



# City of Oulu's Environmental Programme 2026

A Higher Degree of Environmental Friendliness  
26.6.2023



**OULU**



## What is being done and why

The Environmental Programme is one of Oulu City Strategy 2035 implementation programmes. The Programme aims at securing the good condition of the environment and ensuring the city's vitality. The basis of the Programme are the city strategy's focus areas and their policies as well as the city's agreements and commitments to promote environmental issues.

National and international agreements and policies are behind the commitments, the aims and actions of which are compatible with the city's actors. The Environmental Programme ensures the accomplishment of the policies and environmental objectives set in the city strategy.

The primary policy guiding the Environmental Programme is the Carbon Neutral Oulu 2035. The Environmental Programme sets the frame for the environmental objectives and development of action of administrative branches, public utilities, and city-owned companies. The Programme spans over the entire city organisation, reinforces the development of economic life, and guides the city's decision-makers, personnel, citizens, companies, and communities towards environmentally responsible action.



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# Introduction



## Context of the update

When the city of Oulu's Environmental Programme 2026 was being prepared, it was decided that its implementation would be evaluated by an external evaluator in 2022.

Gaia Consulting was chosen by a bidding process as the realiser of the mid-term evaluation and programme updating. The mid-term evaluation was realised in June–August 2022, and the Programme was updated in August–December 2022.

The evaluation addressed the progress of the Programme's implementation and the accomplishment of set objectives relative to implemented actions and their effects. The results of the mid-term evaluation were used in the updating of the Environmental Programme.

## Goal of the update

Based on the mid-term evaluation, the Programme framework (focus areas, aims, actions, indicators), was adjusted, and its contents were updated in full and by focus areas. The update also included the involvement of topic experts and decision-makers. A simple, clear, impactful and easily communicable entirety was created, and the continued utilisation of the Programme was ensured.

The goal of the programme update was not to make an entirely new Programme but to update its contents within the framework of the focus areas lined by the new city strategy and according to the results of the mid-term evaluation to re-direct the Programme for the remaining term.

The programme update included a total of five city expert workshops and one for decision-makers. Additionally, the mid-term evaluation was presented to the Urban Environmental Committee and the Environmental Programme's Steering Group and the programme update was presented to the Environmental Programme's Steering Group, the city's executive group, the Community Board, and the City Board.

A wide range of experts and elected officials took part in the mid-term evaluation and the programme update process.

A total of 80 city experts and 20 decision-makers were involved.

The updated Environmental Programme was accepted by Oulu's City Board 26.6.2023.

# City Strategy Focus Areas guide the Environmental Programme's Focus Areas



*Oulu2026 strengthens ability to attract and retain talent*  
*Oulu will be carbon-neutral in 2035*  
*Oulu has impressive services, sustainable economy and healthy personnel*



**Focus Area 1**

**Our City Develops Sustainably**

*Oulu is Finland's most business-friendly international growth centre*  
*Oulu will be carbon-neutral in 2035*  
*Oulu has effective services, sustainable economy and healthy personnel*



**Focus Area 2**

**We Act Resource-wisely**

*Oulu2026 strengthens ability to attract and retain talent*  
*Oulu will be carbon-neutral in 2035*  
*In Oulu, everyone has the possibility of living a healthy and safe life*



**Focus Area 3**

**Strength from Nature**

*Education builds a sustainable and international Oulu*



**Focus Area 4**

**We Promote Environmental Responsibility**



### Focus Area 1

## Our City Develops Sustainably

- Sustainable City Planning
- Environmentally Friendly Mobility
- Carbon Neutral Construction



### Focus Area 2

## We Act Resource-wisely

- Energy Efficiency
- Carbon Neutral Energy Production
- Functional Circular Economy



### Focus Area 3

## Strength from Nature

- Nature Accessible to Everyone
- Adaptation to Climate Change
- A Safe, Healthy, and Comfortable Living Environment
- Diverse Nature and Good Ecological Condition of Waterways



### Focus Area 4

## We Promote Environmental Responsibility

- Environmentally Responsible Citizens
- Sustainable Practices in City Administration
- Sustainable Procurement



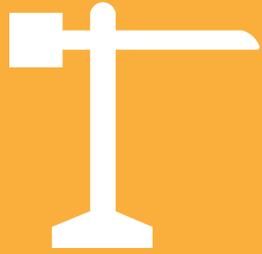
# Environmental Programme Updated Content

The Environmental Programme consists of four focus areas.

