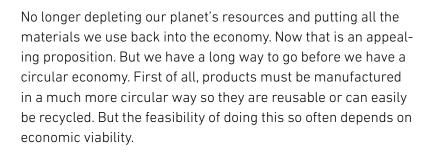


# Annual Review 2024

#### MESSAGE FROM THE PRESIDENT

This is the last time I'll be introducing the DWMA Annual Review. At the end of 2024 I shall be stepping down as president of the Dutch Waste Management Association. After eight years, my term will come to an end and my successor will pick up the reins. The waste sector has navigated some turbulent times in recent years and I admire the ambition, resilience and creativity of this industry.

# **Recycling industry crucial** for the circular economy



Recycling is only possible if we separate our waste properly and if the recycled materials are actually used. Many organisations are working to improve waste separation. They seem to be making progress, but demand for recycled materials is falling. Competition from primary raw materials, such as 'virgin plastic', is too strong. Materials from Asia are much cheaper than our own recycled raw materials, making recycling an increasingly unprofitable enterprise. And that is bad news for the circular economy and for employment.

It is to be hoped that new EU rules will help. For one thing, a recycled content obligation is in the make. From 2030 manufacturers will have to use minimum percentages of recycled content in their products. Ahead of this, the Netherlands will



We have three suggestions to help recyclers out of this crisis. One: support the price of recycled materials with a fixed amount per tonne until the recycled content obligation comes into force. Two: align circular procurement targets with recycling targets. The public sector accounts for about fifteen per cent of all purchases in our economy and can therefore give a huge boost to the demand for recycled materials. Three: introduce a carbon credit system for using recycled material so that carbon savings are rewarded. We are counting on support from the new Dutch government. Each additional tone of recycled waste saves the state money and contributes to climate goals and the transition to the circular economy.

#### Boris van der Ham

President of the Dutch Waste Management Association



 president
 >

 Vision & Stratey
 >

 VITAL SECTOR

 A circular and safe society with respect for people and the environment
 >

 CIRCULARITY

 Maximum reuse and recovery of valuable materials
 >

Message from the

#### CLIMATE

Maximum circularity, energy recovery and emissions reduction

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# Vision

The Dutch Waste Management Association (DWMA) sees a future in which circularity is a given, waste is reduced to the minimum and most materials are recycled for new uses. A future in which the waste industry plays its part in further reducing greenhouse gas emissions. Although its roots are local, the waste industry needs an international orientation and a European level playing field to keep the Dutch waste infrastructure ahead of the field in Europe.

# Strategy

The DWMA has translated this vision into a strategy with three main themes: Vital Sector, Circularity and Climate. Circularity and Climate are about change – transforming the economy. The Vital Sector theme is the foundation – ensuring the essential conditions are in place. 

 Message from the president
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 VITAL SECTOR
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VITAL SECTOR

# A circular and safe society with respect for people and the environment

The primary duty of the waste industry is the safe and responsible collection and treatment of waste. In other words, the Dutch waste companies keep the country clean and tidy. They manage their operations efficiently and with respect for people and the environment. These are the basic requirements for making the transition to the circular economy. They ensure that the waste companies are able to convert waste into raw materials and energy.

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#### VITAL SECTOR

#### Acute danger of exploding NOS canisters

Early in 2023 the waste industry was faced with an unexpected and worrying development. Large numbers of empty laughing gas canisters (NOS canisters) appeared on the streets, in the countryside and in waste containers – about 500,000 in total across the year. These canisters can explode when exposed to high pressures and temperatures, conditions which can be found in refuse vehicles and incinerators. There were more than 10,000 explosions in 2023 alone, exposing refuse collectors and waste workers to serious risk of harm. The explosions can cause considerable damage to waste-to-



energy plants, which have to be shut down for several days for repairs. These damages cost waste treatment companies 65 million euros in 2023. The canisters are dumped because on 1 January 2023 nitrous oxide was added to the list of controlled substances under the Opium Act. Until then the canisters could be handed in under a deposit-refund system worth up to 30 euros per canister. Following the change in the legislation the drugs industry switched to using cheap single-use canisters. After the first explosions occurred the DWMA, its members and the Association for Refuse and Cleansing Management (NVRD) demanded an urgent meeting with the ministries of Infrastructure and Water Management, Justice and Security, and Health, Welfare and Sport. These meetings and various media appearances resulted in the legislation being amended to lift the prohibition preventing waste companies and recycling centres from accepting the canisters in return for a refund. In November 2023 the DWMA and NVRD launched a publicity campaign encouraging users to hand empty canisters in at a municipal recycling centre. Many recycling centres introduced their own reward schemes. A long-term solution is needed as the problem of discarded NOS canisters is likely to continue for some years to come. The DWMA and NVRD want to see progress towards an explosion-free waste management system and reimbursement for the damages incurred and the cost of the measures taken. The waste industry supports the reintroduction of a national deposit scheme.



