

Overview of national waste prevention programmes in Europe



Denmark 

2021

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General information

Name of the country/region	Denmark
Coverage of the waste prevention programme (national/regional)	National
Type of programme (stand alone or integrated into waste management plan)	Integrated into Denmark's circular economy action plan — national plan for prevention and management of waste 2020-2032
Title of programme and link to programme	Handlingsplan for cirkulær økonomi (Action plan for circular economy) https://mim.dk/miljoe/handlingsplan-for-cirkulaer-oekonomi/
Duration of programme	2021-2032
Languages	Danish, English
Development process of the programme/revision	The Danish government's action plan for circular economy constitutes the national plan for the prevention and management of waste for 2020-2032. The action plan was drafted in 2020 and sent for consultation in December 2020. The final plan was published in June 2021. The action plan for circular economy describes the Danish targets, indicators, policies and initiatives related to the entire circular value chain, which ranges from design and consumption to waste management, where natural resources are recycled into new products and materials
Budget envisaged for implementation of the project	No specific budget for the implementation of the programme is included

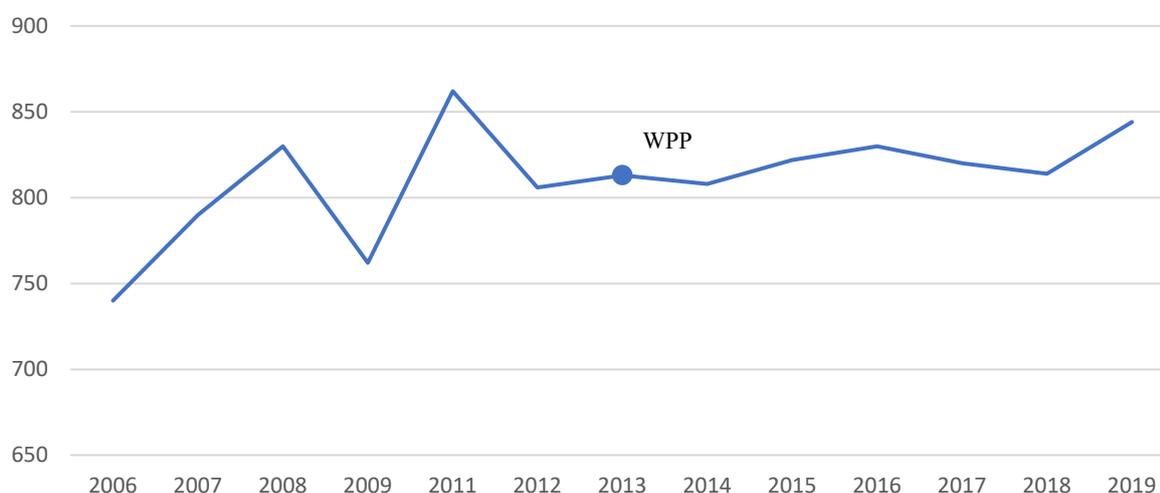
Waste generation

The following figures illustrate the progress towards waste prevention and decoupling of waste generation from economic growth in Denmark.

Municipal solid waste

- The generation of municipal waste increased from 740 kg per capita in 2006 and reached its maximum in 2011 with 862 kg per capita (see Figure 1).
- The trend stagnated after 2011, and between 2012 and 2019 waste generation remained at the same level at 810-840 kg per capita per year. Denmark's municipal solid waste (MSW) generation is therefore one of the highest in Europe.
- Denmark's first waste prevention plan (WPP) came into force in 2013 and, although MSW generation is influenced by many factors (e.g. household expenditure), the prevention measures in that WPP might partially explain the stable trend in waste generation since then. It is noteworthy that household expenditure increased steadily during the same period ⁽¹⁾, thus some decoupling may have occurred.

