estimated) EU-27 average of 49% in the same year. The incineration rate decreased by 8 percentage points and was 41% in 2022. The landfill rate remained below 2% throughout the considered time frame (Figure 2, right).

The data shown in Figure 2 differ slightly from the data reported by the Dutch authorities to show compliance with the preparing for reuse and recycling target of 55% to be met by 2025, as laid down in the Waste Framework Directive. The Netherlands reported a (provisional) preparing for reuse and recycling rate in response to the target that was in the range of 1-5 percentage points below the (voluntary) data shown in Figure 2 for the reference year 2022, but these data are still awaiting final validation by Eurostat (Eurostat, 2024c).

Packaging waste

Packaging waste generation in the Netherlands has stagnated since 2010 (Figure 3, left). The country generated 169 kg/cap in 2022, which is slightly below the (estimated) EU-27 average of 186 kg/cap in the same year ([1]). The higher amounts of wooden packaging in 2015-2017 can be explained by a change in the reporting method for repaired wooden packaging in 2015 and again in 2018.

Figure 3 Packaging waste generation (left) and recycling rates (right), 2010-2022



Source: Eurostat (2024e)

Note: As of the reference year 2020, the Netherlands applies the new calculation points for calculating recycled packaging waste pursuant to Article 6c, of Directive 94/62/EC.

The country's overall packaging waste recycling rate, as well as the recycling rates for paper/cardboard and glass packaging, was above the 2025 target already in 2010 (Figure 3, right). The overall recycling rate stagnated, standing at 75% in 2022. The overall recycling rate is mainly influenced by paper and cardboard as this constitutes the largest fraction. In 2020, the recycling rates dropped for all materials, which slightly reduced the overall recycling rate and can be attributed to the application of the new calculation points. The trend for wooden packaging recycling shows a significant increase from 2014 onwards, and stabilising after 2018, due to the introduction of wooden packaging in the numbers since the reference year 2015. For the reference year 2020 and onwards, it is mandatory to report steel and aluminium packaging separately. The recycling rates of both fractions have been above the 2025 target.

([1]) The EU-27 average might be influenced by the situation that not all Member States already fully apply the reporting rules for packaging waste as defined in the Commission Implementing Decision 2019/665.

Policies in place to encourage waste prevention measures and to increase recycling

Legislative framework and waste management plans

In the Netherlands, waste management, including packaging waste, is organised at the national level, respectively through the central environmental law (Wet Milieubeheer) (EU, 2018; ETC/CE, 2022) and the Dutch law on packaging waste (Ministerie van Infrastructuur en Waterstaat, 2021a). Both the Dutch National Waste Prevention Plan and the National Waste Management Plan were updated to accommodate the Waste Framework Directive, amended in 2018. The National Waste Management Plan also includes national targets for packaging waste (Ministerie van Infrastructuur en Waterstaat, 2021b). Additionally, an action plan is in place to implement a circular economy by 2050.

The Ministry of Infrastructure and Water Management adopted the second amendment to the National Waste Management Plan (NWMP) 2017-2029, titled 'Smarter use of raw materials' (Landelijk afvalbeheerplan 2017-2029 - Slimmer omgaan met grondstoffen; short: LAP3) which came into effect on 2 March 2021 . In 2022, it was decided to extend the validity of LAP3 by two years, until the end of 2025. It will be followed by a Circular Materials Plan (CMP), which is currently being drafted. The NWMP covers both household and industrial waste and has dedicated sections for targeted waste streams (e.g. bio-waste, textile, paper and cardboard, etc.). The plan provides a set of measures to be implemented by the municipalities to improve separate household waste collection. This NWMP is complemented by sectoral plans including minimum standards and information on cross-border transport covering 85 waste streams (Ministerie van Infrastructuur en Waterstaat, 2021c). In addition, regarding packaging waste, the NWMP refers to the Packaging Management Decree 2014 and the Packaging Management Regulations, alongside Sectoral plan 41, which encompasses the packaging policy (Ministerie van Infrastructuur en Waterstaat, 2021b).

Waste prevention measures

The Netherlands' National Waste Prevention Programme (NWPP) is a stand-alone document valid from 2020 onwards (Rijksoverheid, 2021). Waste prevention measures within the NWPP origin from the circular economy programme 'Netherlands Circular in 2050' published in 2016 (Government of the Netherlands, 2016) and updated in 2023 (Government of the Netherlands, 2023). The current NWPP does not include information about when the programme will be evaluated or information on the foreseen budget for its implementation (EEA, 2023b).