Each focus area includes 3-4 objectives

The Programme especially responds to the following Sustainable Development Goals of the UN Agenda 2030.





Focus Area 1

# Our City Develops Sustainably



# Sustainable City Planning



## Aims

Oulu's city planning considers the principles of sustainable development and the city's long-term development. The city offers housing possibilities in urban environments and in rural areas by ensuring the vitality of local centres.

City planning emphasizes the most efficient sustainability actions aims at creating a city environment where sustainability covers and is supported by the city's buildings, infrastructure and conditions.



## Actions

City area planning and realisation support the creation of sustainable districts that provide for diversity in plot supply, housing types, functions and services.

The share of infill development will be increased considering the values of the cultural environment and developing greenspaces.

Construction outside the detailed plan areas is directed to the most appropriate locations by city land-use planning.

Density and location are considered in infill, new detailed plan area and working district development to ensure they support public transportation, pedestrian traffic and cycling.

The *Green Factor* tool is implemented in construction. Green efficiency is considered in urban area planning.

Services are directed to centres accessible by public transportation and other forms of sustainable mobility to decrease the need for individual car transportation.

The characteristics of local centres guide the development and diversity of services.

## Indicators

- The share of apartments constructed in detailed plan areas (%)
- The share of population in the Master plan's central areas (%)
- The share of infill development in grid plan area housing production (%) - goal 70 %
- The share of population living in dense areas (%)
- The share of population in central dense areas (%)
- The share of hectares utilising *Green Factor* in the detailed city plan areas per year. (%)
- Accessibility of services: daycare centres, schools, grocery stores, libraries (the share of residents living within 300m and 700m of such services) (%)



# Environmentally Friendly Mobility



## Aims

Oulu is an environmentally friendly city where sustainable mobility is attractive and accessible. Diversified service supply in close distance within easy to reach and sustainable, well-connected travel chains enable smooth mobility from door to door - year round.

The transportation system is developed to reduce the negative effects of traffic and to encourage the use of public transportation.



### Actions

Public transportation offering and service level is developed especially in areas with the highest user potential.

Pedestrian and cycling networks and cycling services are developed to increase year-round use.

An assessment report of efficient public transportation is compiled.

Promotion of land use that supports sustainable mobility.

The city enables the development of pedestrian mobility, cycling, driving, public and rail transportation and travel chains.

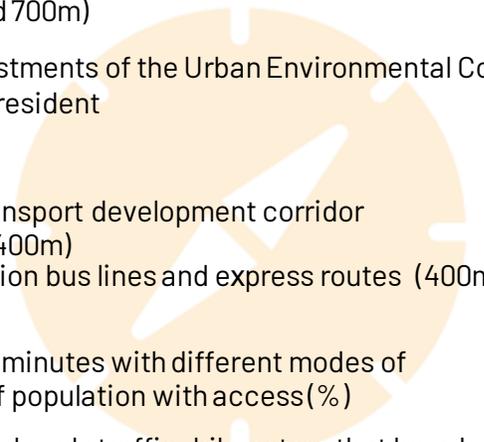
Improving the quality level of maintenance and upkeep of pedestrian and cycling infrastructure.

Implementation of the Sustainable Urban Mobility Plan.

Implementation of the city of Oulu's Parking Programme 2040.

### Indicators

- Total number of trips and trips per resident per year in public transportation
- Availability of bus stops (within 300m and 700m)
- The share of pedestrian and cycling investments of the Urban Environmental Committee's development investments (%) and € per resident
- Population within the efficient public transport development corridor (Linnanmaa-city centre-Kontinkangas, 400m)
- Population living near public transportation bus lines and express routes (400m)
- Access to the Oulu city centre in 15 to 30 minutes with different modes of transportation on weekdays, the share of population with access (%)
- Enhancing the condition of pedestrian and cycle traffic: kilometers that have been enhanced.
- Implementation of Oulu's Sustainable Urban Mobility Plan. Qualitative evaluation.
- Amounts of motor traffic, cycle, and pedestrian traffic in different points
- Mode of travel distribution according to national passenger traffic study in Oulu's city centre and regionally (%)
- Implementation of Oulu's Parking Programme 2040. Qualitative evaluation





# Carbon Neutral Construction



## Aims

In Oulu, all maintenance, construction, and demolition will strive for carbon neutrality and material saving without compromising on quality. Additionally, repairs are primarily recommended instead of new construction.