Figure 1: Municipal waste generation in Denmark (kg per capita), 2006-2019



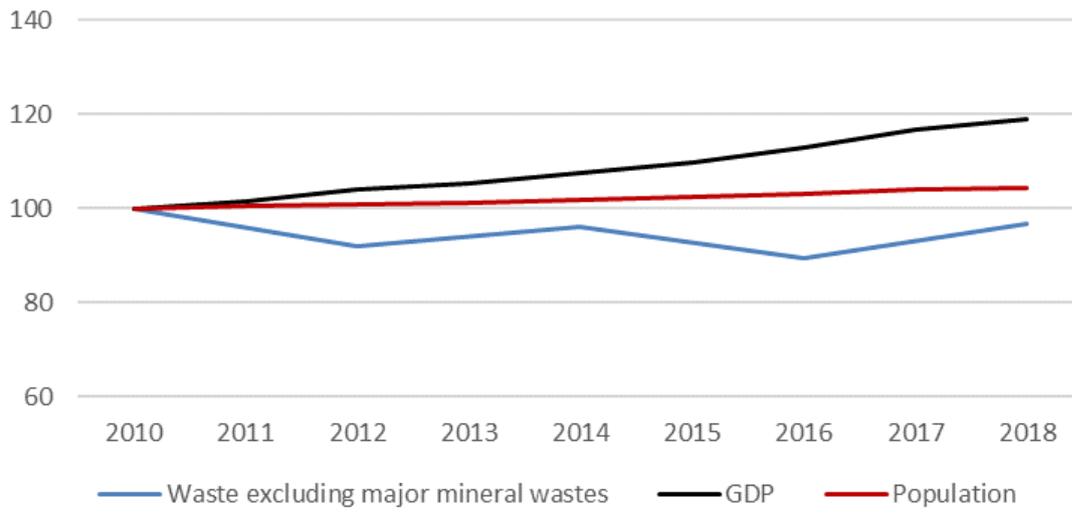
Source: Eurostat Circular Economy Monitoring Framework.

Total waste

- Denmark's waste generation (excluding major mineral wastes) decreased between 2010 and 2012 and remained steady in the years that followed to 2018 (see Figure 2). During the same period, Denmark's GDP grew steadily.
- Although a longer time series is needed to confirm that decoupling has occurred, Denmark seems to have been on track to decouple total waste generation from economic growth since 2010.
- A correlation between total waste generation and population, which grew slowly during the same period 2010-2018, cannot directly be observed.
- In Figure 2, one cannot see a clear immediate impact of Denmark's first WPP (2013 onwards) on total waste generation. Total waste generation is, however, lower in 2018 than in 2010.

(1) <https://data.worldbank.org/indicator/NE.CON.PRVT.PP.KD?end=2019&locations=DK&start=2012>

Figure 2: Growth rate of waste (excluding major mineral wastes), GDP and population in Denmark, 2010-2018 (2010 = 100)



Source: Eurostat.

Waste prevention programme

Objectives and priorities

1. Waste prevention objectives of the programme: quantitative objectives (waste reduction) and qualitative objectives (reduction of hazardous substances/environmental impacts)	The Danish government is committed to ensuring less waste and better use of natural resources by, for example: <ul style="list-style-type: none">• strengthening efforts to include circular economy strategies in EU eco-design regulations• introducing mandatory use of ecolabels in state procurement• reducing the level of limescale in drinking water (leading to, among other things, extended durability of electronics and reduced consumption of cleaning agents)• introducing mandatory use of total cost of ownership in state procurement• creating a clear framework for municipal second-hand shops
2. Sectors covered	The action plan for circular economy focuses on three areas with a significant environmental and climate impact: <ul style="list-style-type: none">• biomass• construction• plastics
3. Priority waste types	<ul style="list-style-type: none">• Biomass• Construction• Plastics
4. Target groups	The programme focuses on possible measures by public institutions, industry and households

