Country profile

# Overview of national waste prevention programmes in Europe

# Finland

2021

Photo: © Mario Cvitkovic from Pixabay

European Environment Agency

## General information

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| 1. | Name of the country/region | Finland |
| 2. | Coverage of the waste prevention programme (national/regional) | National (excluding the Åland Islands) |
| 3. | Type of programme (stand alone or integrated into waste management plan) | Integrated |
| 4. | Title of programme and link to programme | Kierrätyksestä kiertotalouteen. Valtakunnallinen jätesuunnitelma vuoteen 2023 (Finnish): http://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/160441/SY_01_18_FI_Kierratyksesta_kiertotalouteen.pdf?sequence=4&isAllowed=y<br>From recycling to a circular economy: National waste plan to 2023 (English): https://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/160889/SY_01en_18_WEB.pdf?sequence=1&isAllowed=y<br>Från återvinning till cirkulär ekonomi Riksomfattande avfallsplan fram till 2023 (Swedish): http://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/160443/SY_01_18_SE_Fran%20atervinning_till_cirkular_ekonomi.pdf?sequence=4&isAllowed=y |
| 5. | Duration of programme | 2017-2023 |
| 6. | Languages | Finnish, English, Swedish |
| 7. | Development process of the programme/revision | The current national waste management plan is valid until 2023. An update of the current programme was sent for consultation in October 2021 and is expected to be adopted at the beginning of 2022, thereby replacing the current plan |
| 8. | Budget envisaged for implementation of the project | No specific budget for the implementation of the programme is included in the programme |

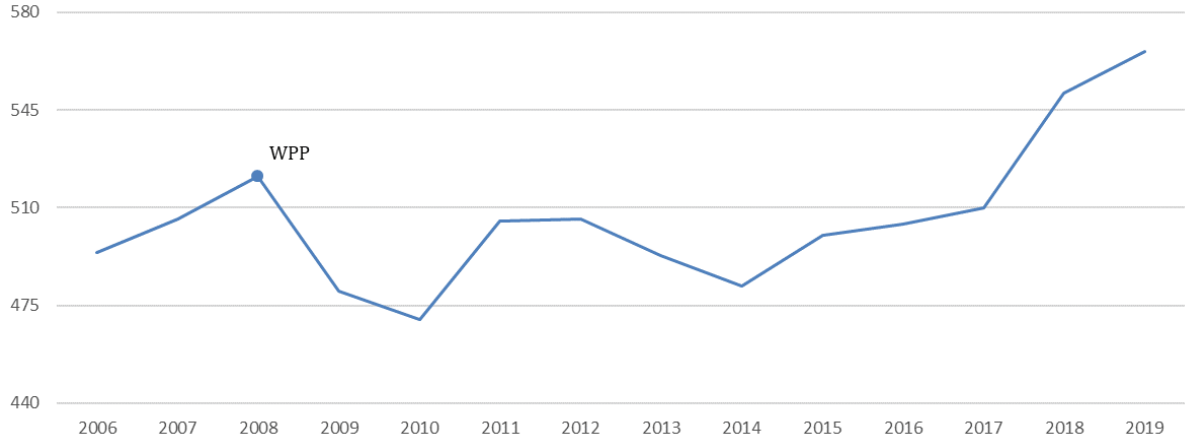
## Waste generation

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

*Municipal solid waste*

- The generation of municipal solid waste (MSW) per capita (see Figure 1) fluctuated during the period 2006-2019. After an initial increase between 2006 and 2008, waste generation per capita decreased for 2 years; however, this positive trend changed again and after 2010, the generation of MSW started increasing. Between 2011 and 2017, MSW generation stayed at approximately the same level, at 480-500 kg per capita per year. In the last 2 years, 2017-2019, MSW generation has risen steeply, reaching its highest value of 566 kg per capita in 2019.
- MSW generation per capita in Finland is above the European average, which was around 490 kg per capita per year (in 2019).
- The decrease in MSW generation after 2008 coincided with the implementation of Finland's first waste prevention programme. MSW generation is influenced by many factors, e.g. household expenditure, which also dropped sharply in 2008 ([1]) as a consequence of the global financial crisis.