Public buildings act as examples of carbon neutral and sustainable construction solutions.



## Actions

Existing buildings are primarily repaired, enhanced, and maintained to prolong life spans

Carbon neutral construction is promoted in all city planning and plot allocation.

New guidelines are developed for building renovation and housing that aims for a higher quality than current regulations.

## Indicators

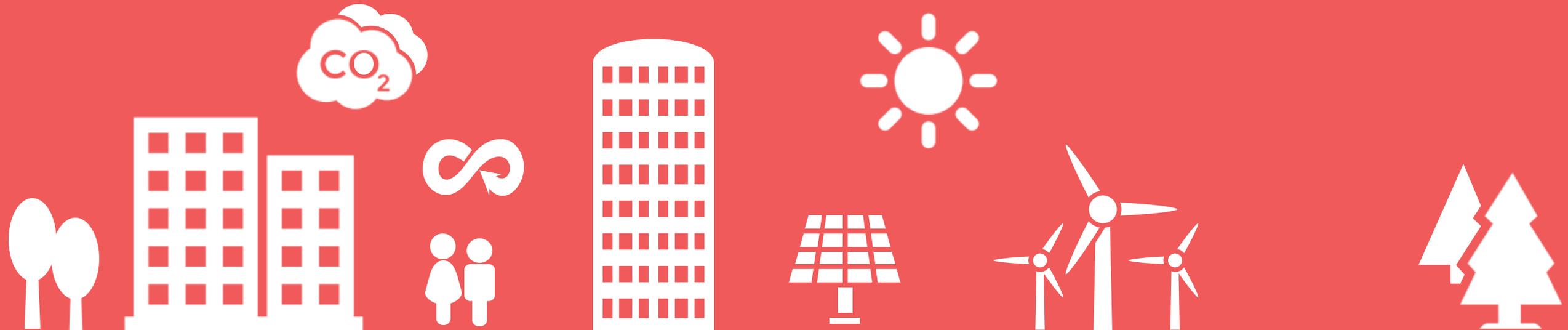
● Renovation permits per year / permitted square meters





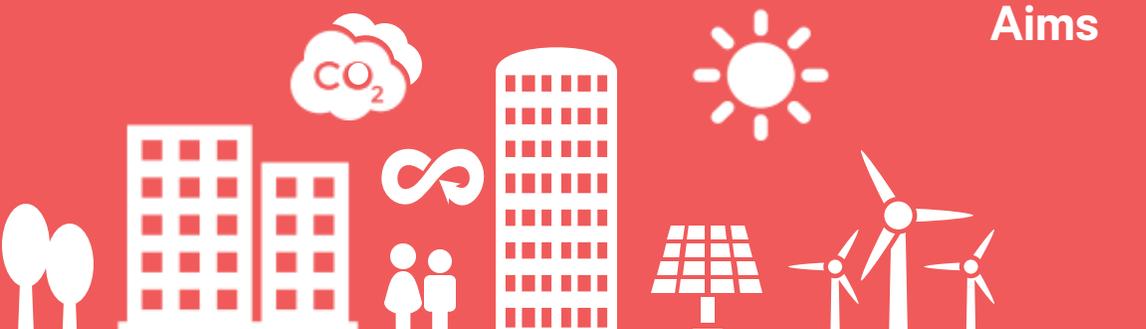
Focus Area 2

# We Act Resource-wisely





# Energy Efficiency



## Aims

Oulu will use energy efficiently regardless of circumstances. The city will lead the way and will make efficient energy consumption possible for citizens and companies.

Public buildings will act as pioneers in energy solutions systematically and on a long-term basis.



## Actions

The city's own energy consumption is reduced by at least 10.5% by 2025 from the 2014 rate according to the Efficient Energy Agreement. Preparations are made to join a new agreement.

The specific energy consumption of the city's properties is reduced and the implementation of efficient energy investments is ensured.

Guidance and instruction is offered to citizens and companies on energy efficiency and life cycle extension concerning construction, building use, and maintenance.