The current NWPP focuses on sustainable production and consumption practices, along with product reusability and repairability. The programme has three overarching strategic objectives (Government of the Netherlands, 2023): (1) to utilise raw materials within existing supply chains, (2) to transition away from fossil fuels, critical materials, and non-sustainable resources, (3) to drive innovation in production methods and circular product design (EEA, 2023b). Priority waste streams for waste prevention are food waste, construction and demolition waste, hazardous waste and critical raw materials, packaging waste, electrical waste including batteries, and bulky waste (EEA, 2023b).

The current NWPP lacks indicators for monitoring its implementation. However, it does include specific quantitative targets related to waste prevention (EEA, 2023b). These are:

- Limit the total waste volume to a maximum of 61 million tonnes by 2023 and 63 million tonnes by 2029.
- Achieve a 50% reduction in primary material input (minerals, fossils, and metals) by 2030.
- Achieve a 50% reduction per capita of food waste by 2030 compared to 2015.
- Use 20% less plastics by 2024 compared to 2017.

Waste prevention measures, such as Extended Producer Responsibility (EPR), circular design, and circular purchasing, are outlined in the NWPP, as well as measures to increase reuse (Rijksoverheid, 2021). EPR has been implemented in the Netherlands for various product groups (electrical and electronic equipment, batteries, scrap vehicles, packaging, and car tyres). An EPR scheme for textiles was implemented in 2023, and the government is exploring options for other product chains. The CIRCO programme is part of measures to stimulate circular design and offers entrepreneurs tools to design circular products. An evaluation shows that participants in CIRCO workshops mainly focus on reducing (virgin) raw material use, reuse, and (design for) product preservation. For circular public purchasing, the government aims to use as few raw materials as possible and prevent waste, with the goal that ten purchasing categories should be circular by 2023 (Rijksoverheid, 2021). The use of circular economy requirements is regularly monitored for 16 selected product groups in the public tenders. The share of tenders that include such requirements increased by 20 percentage points to 46% in 2020/2021 compared to 2015/1016 (RIVM, 2023). An important step has been taken on the purchasing side by offering refurbished equipment also as an option in the government-wide purchasing strategy (Rijksoverheid, 2021).

Measures to increase reuse and repair include the pilot project ‘Circular Craft Center Initiative’, which aims to establish a network of circular craft centres by 2030. The reuse of construction materials is emphasised, with ongoing efforts to develop materials passports to secure reuse during demolitions or renovations (Rijksoverheid, 2021). The Ministry of Infrastructure and Water Management has also financed the development of the RepairMonitor service, which provides insights into the repairability of products by third parties such as repair cafés .

Monitoring of the programme’s implementation will be conducted by the Dutch Environmental Agency (PBL) in collaboration with seven other institutions (EEA, 2023b), as part of the government’s monitoring of the transition towards a circular economy by 2050, with a goal of reducing the use of primary raw materials by 50% by 2030.

The Netherlands’ previous Waste Prevention Programme (WPP), ‘Design better – waste less – consume more consciously’, was published in 2013 and evaluated . However, no information about the evaluation or about how the results from the evaluation were incorporated into the ongoing programme is presented in the current NWPP from 2021.

The Netherlands has reported data for reuse (2021) in compliance with Commission Implementing Decision (EU) 2021/19 (EEA, 2024):

- 44849 tonnes of textiles,
- 112376 tonnes of electrical and electronic devices, and
- 294407 tonnes of furniture.

It should be noted that these data have been reported for the first time. As the reporting process matures, it is expected that these data will strengthen but for now, caution is advised

in drawing insights from the dataset. More information about the interpretation and limitations of the dataset is available (EEA, 2024).

Policies to encourage separate collection and recycling

The Dutch municipalities design their own separate waste collection system through municipal ordinances. For residual waste and bio-waste, door-to-door collection is applied throughout the whole country. By law, all municipalities should do their best to collect bio-waste from all households, and around 90% of Dutch households are served by bio-waste collection (RIVM, 2024). Regarding the collection of other recyclable fractions, larger cities favour bring points, while smaller towns prefer door-to-door collection. Some fractions are frequently collected co-mingled, for example, plastics, metals and beverage cartons; plastics and beverage cartons; or glass and metals. All fractions, except residual and food waste, are also collected through civic amenity sites. In the Netherlands, separate collection is not mandatory for plastics, metals and composites and post-sorting these fractions from residual waste is allowed and practised in some municipalities. Furthermore, the Netherlands mandates the separate collection of non-household packaging waste and bio-waste. (ETC/CE, 2022)

Only about 41% of Dutch households are incentivised to sort their waste at source through a pay-as-you-throw system, which is mainly based on the volume and/or frequency of waste collection. Most citizens pay waste collection fees based on the number of persons in the household. (RIVM, 2024)

The success of separate collection for certain fractions is fading, posing a challenge to meeting the EU waste targets in the future. The Dutch authorities aim to enhance separate collection systems, especially for high-rise buildings. The focus includes reintroducing bio-waste collection in high-rise buildings (which was not applied in the period 2019-2020), combined with improved infrastructure for the collection of paper, glass, and textiles (ETC/CE, 2022). This already led to a small increase in the recycling rate (Figure 2).