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



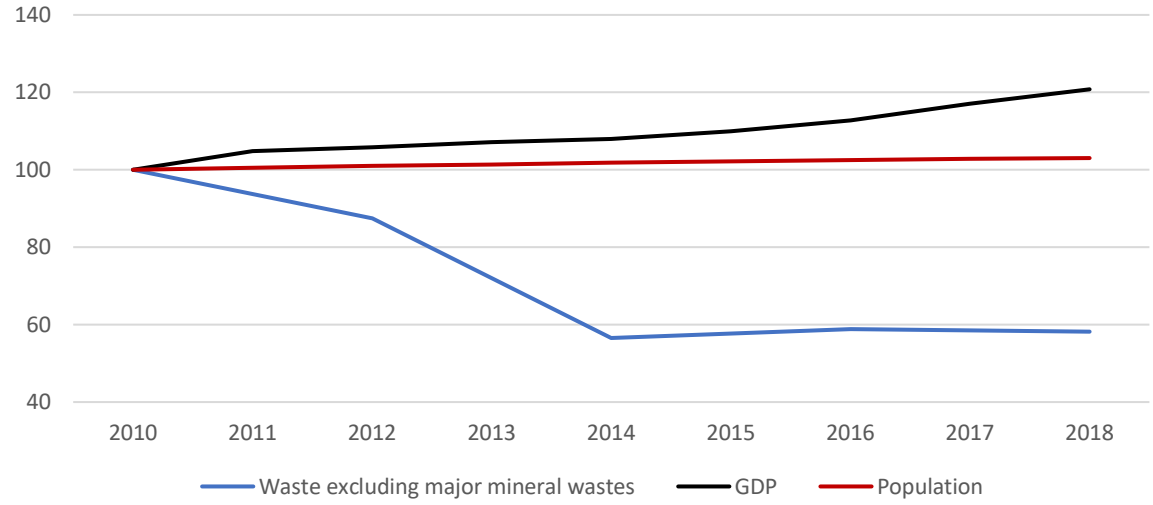

Note: WPP, waste prevention programme.
Source: Eurostat Circular Economy Monitoring Framework.

*Total waste*

- Finland's waste generation (excluding major mineral waste) decreased dramatically from 2010 until 2014 and remained steady at the lower level in the following years (see Figure 2). During the same period, 2010-2018, Finland's GDP grew. Some issues around waste data collection might also explain this development.
- Although a longer period is needed to draw solid conclusions, since 2010, Finland seems to be on track to (at least relatively) decouple total waste generation from economic growth.
- Finland's population grew only slightly during the same period, and a link between total waste generation and population growth cannot be observed.

([1]) https://data.worldbank.org/indicator/NE.CON.PRVT.KD?end=2019&locations=FI&start=2006

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




Source: Eurostat.

## Waste prevention programme

*Objectives and priorities*

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| 1. | Waste prevention objectives of the programme: quantitative objectives (waste reduction) and qualitative objectives (reduction of hazardous substances/environmental impacts) | • Relative decoupling of GDP from municipal waste generation<br>• Increase reuse of packaging<br>• Permanent decrease of single-use plastics<br>• Halving food waste generation by 2030<br>• Increase reuse of electrical and electronic equipment (EEE) and decrease its content in municipal waste<br>• Reduce content of hazardous components in products<br>• Decrease waste from construction |
| 2. | Sectors covered | • Other industrial sectors<br>• Households<br>• Energy sector<br>• Agriculture and forestry<br>• Private service activities, hospitality<br>• Public services |
| 3. | Priority waste types | • Household/municipal waste<br>• Packaging<br>• Single-use plastics<br>• Organic waste/food waste<br>• Construction and demolition waste<br>• Waste electrical and electronic equipment/batteries |
| 4. | Target groups | The new programme addresses actions in public institutes, households and industry |