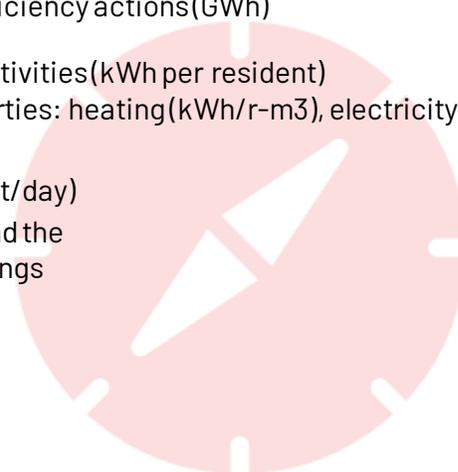
Digital solutions are used in reduction and monitoring of property and rental housing energy consumption(including demand response)

Use of waste heat is increased and its utilisation possibilities are taken into account in regional planning.

The life cycle cost of projects are taken into account in the city's investment decisions.

## Indicators

- Energy savings achieved with energy efficiency actions(GWh)
- Energy consumption of the city's own activities(kWh per resident)
- Specific consumption in the city's properties: heating(kWh/r-m<sup>3</sup>), electricity (kWh/r-m<sup>3</sup>), water(l/r-m<sup>3</sup>)
- Water consumption in housing(l/resident/day)
- Efficiency ratings in new construction and the theoretical energy consumption of buildings





# Carbon Neutral Energy Production



## Aims

The greenhouse gas emissions of energy production are reduced versatily and systematically. Renewable energy is produced and used widely in different hybrid systems.

Oulu will be carbon-neutral by 2035. Therefore, energy production will no longer produce carbon emissions that cause climate warming or the emissions will be compensated with carbon sinking or recovery.

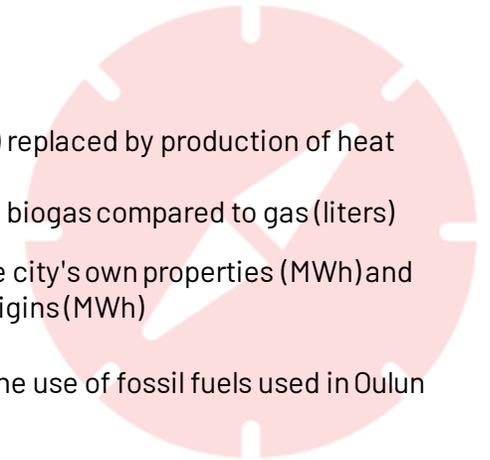


## Actions

- Greenhouse gas emissions are reduced by increasing the share of renewable energy sources and new forms of energy production.
- Opportunities for decentralised energy production are increased. Low grade heat production is encouraged, and two-way production is promoted.
- Biogas business is increased and expanded. City's own electricity and heating production, biofuel production, and liquefied biogas distribution are increased.
- Portion of renewable energy sources in the city's own properties is increased and the share of fossil fuels is decreased considering the security of supply.
- Oulun Energia's path to carbon neutrality is implemented.
- Use of peat as an energy source is given up in a controlled manner.

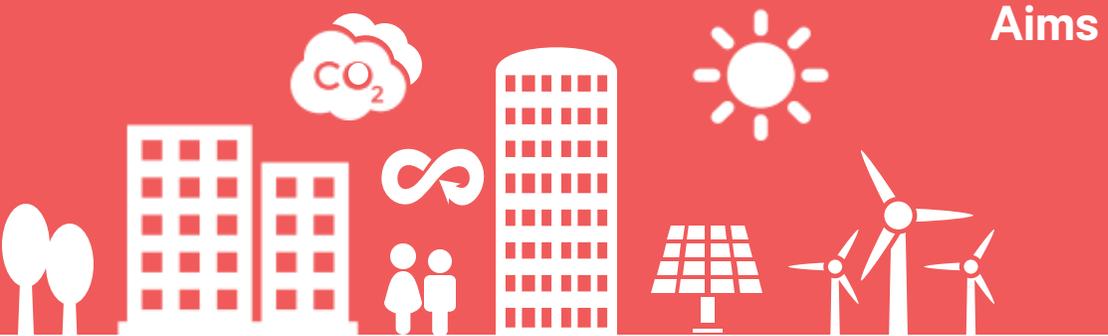
## Indicators

- The shares of different energy sources in total energy procurement and district heat production
- The amount of fossil fuels (million litres) replaced by production of heat and energy by biogas.  
Amount of transport fuel produced with biogas compared to gas (liters)
- Amount of renewable energy used in the city's own properties (MWh) and the amount of energy from fossil fuel origins (MWh)
- The amount of carbon emissions from the use of fossil fuels used in Oulun Energia's energy production