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#### Supply chain approach to battery fires

Discarded batteries, especially lithium batteries, are among the top three causes of fires at waste collection and treatment facilities. Everyday products like power drills, bicycles and shavers increasingly come with built-in batteries. The larger batteries in particular, such as e-bike batteries, can explode and cause fires. Battery fires are a societal problem requiring action by all parties in the supply chain. The Waste Fires Task Force – a partnership between DWMA, the Association for Refuse and Cleansing Management NVRD, BRBS Recycling (the Dutch association for the recycling of construction and demolition waste), the Dutch Association for Transport and Logistics TLN and the producer responsibility organisations for batteries (Stibat) and e-waste (Stichting OPEN) – aims for 100% collection of batteries. The Task Force launched twelve campaign activities in 2023, from a measuring system for waste battery fires to a joint communication campaign. The campaign to prevent battery fires, launched during the waste industry's Safety Week from 5 to 9 June 2023, included a website, radio spots, animations and social media posts encouraging people to return batteries and electrical appliances for recycling. The campaign is being repeated in 2024.

### Consequences of PFAS restrictions for secondary materials

Substances of very high concern (SVHC) are hazardous and should be removed from production and consumption chains as far as possible. The list of SVHC continues to grow. The EU is preparing legislation to prohibit the production, use, sale or import of about 10,000 PFAS (perfluoroalkyl and polyfluoroalkyl substances). Although waste falls outside this 'PFAS restriction', the legislation may have major consequences for recycling because strict standards will apply to secondary raw materials. In 2023 a DWMA working group looked into the problems the PFAS restriction may cause for waste operators when selling secondary raw materials. However, collecting information about SVHC in waste streams is no easy matter, especially when they are of varied composition. The DWMA



Looking ahead to 2024

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supports the phasing out of SVHC and believes that their use should be halted at the beginning of the supply chain. An EU ban on production and imports would halt the flow of SVHC at source. In the meantime, we will still have to deal with SVHC in the waste management chain for some decades to come. The DWMA and its members conducted impact tests to investigate the presence of SVHC in wastes and the potential emissions to air and water. They are also taking part in a government pilot project to identify the possible presence of SVHC in construction and demolition waste streams.

#### Competence Code 95

Code 95 is a compulsory driving licence code indicating the driver's competence. This initial qualification is listed on the driving licence once a driver has passed all the relevant tests and exams. The code is valid for five years and can be renewed by completing a refresher course. The sewer cleaning and inspection companies in the DWMA are keen for safety aspects of sewer maintenance to be included in the training. Important factors for sewer maintenance include the risks of working in sewers, the safety measures to be taken and personal protective equipment. The sewer maintenance sector is investigating the possibility of expanding the refresher course to include these topics and is holding discussions with the Central Office for Motor Vehicle Driver Testing (CBR). The CBR is responsible for the certification of training courses.

#### United front against aggression and violence

Waste collectors increasingly face aggressive behaviour and violence during their work. Like ambulance staff, teachers, politicians and journalists, they are frequently subjected to verbal and physical abuse. Society is becoming harsher and studies show that the number of incidents is increasing. The DWMA supports the charter against aggression and violence which two D66 MPs published in 2023. The charter calls upon the public to unite behind the groups subjected to aggressive behaviour. It drew widespread support and was signed by many political parties and civil society organisations.





#### Waste Heroes honoured

The 30,000 people who work in the waste industry are among the group that keeps society functioning. Despite this, the important work they do often does not receive the recognition it deserves. During the Week of Waste Heroes from 6 to 12 March 2023 the companies and organisations in the waste sector paid tribute to their staff, highlighting the importance of the work they do. The week is an initiative by DWMA, NVRD and TLN and the 2023 edition was the third time it has been held. The week kicked off with a festive event at Renewi in Nieuwegein. More than 130 municipalities, companies and organisation took part in the initiative and organised activities for their staff, from treating them to a breakfast and a gift to holding competitions and providing free coffee. The DWMA published a daily vlog on its website and social media in which Waste Heroes from our members talked about their work and what motivates them.