Targets, indicators and monitoring

1. Indicators proposed	Denmark's action plan for circular economy includes a number of indicators addressing waste prevention: <ul style="list-style-type: none">• total waste sector CO₂e emissions (million tonnes)• less waste and better use of natural resources• municipal waste per capita (kg)• material footprint (RMC per capita) (tonnes)• resource productivity (BNP/RMC) (DKK per kg)• number of products and services with Nordic Swan Ecolabel• turnover of products and services with Nordic Swan Ecolabel (billion DKK)• circular material use rate (recycling and material recovery compared with DMC)• climate footprint of public procurement (million tonnes CO₂e)
2. Quantitative targets	Targets are set in accordance with EU targets, for example: <ul style="list-style-type: none">• halving food waste generation by 2030, based on the UN SDG• increasing the separate collection of plastic bottles to 70 % by 2025 and 90 % by 2029• significantly reduce the amount of marine waste• reduce the amount of food waste in all parts of the food value chain• reduce the environmental impact of construction and demolition<ul style="list-style-type: none">○ proportion of construction projects certified by the Nordic Swan Ecolabel, DGNB, LEED or Breeam• reduce consumption and improve reuse and recycling of plastics<ul style="list-style-type: none">○ amount of marketed plastic packaging (1 000 tonnes)○ amount of certain types of single-use products (tonnes)• separate collection of plastic bottles
3. Monitoring of programme	<ul style="list-style-type: none">• Waste intensity will be monitored based on annual reports by the Danish statistical office• Share of reusable packaging is monitored by annual reports submitted in accordance with the Danish packaging law
4. Evaluation of the programme	The implementation of the programme will be evaluated after 6 years. Based on the annual monitoring of the indicators outlined above, additional measures may be introduced in order to fulfil the stated targets

Breeam, Building Research Establishment's Environmental Assessment Method; CO₂e, carbon dioxide equivalent; DGNB, German Sustainable Building Council; DKK, Danish krone; DMC, domestic material consumption; LEED, Leadership in Energy and Environmental Design; RMC, raw material consumption; SDG, Sustainable Development Goal.

Prevention measures

Prevention measures implemented in accordance with Article 9 of the Waste Framework Directive

Table 1: Specific waste prevention measures structured in accordance with Article 9 of the Waste Framework Directive

Promote and support sustainable consumption models	<ul style="list-style-type: none"> • Development of quality standards for green procurement and training in green procurement (2021 onwards) • All public procurement must be eco-labelled by 2030
Encourage the design, manufacture and use of products that are resource-efficient, durable (including in terms of life span and absence of planned obsolescence), repairable, reusable and upgradeable	<ul style="list-style-type: none"> • A guide for design of reusable packaging was published on a multi-stakeholder platform in 2019 (https://plast.dk) • All public procurement is to include total cost of ownership criteria
Target products containing critical raw materials to prevent those materials becoming waste	<ul style="list-style-type: none"> • Denmark has set targets for the separate collection of batteries (up to 45 %) and waste electronics (up to 65%) • The extended producer responsibility (EPR) organisation Elretur has established an experience exchange forum for municipalities and waste companies that either already work towards reuse in the field of electronics or aspire to it • A major role of municipal waste centres is organising customer-to-customer exchange of used electronic goods or making them available in their thrift shops ⁽²⁾
Encourage the reuse of products and the setting up of systems promoting repair and reuse activities, including in particular for electrical and electronic equipment, textiles and furniture, as well as packaging and construction materials and products	<ul style="list-style-type: none"> • Analysis of whether a reduced VAT rate for repair activities and second-hand products could be implemented • The government will continue informing the public about options for and the benefits of reuse • Donations for reuse will be deductible for tax purposes • Collection of electronic products will be improved in order to support reuse, including cooperation with local reuse networks • Circle House project
Encourage, as appropriate and without prejudice to intellectual property rights, the availability of spare parts, instruction manuals, technical information, or other instruments, equipment or software enabling the repair and reuse of products without compromising their quality and safety	<ul style="list-style-type: none"> • Quality standards for second-hand products as well as legal liabilities will be harmonised • The government is committed to strengthening its efforts to include circular economy strategies in EU eco-design regulations