# Functional Circular Economy



## Aims

Oulu acts according to the principles of circular economy, bringing about new businesses and cooperation. In circular economy, materials are used efficiently and sustainably and remain in circulation safely and long-term. Products are shared, rented, repaired, and recycled. Servitisation is integrated to circular economy.

Objectives and actions defined in Oulu's Circular Economy Roadmap have been adopted widely and the courses of action and are a part of daily life.

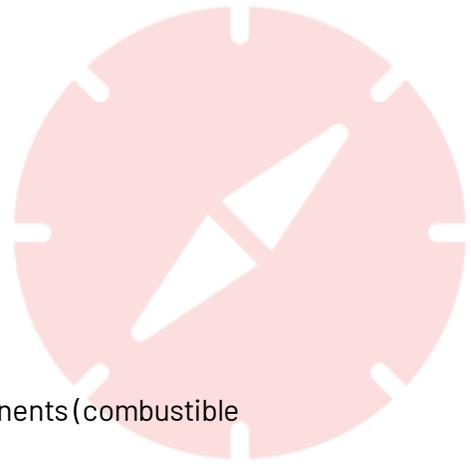


## Actions

- Circular Economy Roadmap actions are implemented as planned.
- City planning creates the preconditions to the use of surplus waste and recycled material. The basis of the planning is alternative comparison that is based on mass economy observation and emission calculation.
- Material flows and mass flows emerging from city activities are investigated and a control and utilisation plan for the largest components is composed (MASSA project)
- Sharing economy and joint use are promoted by developing libraries, community spaces etc. as centres of sharing economy and encouraging for communality.
- Positive attitude toward circular economy is promoted with positive, exciting, and open communication.

## Indicators

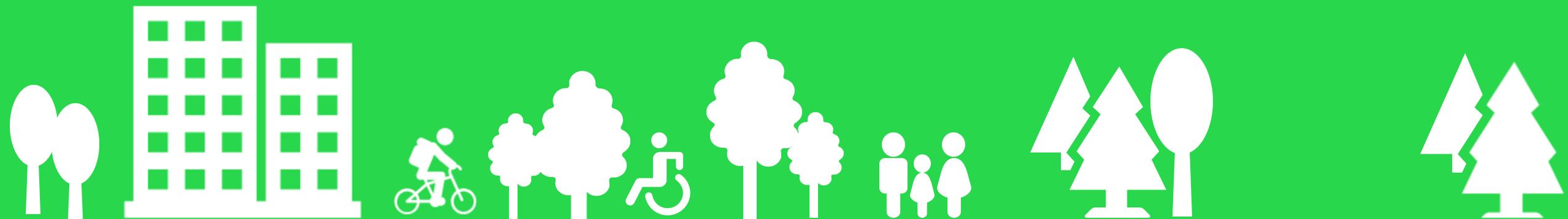
- Implementation of the Circular Economy Roadmap actions. Qualitative evaluation.
- Utilisation rates of diverse waste components (combustible waste + separately recycled biowaste)





Focus Area 3

# Strength from Nature





# Nature Accessible to Everyone

## Aims

Oulu is an environmentally friendly city that considers recreational values and ecological network quality, accessibility, quantity, and green connections in all land use.

Nature is present in all neighborhoods in Oulu.\*



### Actions

The recreational possibilities in local greenspaces, recreational areas and waterways are developed.

The reachability of outdoor recreational trails are enhanced with sustainable modes of mobility and the sufficiency of accessible routes is ensured.

The coverage of natural networks is reinforced and the preservation of main green connections is secured.

Access to nature is secured in the planning of built environments.

### Indicators

- City of Oulu's allocated and appropriation of funds for the upkeep of greenspaces and recreational areas (€ per resident). The aim is 2€ per resident.
- The share of the population nearby lit outdoor recreational trails (300m and 700m)
- The share of the population within 300m from a greenspace of 1,5 ha



\*What is considered nature in practice needs more accurate definition from the city. For now: Nature means a living environment, including surface of the earth and waterways and atmosphere with their flora and fauna, that has been altered only slightly or not at all by humans.