#### See also:

• <u>Dutch waste associations NVRD and DWMA want</u> government support to combat laughing gas canisters



Maximum circularity, energy recovery and emissions reduction

Looking ahead to 2024





## Maximum reuse and recovery of valuable materials

With the waste sector actively working towards maximum circularity, the waste companies are playing their part in reforming the economy. The aim is an economy which facilitates the maximum reuse and recovery of valuable materials. We will then be less dependent on primary raw materials. Message from the president

Vision & Stratey

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#### Circular Materials Plan in preparation

The Netherlands is aiming for a fully circular economy by 2050. This ambitious goal requires more than just an optimal, high-quality waste management system; there must also be more emphasis on the beginning of the production chain, where the big challenge is to design and manufacture products differently. This broad approach lies at the heart of the Circular Materials Plan (CMP) currently being prepared by national government as the follow-up to the National Waste Management Plan (LAP). The DWMA endorses the importance of adopting a broad perspective on circularity and is participating in an expert group to draw up an environmental impact assessment of the CMP. The public consultation process will



begin in autumn 2024 and the CMP is expected to come into force by the end of 2025. The DWMA is closely following developments concerning the CMP and is making its views known to the government.

#### Separating waste outside the home

Almost five billion kilograms of commercial waste are produced each year. This waste arises in the retail, office and other services sector, which consists of more than a million businesses. As more than half of all this waste is still not being recycled, the DWMA vigorously promotes more waste separation in the workplace. A survey shows that almost half of all people are better at separating waste at home than elsewhere. At the end of March 2023, environment minister Vivianne Heijnen launched a public campaign to encourage people to separate waste 'as if at home'. Through radio spots, social media, a special campaign website and national news media the campaign calls on people to join with their work colleagues and employers to separate waste streams in the workplace. Waste collectors agreed to offer new customers at least one additional container besides the residual waste container, for by example food and garden waste or plastic waste. The DWMA had this agreement reviewed by the Authority of Consumers and Markets (ACM) for competition implications and the outcome was positive. The waste companies are working to improve waste separation outside the home together with supply chain partners, such as government



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authorities, the national SME organisation MKB-Nederland, the Confederation of Netherlands Industry and Employers VNO-NCW and industry associations.

#### Coffee pads and tea bags in food and garden waste

From 2023 coffee pads and tea bags may officially be included in food and garden waste. Until the beginning of 2023 they were on the list of food wastes that do not belong in the green waste stream. The switch from the 'no' list to the 'yes' list was due to the Green Deal agreed in 2021 between the industry association for Dutch coffee and tea companies Koffie & Thee Nederland, the DWMA and the Dutch government. The Green

Deal shows how value chain collaboration can lead to greener products. The collection of coffee pads and tea bags in food and garden waste can generate about 88 million kilograms of additional compost each year. Used coffee capsules were not included in the Green Deal because they cannot be composted and so belong in the residual household waste bin. On 18 March 2023 the Green Deal won the Recycling Heroes Award at the annual Global Recycling Day event.

#### Potential of chemical recycling

With legislation in the pipeline to make the use of recycled plastic in the manufacture of new products mandatory, an uplift in plastic recycling is expected in the next few years. To meet the increasing demand for recycled plastic, the Dutch chemicals and plastics industry wants to invest in chemical recycling plants where plastics will be broken down into their molecular building blocks. A study conducted in 2023 by KPMG came to a positive conclusion about the opportunities for chemical recycling in the Netherlands. The study was commissioned by the DWMA, the Association of the Dutch Chemical Industry VNCI, Plastics Europe Nederland and the 'acceleration platform' for chemical recycling and plastics (a public-private partnership between industrial companies and government) and presented to the Confederation of Netherlands Industry and Employers VNO-NCW at a press conference held in November 2023. Public and private parties, including the DWMA, are working to improve the investment



emissions reduction >

Looking ahead to 2024

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climate for chemical recycling in the Netherlands. KPMG expects there will be a shortage of plastic waste. To ensure a properly functioning plastics recycling loop, they see a need for additional measures, from more and better waste separation and/or post-sorting of plastic waste to a level European playing field for transporting plastic waste. The DWMA considers chemical recycling to be an addition to mechanical recycling, but only if the plastic waste is converted into a secondary material. Converting the waste into a fuel does not constitute recycling, in the DWMA's opinion.