*Targets, indicators and monitoring*

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| 1. | Indicators proposed | The draft national waste management plan contains general indicators and indicators for specific waste streams.<br>Indicators relating to waste prevention are:<br>• generation of total waste per industrial sector<br>• generation of hazardous waste per industrial sector<br>• municipal waste generation (kt/year) and generation per capita (kg/capita and year)<br>• development of municipal waste generation in relation to the development of GDP<br>• total waste generation in construction<br>• reuse of electrical equipment<br>• reuse of specific product groups (indicator to be developed based on the guidance from the European Commission and is currently under development) |
| 2. | Quantitative targets | • Halving food waste generation by 2030 |
| 3. | Monitoring of programme | • The progress of the measures will be mapped both midway in 2024 and at the end of the programme in 2027<br>• Quantitative indicators will be collected on a yearly basis |
| 4. | Evaluation of the programme | The implementation of the programme is currently under evaluation with a view to updating it in early 2022. The mid-term review in 2024 will summarise possible actions that have not yet been launched. It will also look at the progress of digitalisation and data quality through indicators to be decided at a later stage, such as the development of system availability, the number of data interfaces used or the number of deployments of the digital system for environmental permits and surveillance in municipalities |

## Prevention measures

| Prevention measures implemented in accordance with Article 9 of the Waste Framework Directive | |
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| Promote and support sustainable consumption models | • The **Keino** competence network for sustainable innovative procurement, implemented by the Finnish government (www.hankintakeino.fi), supports public procurers in making sustainable procurements through training, demonstrations, etc. Product group-specific criteria are developed in cooperation between **Keino**, procurement units and companies<br>• Public procurement units are encouraged to implement the Procurement Finland strategy and the objectives and measures for ecologically sustainable procurement<br>• Several organisations, e.g. the Finnish Consumer and Competition Agency, the Consumers Union and the Finnish Innovation Fund, Sitra, have developed training and educational materials on sustainable consumption directed at consumers<br>• The Jakamistalousinfo website (https://jakamistalousinfo.fi/en/frontpage) began in December 2018 and contains information and instructions in Finnish, Swedish and English for sharing economy service users and providers. It is supported by the Ministry of Employment and Economic Affairs |
| 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 | • Public organisations will stop procuring and using dishes served in single-use plastic containers |
| Target products containing critical raw materials to prevent those materials becoming waste | • Finland will support the development of the circular electronics initiative included in Europe's circular economy action plan at the EU level<br>• Governmental support for development and demonstration will be increased to keep critical raw materials in the circular economy loop<br>• Operational guidelines for waste collectors will be created to better enable reuse and preparation for reuse of EEE. Equipment should be handled with care during collection, storage and transport |
| 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 | • Prepare zoning guidelines for planners to take into account the regional needs of the circular economy so that reuse, recycling and other recovery are as close as possible to where the |

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

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| and furniture, as well as packaging and construction materials and products | material is generated and used. Adequate areas should be reserved in agglomerations for regional reuse and recycling points for residents<br>• Analysis of economic policy instruments to diminish waste generation and increase reuse and repair services and sharing economy services will be carried out<br>• The upcoming new period of the food industry's commitment to material efficiency will include increased substitution of single-use packaging<br>• The government is to promote experiments on new services enabling more reuse, especially in sparsely populated areas<br>• Producer organisations are to define the new basis for levies on producers in such a way that they encourage product reuse, etc. They are also to develop operating models that enable and promote reuse and form a regionally comprehensive network with actors providing reuse services<br>• Collection of electronic products will be improved to support reuse<br>• Support for pilots and research on promoting reuse over recycling of EEE, e.g. investigating how leasing activities can affect the life cycle of EEE<br>• Develop national demonstration practices for the reuse of demolition materials by building on a previous project that investigated the safety of demolition materials in various applications. The aim is to promote product approval practices for key demolition material fractions and building components<br>• Develop the reuse value chain in renovation projects by municipalities and enhance the delivery of usable construction products and parts for reuse in collaboration, e.g. with recycling centres and/or workshops. Employ digital tools to increase the networks between and the sales channels of recycling centres |
| 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 | • Create guidelines for reuse operators to support how they manage complex legislation, e.g. on electrical equipment repair, warranty and having the necessary operation permits. When possible, quality classification or standards should be developed for reusable equipment. Guidance on legislation and practices in reuse should be compiled. In the same context, the need for a professional qualification in dismantling, repair and reuse of waste EEE will be clarified<br>• Increase consumer information on life-extending measures, repair services and the possibility of handing over and acquiring products for reuse. In addition, organise a repair day for EEE, to be |