Kielitoimiston sanakirja. 2022 Kotimaisten kielten keskus ja Kielikone Oy. Accessed 15.11.2022: <https://www.kielitoimistonsanakirja.fi/luonto>



# Adaptation to Climate Change

## Aims

Oulu's urban environment, including land use, buildings, and ecosystem services among other things, is designed to be climate resilient.

Environmental solutions slow down climate change and at the same time we adapt to the impacts of climate change.



### Actions

Risk analysis and adaptation plans for extreme weather events will be kept up to date. Adaptation actions are implemented systematically based on climate plans and assessments.

The Action Plan for Runoff Water will be implemented emphasising natural solutions.

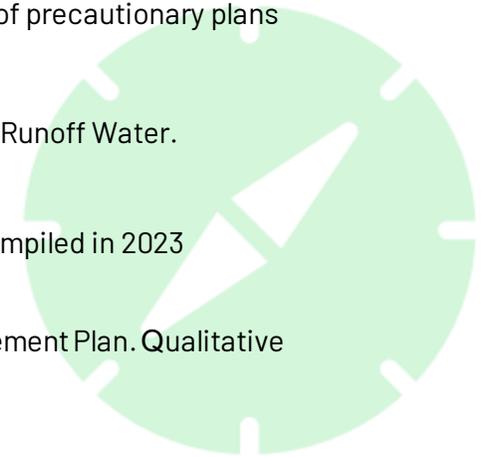
A climate road map is compiled that specifies the courses of action in adapting for climate change.

Implementation of the Forest Management Plan. Thinning of forests is handled in time and trees are kept healthy.

Promotion of environmentally friendly cultivation methods.

### Indicators

- Implementation and up-to-dateness of precautionary plans
- Implementation of the Action Plan for Runoff Water. Qualitative evaluation.
- The city's Climate Road Map will be compiled in 2023
- Implementation of the Forest Management Plan. Qualitative evaluation.





# A Safe, Healthy, and Comfortable Living Environment

## Aims

The quality of Oulu's living environment is improved and maintained to advance the well-being and health of people and nature.

City planning and implementation consider matters such as noise, air quality, and the condition of land areas and waterways.



## Actions

Quality control of renovation and maintenance is used to promote the healthy and safe construction of buildings.

The health and safety of built living environments are preserved with anticipatory, well-timed and targeted maintenance.

Noise and ground vibration disturbance prevention with land use and traffic planning. Implementation of the Noise Abatement Action Plan.

Good quality of indoor air in city properties is maintained by utilising real-time measurements.

Contaminated land areas are purified favouring sustainable restoration methods.

## Indicators

● Number of targets of indoor air task forces

● Air pollution levels

● Implementation of the Noise Abatement Action Plan  
● Number of residents exposed to noise





# Diverse Nature and Good Ecological Condition of Waterways

## Aims

In Oulu, the conservation or improvement of biodiversity, sufficient greenspaces, and good condition of waterways is considered in all land use planning.

Biodiversity means the spectrum of nature, species, and genes that are essential to the city, its citizens, and sustainable business activities.

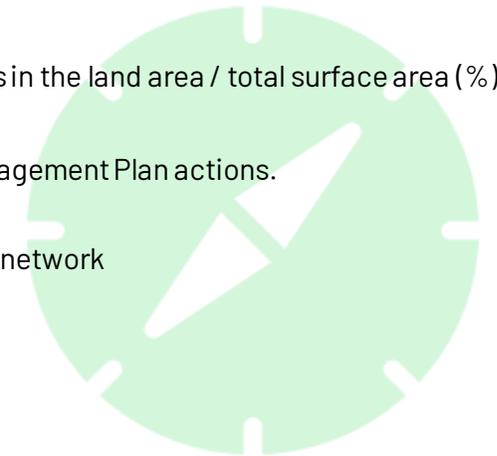


## Actions

- Implementation of actions outlined by the LUMO report.
- Nature is restored according to EU's and other national agreements.
- Implementation of the Waterways Management Plan.
- The sewer network is expanded and renovation is intensified.
- The diffuse pollution of waterways is reduced and the condition of waters is enhanced by considering the waterways in land use and restoration projects.
- Nutrient load of agriculture is reduced by encouraging environmentally friendly methods.
- Efficient sewage treatment helps improve water quality.