#### Recycling strategy

Recycling reduces the need to extract primary raw materials. In 2023 the DWMA's Recycling Section developed a recycling strategy with three main themes: cleaner material streams, more recycling and stimulating markets for recycled raw materials. Better quality recycling begins with the collected waste streams. The section wants the government's Circular Materials Plan to contain uniform quality standards for waste streams, backed by clear yes/no lists. These lists would give consumers, municipal authorities, waste collectors and product designers vital information on what can and should be recycled. The strategy contains a number of firm targets, such as 55% recycling of household and commercial waste by 2025, 60% by 2030 and 65% by 2035. These targets are in line with EU objectives. The members of the DWMA propose the same percentages for recycled content in new products: 55% by 2025 and 65% by 2035. Including more recycled content in new products will increase the market for recycled raw materials. The government can also give a significant boost to the market for recycled materials through its annual 70 billion euro procurement budget.

#### FEAD raises EU recycling targets

The DWMA is a member of the European Federation of Waste Management and Environmental Services (FEAD). In 2023 FEAD published a strategy setting a 75% recycling target for all waste streams by 2035. Achieving this ambitious goal will require a considerable effort across the EU. At the moment about 40% of the waste produced by the 27 EU member states is recycled and about the same volume is landfilled. In comparison, almost 80% of the 60 million tonnes of waste produced in the Netherlands is recycled. To meet FEAD's European target, waste streams will have to be diverted away from landfill and low-quality recycling. A self-sufficient Europe will obtain its raw materials from the high-quality recycling of material streams and FEAD aim's to work with industry and governments to make this happen.

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#### Future-proof landfilling

Landfilling is and will remain part of the circular economy. There will always be waste that cannot be recycled or incinerated, such as residual wastes from recycling that are not recyclable or combustible and products still in use that contain asbestos. Landfills also provide an option for disposing of wastes arising from emergencies. To ensure there is a reserve waste disposal solution in the future, landfill capacity must remain available and affordable, but both these conditions are currently under threat. Research by Royal HaskoningDHV indicates that a lack of landfill capacity in future is a real possibility. In full consultation with the DWMA, the Ministry of Infrastructure and Water Management is giving landfill its full attention and launched a work programme on the subject. This multi-year programme will determine the measures needed to make landfill a futureproof option. A proposal by some provincial governments to lower the nominal interest rate for funds to pay for the cost of the perpetual aftercare of closed landfills has caused considerable concern. Lowering the nominal interest rate will have serious financial consequences for landfill operators and put their continuity at risk. In a letter to the ministry, the DWMA made an appeal to the government to take decisive action on this issue.



#### See also:

FEAD sets the bar high: 75% recycling by 203



#### CLIMATE

### Maximum circularity, energy recovery and emissions reduction

The waste sector is pressing ahead with minimising greenhouse gas emissions, in the process actively contributing to the climate transition of the economy. An economy in which maximum circularity is feasible, non-recyclable streams are processed as efficiently as possible, energy is recovered and emissions reduced.

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#### CLIMATE

#### Greening mobility

The waste industry has a large, modern vehicle fleet, ranging from cars, vans and lorries to refuse collection vehicles. Waste companies are making their vehicles and equipment more sustainable, for example by switching to sustainable fuels and developing smarter logistical processes. The main motive for choosing more sustainable transport options is to reduce carbon emissions. An additional stimulus is the growth of zero emission zones in cities. Under the National Climate Agreement, 30 to 40 municipalities should have introduced zero emission zones by 2025. In 2023, the DWMA established a new Mobility Working Group to help waste companies make their transport operations more sustainable. The options being investigated include route optimisation, or reducing



the distance waste is transported to the minimum. An initial inventory made at the end of 2023 indicated that companies face a number of hurdles to greening mobility. Specific types of electric vehicles, such as those used in sewer maintenance, are not yet available and switching to electric vehicles can be held up by capacity constraints on the electricity grid. Moreover, legislation prohibits the electrification of vehicles that are subject to the European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR).