⁽²⁾ <https://www2.mst.dk/Udgiv/publikationer/2020/01/978-87-7038-158-1.pdf>

<p>Reduce waste generation in processes related to industrial production, extraction of minerals, manufacturing, construction and demolition, taking into account best available techniques</p>	<ul style="list-style-type: none"> • Denmark’s circular economy action plan’s key sector is construction • The government is committed to updating building regulations with elements from the voluntary sustainability class and introducing increasing limit values for buildings’ climate footprint. It will also introduce requirements for standardised demolition plans • Exchange platforms for construction products and materials will be supported • A specific obligation to explore the waste prevention potential in construction projects will be evaluated • Modular construction enabling reuse of construction elements is being piloted in the Circle House project ⁽³⁾
<p>Reduce the generation of food waste in primary production, in processing and manufacturing, in retail and other distribution of food, in restaurants and food services as well as in households as a contribution to the UN Sustainable Development Goal to reduce by 50 % per capita global food waste at the retail and consumer levels and to reduce food losses along production and supply chains by 2030</p>	<ul style="list-style-type: none"> • The national strategy on food waste prevention will be implemented and further developed • ONE\THIRD, a think tank operating as an independent organisation under the Danish Ministry of Environment, is managing ‘Denmark against food waste’, a voluntary agreement that unites 25+ food producers and retailers behind the shared mission to halve food waste by 2030. The signatories to the voluntary agreement co-develop and test a methodology and metrics to measure food waste reliably. ONE\THIRD publishes a yearly report on general progress on preventing food waste and loss in Denmark • Other government actions include provision of professional assistance to reduce food waste in the retail sector
<p>Encourage food donation and other redistribution for human consumption, prioritising human use over animal feed and reprocessing into non-food products</p>	<ul style="list-style-type: none"> • Options to support food donation will be developed by a specific group working with the regions • A study will be prepared on legal options to support food donation • Legal risks of and liabilities for food donation will be minimised wherever possible

⁽³⁾ <https://stateofgreen.com/en/partners/3xn/solutions/designing-housing-for-disassembly-and-reuse/>

<p>Promote the reduction of the content of hazardous substances in materials and products, without prejudice to harmonised legal requirements concerning those materials and products laid down at EU level, and ensure that any supplier of an article as defined in point 33 of Article 3 of Regulation (EC) No 1907/2006 of the European Parliament and of the Council provides the information pursuant to Article 33(1) of that regulation to the European Chemicals Agency as from 5 January 2021</p>	<ul style="list-style-type: none"> • The government is to introduce a requirement to carry out an environmental and resource survey prior to demolition and major renovation projects. The survey will map the presence of contaminants and the possibility of reusing and recycling the materials
<p>Reduce the generation of waste, in particular waste that is not suitable for preparing for reuse or recycling</p>	<ul style="list-style-type: none"> • Danish companies will need to pay for the disposal of packaging used for their branded products by 2025
<p>Identify products that are the main sources of littering, notably in natural and marine environments, and take appropriate measures to prevent and reduce litter from such products; where Member States decide to implement this obligation through market restrictions, they should ensure that such restrictions are proportionate and non-discriminatory</p>	<ul style="list-style-type: none"> • The environmental organisation Plastic Change works to combat plastic pollution on a global scale. Accredited by the UN Environment Assembly (UNEA), it works with major brands to reduce the use of plastic packaging, single-use cups, plastic bags and microbeads. Plastic Change has distributed information on littering to more than 50 million people worldwide with the help of volunteers and grants • The EU Directive on single-use plastics will be implemented • An EPR system is to be introduced to Danish companies for packaging used for their branded products by 2025
<p>Aim to halt the generation of marine litter as a contribution towards the UN Sustainable Development Goal to prevent and significantly reduce marine pollution of all kinds</p>	<ul style="list-style-type: none"> • Introduce a ban on certain single-use plastics • Reduce the amount of specific forms of plastic take-away packaging by 50 % • Require recycling of a minimum of 60 % of collected plastic waste • Establish a research mission on recycling and reduction of, for example, plastic waste
<p>Develop and support information campaigns to raise awareness about waste prevention and littering</p>	<ul style="list-style-type: none"> • Regional and local waste organisations have created information centres linked to their recycling/waste centres • A number of special-purpose NGOs conduct information and awareness-raising campaigns, in particular for preventing food waste and plastic packaging • ‘Mind the trash’, a teaching material on waste and resources for school students in years 4-6. Website with eight teaching courses

Additional implemented prevention measures, not covered by Article 9 of the Waste Framework Directive

Collection of used textiles
Denmark has a long tradition of used textile collection by charities and private operators. Municipal waste companies have recently begun collecting used textiles and textile waste via civic amenity centres and door-to-door collection. Some brands/retailers have

also experimented with collection. Collection of used textiles from public institutions (e.g. hospitals) is minimal, as is collection of workwear from businesses. In Denmark, collection of used textiles is not considered waste collection when the collector makes it clear that they wish to receive only clean, reusable textiles. However, typically 20-30 % of collected textiles are not reusable and are directed to recycling. The Danish government and supporting parties agreed in June 2020 to require Danish municipalities to carry out the separate collection of textile waste from 2022 ⁽⁴⁾.