## Indicators

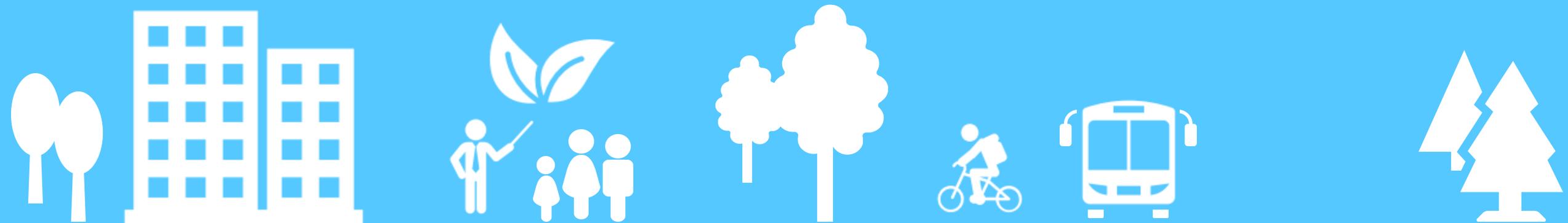
- Implementation of the LUMO report and observation of the actions  
The share of old forests (%)
- The share of nature conservation areas in the land area / total surface area (%)
- Implementation of the Waterways Management Plan actions.  
Qualitative evaluation.
- Percentage of bilge water in the sewer network
- Ecological condition of surface waters
- Total load of waste water, BOD and phosphorus (g/resident/day)





Focus Area 4

# We Promote Environmental Responsibility





# Environmentally Responsible Citizens

## Aims

In Oulu, the citizens, companies, and communities are aware and understand the effects of their actions towards environmental objectives.

The city encourages and guides the residents and enables sustainable life.



### Actions

The evaluation of environmental impacts and life cycle cost analysis are adopted in the planning and decision-making of all significant projects.

The city leads by example; informs and provides guidance to residents, companies and communities to encourage environmentally responsible behaviour.

Promotion of network cooperation between the city and other actors.

Early childhood education and care and education units are developed to act as sustainable future learning environments

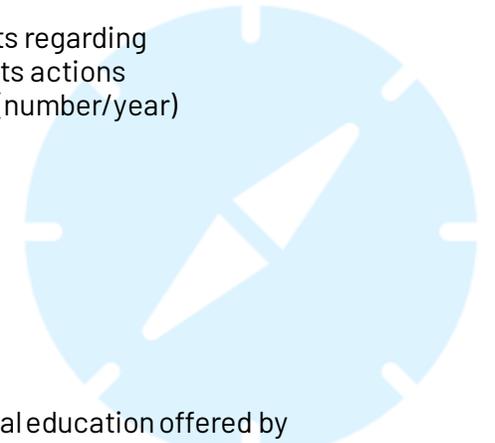
Learning Stream for Sustainable Future in Oulu guides children, young people and people working with them towards a sustainable lifestyle.

### Indicators

● Number of significant projects where the evaluation of environmental impacts and life cycle cost analysis were realised in their planning and decision-making

● A resident survey (yes/no), and its results regarding programme awareness and success of its actions  
Number of communication campaigns (number/year)

● Eco-Schools and daycare centres  
Number of participants in environmental education offered by Timosenkoski Nature School, Alaköoki, and Heikinharju Nature Daycare





# Sustainable Practices in City Administration

## Aims

Sustainable practices and environmental awareness are an integral part of daily life in Oulu.



### Actions

Eco support activity as a model to increase sustainability within the city organisation is continued and developed further

Service and freight transportation is intensified and pooled to optimise logistics.

Sustainable food supply is promoted by, for example, increasing the portion of local ingredients in meals produced and ordered by the city. The amount of food waste is reduced.

Portion of zero-emission and low emission driving power in the city's transportation is increased.

The potential for remote work and online meetings is utilised. Environmentally friendly modes of transportation are used for travel.

City premises are designed to be multifunctional and the utilisation rates will become higher. Unnecessary premises are disposed of.

Environmental competence of city managers, personnel, and employee representatives and understanding of their work's relation to the objectives of sustainable development is increased.