### More recycling of construction and demolition waste

The Netherlands is on the brink of a major housebuilding programme. A million new homes have to be built over the next ten years. If our climate ambitions are to be achieved, the use of sustainable construction methods is essential. This is not possible without increased reuse and recycling of building materials. The DWMA is therefore pushing to raise the level of reuse and recycling of construction and demolition waste. In 2023 the DWMA set up its own working group to promote the recycling of bulky household waste for raw materials recovery and carbon emissions reduction. Construction and demolition waste is also attracting growing attention at the EU level. In 2023 the European Recycling Industries' Confederation (EuRIC), to which the DWMA is affiliated, founded the EuRIC Construction & Demolition Branch to boost the recycling of construction and demolition waste. The new branch represents the interests of European recyclers. In October a joint EuRIC/DWMA delegation visited Renewi in Amsterdam and Remondis in Son en Breugel.



Looking ahead to 2024

#### CLIMATE

#### Avoided carbon emissions

The DWMA is working with its members on a climate agenda to optimise the sector's contribution to the climate transition. The waste industry contributes to the climate transition on several fronts. Some waste companies generate sustainable energy and reduce their carbon emissions by greening their energy mix. Circular and climate ambitions often go hand in hand. The sector also works hard to reduce the amount of residual waste and increase recycling and reuse. This does not reduce the waste companies' own emissions, but those of other parties in the materials chains. For example, recycling avoids carbon emissions during the production of new raw materials and reduces fossil energy consumption. These 'avoided emissions' are the biggest climate benefits of the waste sector. The DWMA is calculating these avoided emissions to obtain a realistic indication of the total contribution made by the waste sector to mitigating climate change.

#### Carbon pricing

Much remains to be done to achieve EU and Dutch climate targets for 2030. One way to make industry more sustainable is to price carbon emissions. The carbon pricing mechanism for Europe is the EU Emissions Trading System (ETS). The Netherlands introduced its own carbon levy in 2021. The participation of waste-to-energy (WtE) plants in both systems has been the subject of much discussion. The Dutch government intends to tighten up the carbon levy and phase out exemptions, including those for the WtE plants. The ETS currently



does not include WtE plants, but the European Commission is investigating the feasibility of bringing them into the system. The DWMA does not support carbon pricing for WtE plants. Waste incinerators have little or no control over the input stream and it is households who will eventually foot the bill for the higher costs. The DWMA's view is that carbon pricing should in any case be determined at the European level to ensure a level playing field. If the WtE plants face higher costs there will be less room to invest in climate measures, such as carbon capture and heat utilisation. Inclusion of WtE plants in the ETS must first be the subject of an impact assessment and feasibility study, which is mandatory for European Commission initiatives that are expected to have considerable economic, social and environmental consequences. The DWMA will scrutinise the impact assessment, which is due to be published in 2026.



Maximum reuse and recovery of valuable materials

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Looking ahead to 2024



## Looking ahead to 2024

Many of the developments in the past year will continue to occupy the DWMA and its members in 2024. For example, the problem of NOS canisters has not yet been resolved and the recycling market has stagnated. The demand for recycled plastic in particular is falling sharply, making recycling activities unprofitable. The DWMA expects the government to step in and help to resolve this problem. Proposals by some provincial governments to lower the nominal interest rate for aftercare funds will require a response from the DWMA in 2024. New regulations for bottom ash will also require attention. Other topics high on the DWMA's agenda include substances of very high concern (SVHC), the rules for exporting wastes, the climate transition, compost quality, the Environment and Planning Act (*Omgevingswet*) and the Water Framework Directive. In 2024 the DWMA will launch a public campaign to raise awareness of the value of waste and the possibilities for reuse when it is properly separated. We want to make people think about what they can do to make the economy more circular. The Week of Waste Heroes, National Compost Day and Safety week will be held again in 2024 and the campaign to stimulate the separate collection of batteries and electrical appliances will be followed up. The plan by the waste collectors to offer new customers a contract for a minimum of two separate waste streams will officially be launched in 2024.

energy recovery and emissions reduction

Maximum circularity,

Maximum reuse and recovery of valuable

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CLIMATE

Looking ahead to 2024

## Waste statistics

In 2022 the 8.1 million households in the Netherlands produced 8.4 million tonnes of waste (8,395 kilotonnes)