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| | potentially organised and managed by authorised repairers and waste management organisations |
| Reduce waste generation in processes related to industrial production, extraction of minerals, manufacturing, construction and demolition, taking into account best available techniques. | • Carry out a detailed study on different approaches to reduce the amount of waste generated by mining and to enhance the recovery of valuable materials from extractive waste<br>• Develop measures to promote the circular economy for extractive waste and support related pilot projects<br>• Undertake several initiatives on reducing construction and demolition waste |
| 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 | • The national roadmap on food waste prevention has been implemented and further developed<br>• Various education and awareness-raising campaigns, for instance through the Saa syödä! (May eat!) website (www.saasyoda.fi) developed in partnership with public institutes, which contain versatile information and guidance to reduce food waste and is directed at consumers, schools, etc. |
| Encourage food donation and other redistribution for human consumption, prioritising human use over animal feed and reprocessing into non-food products | • Unsold food in retail shops is directed primarily to organisations that distribute food aid for human consumption. The food aid guide by Finnish Food Safety has clarified the practices and made it easier to direct food to charities. Many stores have agreed to work with charities in their area to provide unsold food to those in need. In all, the retails sector has hundreds of partners in food distribution |
| 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 | • Update guidelines on contaminants in sealants and provide guidance on taking these substances into account in contaminant surveys in demolition to better enable reuse and recycling of construction products and material (e.g. short-chain chlorinated paraffin, persistent organic pollutants)<br>• Increase research and demonstration funding for the removal of harmful substances from the cycle, especially for EEE |

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| Reduce the generation of waste, in particular waste that is not suitable for preparing for reuse or recycling | • Design plans for significant demolition waste fractions that are currently under-used because of the risk of contamination by hazardous substances, i.e. wood, gypsum boards, windows and mineral wool |
| 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 | • The plastic roadmap of Finland, approved in 2019, includes 10 key actions and several measures to reduce plastic waste, replace plastic and increase its reuse<br>• Cities and municipalities, event organisers and other agents are challenged to introduce solutions that reduce littering and unnecessary consumption, including improving waste collection and the instructions for this, ensuring anti-littering and good recycling practices at public events, and restricting smoking on public beaches<br>• The EU Single-use Plastics Directive will be implemented |
| 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 | • The third part of the maritime operational programme is currently being prepared. The draft programme sets out 18 measures to prevent marine litter. Measures are presented, e.g. to accelerate the management of abandoned fibreglass boats, to reduce the littering of coastal areas commonly used for recreation through education and provision of appropriate waste containers, to develop waste and sewage management in marinas and boating, and to reduce plastic discharge from artificial turf, road traffic and agricultural plastics<br>• The plastic roadmap of Finland includes measures to reduce plastic waste, replace plastic and increase its reuse<br>• Specific single-use plastic products will be banned |
| Develop and support information campaigns to raise awareness about waste prevention and littering | • One measure in the plastic roadmap is a set of campaigns giving wide and constant visibility to the plastics challenge, highlighting solutions and players, and raising awareness among consumers and the general public of the consequences of our actions and how each and every one of us can make a difference<br>• The use of Finnish tap water instead of bottled water is promoted, e.g. by encouraging cities, hotels and restaurants to offer tap water |

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

## Food waste prevention

*Food waste generation*
About 400-500 million kilogrammes of food is lost in Finland every year. The amount represents about 15 % of the total edible food. Of this about 107-137 million kilogrammes is generated in households, equivalent to approximately 20-25 kg per capita per year.