⁽⁴⁾ <https://www2.mst.dk/Udgiv/publications/2020/06/978-87-7038-202-1.pdf>

Food waste prevention

Food waste generation

Denmark produces approximately 1 200 000 tonnes of food waste a year from primary production, processing and manufacturing, retail, restaurants and households. The amount of food waste from households decreased by 14 000 tonnes between 2011 and 2017. That is an average decrease in food waste of 8 % per household per week.

Measures to prevent food waste

ONE\THIRD is a think tank operating as an independent organisation under the Danish Ministry of Environment and Food. Its five focus areas are:

1. supporting civil society's battle against food loss and food waste;
2. contributing to general business opportunities relating to food waste prevention;
3. offering insights on how to overcome barriers to preventing food waste and food loss;
4. improving data collection and impact assessment;
5. international cooperation on know-how and sharing of experiences.

ONE\THIRD's actions have been described in Table 1 (see above).

The [REFOOD](#) label ⁽⁵⁾ is a scheme for companies and organisations in the food and service sector aimed at minimising and recycling food waste. Members are required to choose three food waste reduction initiatives and to have a scheme for recycling food waste. In 2021, 1 320 organisations held the REFOOD certificate.

Several food donor and food sharing programmes and organisations have emerged during the last few years. The NGO [Stop Spild Af Mad](#) (Stop Wasting Food) ⁽⁶⁾, Denmark's largest movement against food waste, pushed for the first 'National Day of Food Waste', celebrated on 29 September, to raise awareness of the issue. The NGO has launched a food bank called GratisMad (Free Food). [Food Sharing Copenhagen](#) ⁽⁷⁾ is another of Denmark's largest volunteer-led organisations working to raise awareness of and prevent food waste. Food Sharing Copenhagen has built relationships with local fruit and vegetable suppliers and wholesalers, and large food-sharing events take place once to twice a week.

[Eat GRIM](#) (Eat Ugly) ⁽⁸⁾ delivers food boxes of organic and 'ugly' fruit and vegetables that do not fit supermarket's beauty standards, nor the EU's quality standards. By buying whatever farmers cannot sell they have saved around 572 tonnes of food and created over USD 1 billion (EUR 0.87 billion) income for farmers.

Reuse of products

Data

With regard to the Commission Implementing Decision (https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L_.2021.010.01.0001.01.ENG&toc=OJ%3AL%3A2021%3A010%3ATOC), this section will be updated by the EEA accordingly.

Measures to support reuse

As part of the EU TAIEX-EIR PEER-2-PEER programme, which provides tailored support to Member States' authorities implementing environmental policy and legislation, a Danish waste

⁽⁵⁾ <https://refoodlabel.dk>

⁽⁶⁾ <https://stopwastingfoodmovement.org>

⁽⁷⁾ <https://foodsharingcph.org>

⁽⁸⁾ <https://eatgrim.com>

organisation has conducted study visits to Belgium to learn how to create repair and reuse networks⁽⁹⁾.

The Aarhus area waste management organisation supports reuse in its recycling centre, REUSE, where people can leave things they do not use any more and pick up used items they need. Volunteers also host exhibitions, events and courses on waste and recycling. Depending on the season, citizens can come by and fix their bike, for example. The centre has 300-350 visitors a day and a yearly turnover of approximately 500 tonnes of objects and furniture, saving about 550 tonnes of CO₂. Each year, about 50 school classes visit REUSE to take part in interactive learning. Moreover, students moving to Aarhus in August can get a free 'move-in box', including tableware, pots and pans. Cargo bikes are available to borrow for free when needed to transport bigger objects.

The smartphone app 'kleen hub' allows restaurants to lend their customers reusable stainless steel boxes and coffee mugs instead of using compostable or plastic food containers. Customers can borrow the boxes for up to 10 days at no cost unless the box is not returned.

A guide for reusing and recycling plastic consumer packaging has been published in a collaboration between the city of Copenhagen, some NGOs and industry. The guide contains considerations when choosing reuse as a business model, design parameters for reuse and reuse case studies⁽¹⁰⁾.

A collaboration between a major Danish brewery and four of Denmark's largest music festivals is replacing 2 million disposable plastic cups with reusable cups that can be washed and reused. Previously the festivals served drinks in more than 2 million disposable plastic cups. Now, the beverages are served in reusable cups that are collected after use. Then they are washed in a huge, mobile dishwasher that can wash 9 000 cups an hour, which allows the cups to be reused during the festivals.