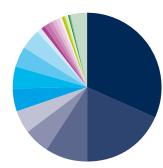
2,662 1.556

759

475

417

415 394



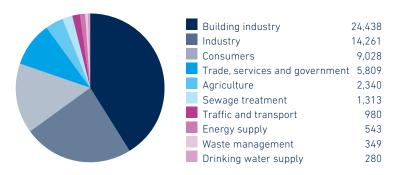
Household residual waste
VGF waste
Paper/board
Household building waste
Wood waste )
Clean rubble
Bulky garden waste

	Plastic, metal & drink packaging	380	Trea
	Glass packaging	362	Reu
	Clean soil	90	Hard
	White and brown goods	83	Plas
	Electrical appliances	83	Hou
	Textiles	77	Matt
	Bulky household residual waste	76	Disp
	Metals	71	Othe

Treated wood waste	45
Reusable household goods	41
Hard plastics	28
Plasterboard / Gypsum	26
Household chemical waste	21
Mattresses	18
Disposable nappies	17
Other	299

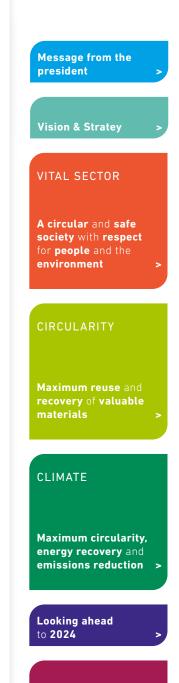
### Each person in the Netherlands produces 460 kilograms of waste each year

#### Total waste arisings in the Netherlands in 2020 (59.341 kiloton)



## Almost **80%** of the more than **59 million tonnes**

of waste is recycled

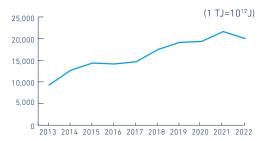


#### WASTE STATISTICS

Electricity produced by the waste sector (gigawatt hours)



### Useful heat produced by the waste sector (terajoules)





Green gas produced by the waste

sector (million m3)

#### Amount of waste processed 2018-2022 in tonnes



Message from the

**Vision & Stratey** 

VITAL SECTOR

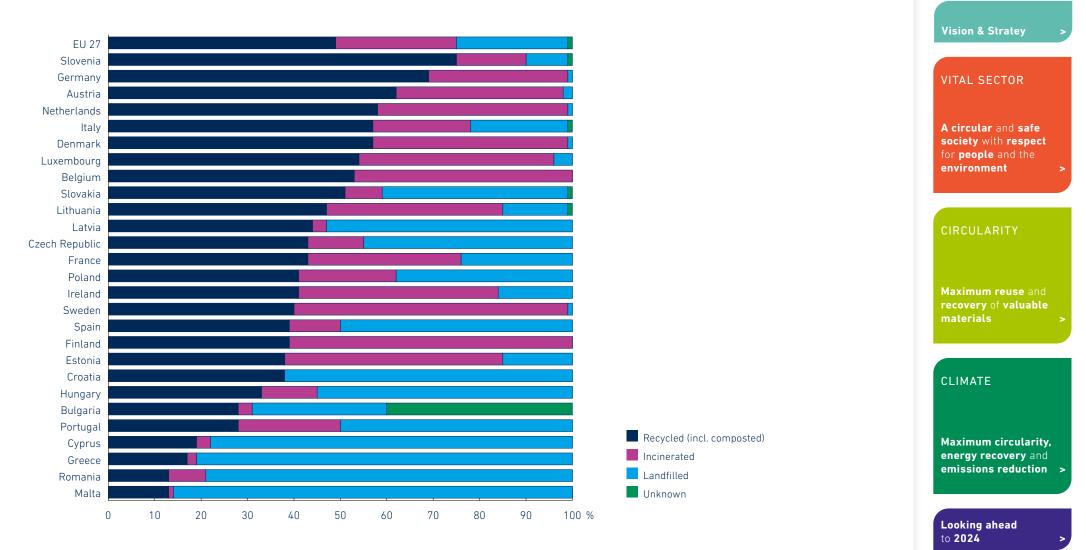
A circular and safe society with respect

for **people** and the **environment** 

president

#### WASTE STATISTICS

How did the EU member states process their municipal solid waste in 2022?



Source: Statistics Netherlands (CBS), Rijkswaterstaat Environment and European statistics office (Eurostat)

Waste statistics

Message from the president



The Annual Review 2023 looks back on some of the important developments during the year.

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