*Measures to prevent food waste*
At the beginning of 2021, the Finnish food waste roadmap (https://www.luke.fi/ruokahavikkiseuranta/tiekartta/) was published, which is a plan for reducing food waste in Finland. The food waste roadmap forms part of the national waste management plan. The roadmap actions are grouped under the following six headings: (1) effective policy instruments, (2) education and knowledge for a more sustainable society, (3) increasing sustainability by transforming practices, (4) technology for smartness, new products and business models, (5) research and development and monitoring of losses, and (6) together more.

The Natural Resources Institute Finland and Ministry of Agriculture and Forestry are responsible for promoting and monitoring the food waste roadmap. The actions are directed towards all actors in the food chain. For instance, food donation in the retail sector has been boosted by widening networks. In Vantaa city, the centralised distribution of food for waste has been developed in cooperation with the city, the parish association, shops and industry. Food is collected daily from nearby shops and taken to a collection point, where products can be quickly distributed to organisations. This saves resources for small organisations, which often rely on volunteers, and avoids unnecessary driving.

For a more comprehensive mapping of country efforts to prevent food waste, please visit the European Commission's Food Loss and Waste Prevention Hub.

## 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*
Various measures to support reuse are already included in the draft of the new Finnish waste prevention programme draft, e.g. support for local reuse centres or guidelines for public procurement based on second-hand products.

The safety and health issues of demolition materials in various applications have been investigated and the work will continue to promote product approval practices for key demolition material fractions and building components. This will include developing national demonstration practices for the reuse of demolition materials. Moreover, the Ministry of the Environment published three guidebooks on increasing the effectiveness of the reuse and recycling of demolition materials and removing harmful substances from circulation.

The project CircHubs ([2]), run by the Finnish Environmental Institute, analysed reuse in Finland and reuse-related business opportunities in Finland. Particular challenges are attitudes towards used goods, logistics, economic viability and high labour costs. Various new business models relating, for example, to the sharing economy were examined to make the purchase of used products easier, cheaper or more fashionable than previously. Based on the analysis, recommendations for enhanced networks were made.

([2]) https://circhubs.fi/in-english/

Reusable textiles are currently recycled in Finland by a range of private charities and clothes shops. These organisations have set up collection sites where individuals can take clothes, shoes and other textiles to be sold second hand or donated in Finland or abroad. Collection sites are mostly managed by three organisations, namely UFF, Fida and the Finnish Red Cross, which have an extensive network of collection points distributed across the country. All three organisations have collection sites in many municipalities, and those for reusable textiles are mainly located in population centres, easily accessible on foot or by bike. Some 50 % of Finns live within 1 km of the closest textile collection point.

Publicly organised regional collection and recycling of waste textiles is planned to start in 2023, 2 years earlier than the Waste Framework Directive requires. Furthermore, a large waste textile refinery is planned to be in operation in Finland by 2023.

## Best practice examples

*The civic amenity centre in the Helsinki area*

The Helsinki Metropolitan Area Recycling Centre is a non-profit company founded in 1990 with the aim to reduce resource consumption, increase environmental awareness and increase opportunities for participation and employment.

The recycling centre has nine recycling stores in the Helsinki metropolitan area and a nationwide online store. It offers a wide range of environmental training and consultancy for residents of the Helsinki metropolitan area, professional educators, companies and communities.

The recycling stores sell recycled goods donated by the townspeople, on-site remanufactured or recycled products and handicraft materials, warranty-serviced household appliances, bicycles and EEE. The centres' activities include the service and repair of donated electrical equipment and bicycles, and remanufacturing of clothing, accessories and furniture.