The Knowledge Centre for Circular Economy in Construction guides building owners, contractors, advisers and municipalities on the recycling of construction and demolition waste and on problematic substances in rebuilding, renovation and demolition.

The country's advisory board on the circular economy has drawn up a number of innovative recommendations for the building sector, which are now being implemented. The following actions relate to reuse:

- additional information requirements for amounts of reused, recycled and recyclable materials and for undesirable substances in new buildings and large renovation projects from 2020, with a voluntary sustainability classification system for buildings becoming mandatory in 2025;
- a standardised, freely available digital building passport, plus a product database for suppliers with digital factsheets for building products;
- a selective demolition plan to identify materials and the content of hazardous substances, assess materials' recycling/reuse value and specify demolition methods⁽¹¹⁾.

⁽⁹⁾ <https://www.municipalwasteurope.eu/newsitem/denmark-belgium-taiex-eir-p2p-study-visit-experts-danish-municipal-waste-management-learn>

⁽¹⁰⁾ Network for circular plastic packaging. 2019 Design Guide. Reuse and recycling of plastic packaging for private consumers. <https://plast.dk/wp-content/uploads/2019/12/Design-Guide-Reuse-and-recycling-of-plastic-packaging-for-private-consumers-english-version-1.pdf>

⁽¹¹⁾ <https://www.oecd-ilibrary.org/sites/d1eaaba4-en/index.html?itemId=/content/component/d1eaaba4-en>

Best practice examples

Support for reuse at municipal recycling stations

Municipal recycling stations receive large amounts of waste, including furniture, textiles, building materials and electronics, that can be prepared for reuse and recycling. However, only a fraction of the items received are actually reused/recycled, as their appeal is in practice not strong enough for the potential next user. Thus, it is not always economically attractive for the municipal waste companies to prepare such products for reuse/recycling. In order to recover as much as possible with a practical value, some recycling stations train employees to assess the value of the products so that these employees can sort the saleable items for the station's own second-hand shops. Several recycling stations sort and clean many products before these go on to be reused. A number of recycling stations also repair incoming products (e.g. furniture and white goods), which are sold in their own thrift stores. Some recycling stations also have barter markets where customers can return products for reuse by other customers. Moreover, several municipal recycling stations collect for other operators, including charities, which then organise further recycling and reuse (e.g. textiles).

Food Sharing Copenhagen

Food Sharing Copenhagen is a volunteer-based organisation that distributes unsold food in Copenhagen. In 2019 its collective efforts helped save over 13 000 tonnes of food waste and feed over 16 000 people. Every week, volunteers collect surplus food from businesses, including bread and dry goods, that would have been thrown out and share it with hundreds of people.

The food-sharing events take place once or twice a week thanks to a significant number of volunteers. In contrast to most other similar social activities, Food Sharing Copenhagen was able to keep up its activities during the pandemic. Under its principles of unconditional sharing, Food Sharing Copenhagen does not make a distinction between those who are accessing the service based on need and those who are simply making an ethical choice.

Links to the circular economy

Waste prevention is an integral part of the comprehensive transformation towards a circular economy. It reduces not only the input of natural resources into the economy but also the efforts required to collect and recycle waste.

Approaches to improving circularity are often linked to successful waste prevention. The following table shows which circular strategies are explicitly integrated into the Danish waste prevention programme.

Topic	Addressed in the programme	Comments
Eco-design	Yes	For example, by supporting EU eco-design regulations
Repair, refurbishment and remanufacture	Yes	For example, guided tours are organised linked to some municipal waste centres' activities
Recycling	Yes	Recycling of municipal waste is covered in the Danish waste management law. Increased recycling of biomass and construction waste are foci in Denmark's circular economy action plan
Economic incentives and finance	Yes	For example, by assessing how waste prevention can be included in eco-modulated packaging fees
Circular business models	Yes	For example, multi-stakeholder platforms for business models aiming to prevent food waste throughout the food chain
Eco-innovation	Yes	For example, a project on construction with disassembly in mind
Governance, skills and knowledge	Yes	For example, by integrating waste prevention into the comprehensive school curriculum. Training in green procurement for public procurers