Packaging waste from households and non-household sources is covered by Extended Producer Responsibility (EPR) schemes. Only one producer responsibility organisation (PRO) is in charge. Packaging waste from households is collected together with non-packaging recyclables by the municipalities, and the municipalities receive financial contributions for packaging collection from the producer responsibility organisation. The fees are based on the 'Waste Management Contribution Agreement for Packaging' (Afvalbeheersbijdrageovereenkomst Verpakkingen, ABBO) and are binding (Afvalfonds verpakkingen, 2021). Advanced fee modulation, i.e. fee modulation within the broad material categories such as higher fees for difficult-to-recycle materials or combinations of materials, is applied for plastic packaging.

There is a mandatory deposit-return scheme for plastic beverage bottles and metal cans, both small and large, excluding bottles for juices and milk. Additional voluntary schemes exist for glass beer bottles, plastic crates and some wooden packaging. (EEA, 2023a)

The Netherlands does not apply any taxes on packaging (ETC/CE, 2022).

Policies and instruments to discourage landfilling or incineration

There has been a landfill ban in place in the Netherlands since 1995 for, amongst others, combustible and biodegradable waste (waste with a Total Organic Carbon (TOC) content of >5%), thus practically banning landfilling of mixed municipal waste. Since 2018, this ban has been extended to additional waste streams (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2022).

The Netherlands strongly relies on incineration for the disposal of mixed municipal waste (Figure 2, left). The Dutch disposal tax (EUR 39.23 per tonne in 2024) is equal for landfilling and incineration and is adjusted annually (RIVM, 2024). This tax is levied on all Dutch waste, including waste that is exported for these purposes (Ministerie van Algemene Zaken, 2015) and outputs from Mechanical biological treatment (MBT) or sorting plants going to incineration (ETC/CE, 2022). Overall, this disposal tax is close to the EU-27 average of landfill taxes across those EU-27 member states applying such taxes (EUR 39-46 per tonne (EEA, 2023a)).

Prospects for meeting the targets on recycling and landfilling

According to the EEA's early warning assessment, the Netherlands was considered to be on track to meet the 2025 target for preparing for reuse and the recycling of municipal waste, and the 2035 target for the landfilling of municipal waste. The same applies to the 2025 targets for the overall packaging recycling rate (ETC/CE, 2022). Looking at the latest available reported data, all packaging waste recycling rates are above the 2025 targets, except for plastic packaging (45.7% in 2022). For municipal waste, the preparing for reuse and recycling rate in 2022 (provisional data) was very close to or above the target to be met by 2025 (Eurostat, 2024c).

Consequently, the European Commission did not issue any policy recommendations for the Netherlands. Nevertheless, the Commission's Environmental Implementation Review (EIR) emphasised the potential to further divert reusable and recyclable waste from incineration and recommended economic incentives to promote waste prevention and enhance the economic feasibility of reuse and recycling. (EC, 2022)

There are no mandatory recycling targets established for municipalities, and the national government lacks enforcement mechanisms to address municipalities that fall behind (ETC/CE, 2022). The Dutch government is currently investigating whether it is possible and/or necessary to achieve more standardisation in the collection of household waste (RIVM, 2024). As part of this study, it is also examined whether more guidance from the central government is desirable towards achieving the recycling goals for 2030 and beyond.

References

Afvalfonds verpakkingen, 2021, 'Afvalfonds verpakkingen - Legislative framework' (https://afvalfondsverpakkingen.nl/en/legislative-framework) accessed 4 June 2021.

EEA, 2023a, *Economic instruments and separate collection systems — key strategies to increase recycling*, EEA Briefing (https://www.eea.europa.eu/publications/economic-instruments-and-separate-collection) accessed 12 February 2025.

EEA, 2023b, *Waste Prevention Country Profile - Netherlands*, EEA (https://www.eea.europa.eu/themes/waste/waste-prevention/countries/2023-waste-prevention-country-fact-sheets/netherlands_waste_prevention_2023) accessed 28 February 2024.