The centre also borrows trailers and lorries to provide pick-up services for bulky items. Twice a year, lorries circulate in the city on a specific schedule and citizens can bring used, still functioning items to them. The centre also provides environmental education for children and education professionals, as well as for companies and communities. Social impact is also created by offering unemployed jobseekers fixed-term jobs and support for further employment. The centre also participates in several publicly funded waste prevention projects, which recently included 'Export of know-how in environmental education to China' and 'Business cooperation model for reuse'.

*Reuse of excavated soil from several construction sites*
The removal of soils is common practice in the construction industry and soil makes up a significant fraction of the waste generated in construction. Reuse requires assurance of the absence of hazardous components and coordination between construction sites to match real-time supply with demand.

A new, green outdoor park was built in Helsinki to replace an uninhabited residential area built on top of an old landfill site with insufficient insulation. Considerable volumes of soil were needed for the construction and, following coordination between various construction projects, the demand was met with recycled soil: 60 000 $m^3$ of surplus aggregates from landscaping, 35 000 $m^3$ of mass-stabilised dredging spoil brought from a coastal residential area expansion site for terrain design and 25 000 $m^3$ of topsoil were collected from other construction projects in Helsinki and used as fertile earth for growing plants. This also used the soils' own seed banks. Moreover, crushed concrete from demolition sites and some of the area's own soil was also used to build the park. The benefits of soil reuse included savings of EUR 3.8 million, 400 000 litres of fuel and 1 000 tonnes of $CO_2$ compared with the soil material being delivered to external recipients and the topsoil procured from different suppliers ([3]).

*Circwaste*
Circwaste (https://materiaalitkiertoon.fi/en-US/Circwaste) is a 7-year LIFE integrated project that promotes efficient use of material flows, waste prevention and new waste and resource management concepts. The project runs from 2016 to 2023. All actions contribute to implementing the national waste management plan and waste prevention programme and directing Finland towards a circular economy. Circwaste comprises 20 partners and 10 funding organisations, is coordinated by the Finnish Environment Institute, and is largely funded by the EU LIFE programme.

The Circwaste project puts into practice demonstrations and pilot plants and carries out studies and trials related to resource efficiency solutions. Each of these actions brings concrete results, such as decreasing the amount of waste generated or material flows used, setting up new equipment or intelligent management systems, and creating new practices and strategies. The 19 cases focus on

([3]) https://www.materiaalitkiertoon.fi/en-US

municipal waste, industrial waste and by-products, construction waste, soils and contaminated land, the food system, etc. Some actions include counselling and education and facilitating industrial symbiosis. Furthermore, regional and municipal circular economy roadmaps have been built in Circwaste. The project focuses on five geographical areas: south-west Finland, Satakunta, central Finland, North Karelia region and South Karelia region. The demonstrations will take place in these areas.

In addition, increasing and supporting reuse is an important goal of the project. The aim is to establish a national network of organisations providing product reuse services and organising pilots for promoting reuse and lengthening product life cycles.

## 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 for improving circularity are often highly interlinked with successful waste prevention. The following table shows which circular strategies are explicitly integrated into the Finland's waste prevention programme.

| Topic | Addressed in the programme | Comments |
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| Eco-design | Yes | Support and impact supporting the EU Ecodesign Directive. Also, the plastic roadmap identifies measures to, for example, improve the recovery, recycling and product design of plastics |
| Repair, refurbishment and remanufacture | Yes | Several initiatives that focus on extending the use phase of products |
| Recycling | No | Recycling is covered in Finland's waste management law, and the recycling rate is an elementary part of the national waste management plan |
| Economic incentives and finance | Yes | Including by assessing how economic policy instruments can act as incentives for repair and reuse (fiscal instruments) |
| Circular business models | Yes | Supporting the sharing economy and facilitating reuse, especially of construction products, are some of the programme's initiatives |
| Eco-innovation | Yes | The plastic roadmap emphasises the need to develop innovation to decrease plastic waste. Support for innovations are also considered necessary to reduce construction waste |
| Governance, skills and knowledge | Yes | For example, by training public procurers in green procurement |