EEA, 2024, *Reuse flows according to the implementing decision (EU) 2021/19 Information on the database structure and use*, No Database version 1, European Environment Agency (EEA) (https://sdi.eea.europa.eu/catalogue/srv/api/records/50b2430b-8218-471c-86ea-65236a870a28/attachments/Reuse%20metadata%20annex%20Version%201.pdf) accessed 5 March 2024.

ETC/CE, 2022, *Netherlands - Early Warning Assessment Related to the 2025 Targets for Municipal and Packaging Waste*, European Environment Agency (EEA) (https://www.eea.europa.eu/publications/many-eu-member-states/early-warning-assessment-related-to).

EU, 2018, Directive (EU) 2018/851 of the European Parliament and of the Council of 30 May 2018 amending Directive 2008/98/EC on waste (text with EEA relevance) (OJ L 150, 14.6.2018, p. 109-140).

Eurostat, 2024a, 'GDP and main components (output, expenditure and income) [nama_10_gdp]' (https://ec.europa.eu/eurostat/databrowser/view/nama_10_gdp__custom_9301905/default/table) accessed 15 October 2024.

Eurostat, 2024b, 'Generation of waste by waste category, hazardousness and NACE Rev. 2 activity (env_wasgen)' (https://ec.europa.eu/eurostat/databrowser/view/env_wasgen/default/table?lang=en) accessed 22 October 2024.

Eurostat, 2024c, Information provided by Eurostat on provisional data in response to the reporting obligation in Art. 37(1) Waste Framework Directive related to the target on the preparing for reuse and recycling for municipal waste (Art. 11(2c)).

Eurostat, 2024d, 'Municipal waste by waste operations [env_wasmun]' (https://ec.europa.eu/eurostat/databrowser/view/ENV_WASMUN/default/table) accessed 22 October 2024.

Eurostat, 2024e, 'Packaging waste by waste management operations (env_waspac)' (https://ec.europa.eu/eurostat/databrowser/view/ENV_WASPAC__custom_842634/default/table?lang=en) accessed 28 October 2024.

Eurostat, 2024f, 'Population change - Demographic balance and crude rates at national level [demo_grind]' (https://ec.europa.eu/eurostat/databrowser/view/demo_gind__custom_9301558/default/table) accessed 15 October 2024.

Government of the Netherlands, 2016, *Circular Dutch economy by 2050*, Government of the Netherlands (Circular Dutch economy by 2050 | Circular economy | Government.nl) accessed 26 March 2024.

Government of the Netherlands, 2023, *Nationaal Programma Circulaire Economie 2023 - 2030*, Government of the Netherlands (Nationaal Programma Circulaire Economie 2023 - 2030 | Beleidsnota | Rijksoverheid.nl) accessed 26 February 2024.

Ministerie van Algemene Zaken, 2015, 'Afvalstoffenbelasting - Milieubelastingen - Rijksoverheid.nl' (https://www.rijksoverheid.nl/onderwerpen/milieubelastingen/afvalstoffenbelasting) accessed 4 June 2021.

Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2022, Besluit stortplaatsen en stortverboden afvalstoffen.

Ministerie van Infrastructuur en Waterstaat, 2021a, 'Besluit beheer verpakkingen 2014' (https://wetten.overheid.nl/BWBR0035711/2021-07-03) accessed 4 June 2021.

Ministerie van Infrastructuur en Waterstaat, 2021b, 'Landelijk afvalbeheerplan 3 (LAP3) - Slimmer omgaan met grondstoffen' (https://lap3.nl/lap/lap-archief/archief-lap-3-tweede-wijziging/) accessed 25 February 2025.

Ministerie van Infrastructuur en Waterstaat, 2021c, 'Sectorplannen LAP 3' (https://lap3.nl/sectorplannen/) accessed 25 February 2025.

Rijksoverheid, 2021, *Afvalpreventieprogramma Nederland*, Rijksoverheid (https://www.rijksoverheid.nl/documenten/rapporten/2021/02/18/afvalpreventieprogramma-nederland) accessed 28 January 2024.

RIVM, 2023, *Het effect van Maatschappelijk Verantwoord Inkopen door de Nederlandse overheid in 2019-2020*, Rijksinstituut for Volksgezondheid en Milieu (https://www.rivm.nl/bibliotheek/rapporten/2023-0131.pdf) accessed 9 November 2024.

RIVM, 2024, Information provided during the Eionet review of the draft country profile on waste management Netherlands, Dutch Ministry of Infrastructure and Water Management.