City personnel are encouraged to commute by bike, by foot, or by public transportation.

We act and share our knowledge in local, national, and international networks.

### Indicators

● Number and positions of eco support persons

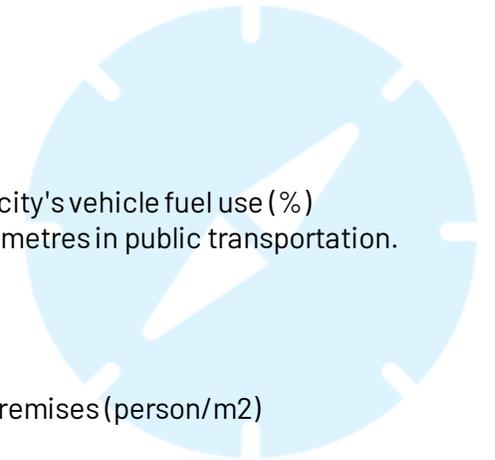
● Costs of service and freight transport

● The share of zero-emission fuels in the city's vehicle fuel use (%)  
Amount and share of zero-emission kilometres in public transportation.

● Number of personnel / number of city premises (person/m2)

● Number of environmental training courses arranged for managers, personnel, and employee representatives

● Number of employees using the employee bicycle benefit





# Sustainable Procurement

## Aims

Oulu is a procurement professional making environmentally responsible procurement/purchases.

The city has specified procurement criteria that are monitored and measured.



### Actions

- Procurement supports Oulu's Environmental Programme and the target of carbon neutrality.
- Procurement processes include the assessment of need, environmental impacts, and life cycle costs.
- The environmental criteria and the obligation to follow them are included in all offer requests and contracts. The environmental criteria must either be set as a minimum requirement or given significant weight in selection.
- The environmental criteria are attempted to be fulfilled in procurement. The dismissal of the criteria must be justified.

### Indicators

- Procurement agreements that promote energy efficiency, number and share
- Procurement agreements that promote environmental solutions, number and share





# Implementation and Management of the Environmental Programme

The following policies are based on the decisions made in workshops for the Environmental Programme's updating process:

- 1) 19.9.2022 workshop for managers**
- 2) 9.11.2022 workshop for decision-makers**

To support decision-making, an impact evaluation is prepared on how the decision promotes or delays the achievement of the objectives lined in the Environmental Programme.

Decisions that are in conflict or delay the objectives of the Programme must be justified, and substitutive or compensatory actions must be pursued.

The life cycle effects of the investments will be considered in budgeting and decision-making regarding the objectives of the Environmental Programme.

The progress and overall effectiveness of the Programme should be evaluated regularly. The indicators are directed to the most significant actions.

Decision-making should also focus on actions that are visible in the daily life of Oulu's residents tangibly and promote the environmental friendliness of daily life.



# Roles of Different Actors in the Implementation of the Environmental Programme

## Implementation

Divisions of industry, public utilities, and city-owned businesses are responsible for the implementation of the Environmental Programme and reporting on the board and committee level.

## Monitoring and Development

The Environmental Programme's Steering Group is responsible for observing the Programme's implementation and development.

### Members of the Steering Group:

Marko Kilpeläinen, Urban and Environmental Services, chairman

Anna-Maria Levy, Urban and Environmental Services  
Ari Heikkinen, Central Administration

Sari Matinheikki, Central Administration

Tero Aho, Education and Culture Services

Pekka Seppälä, Building Control

Johan Alatalo, Public Utility

Jouni Lähdemäki, Oulu Waterworks

Sami Hirvonen, Kiertokaari Oy

Tarja Väyrynen, Oulun Energia Oy

Päivi Vähänikkilä-Kuronen, Oulun Satama Oy

Raimo Hätälä, Sivakka Oy

Janne Hietaniemi, BusinessOulu

Leena Tuuri, Environment Office of the Oulu Region

Jonna Hakala, Environment Office of the Oulu Region

Vesa Miettunen, Environment Office of the Oulu Region  
secretary

## Coordination and Reporting

Implementation of the Programme is communicated about regularly. A report of the Programme is presented annually to the City Board. Environmental economy figures are reported together with the city's year-end financial statements.

The annual report is compiled by Oulu Regional Environmental Office which is also responsible for the Programme's coordination and monitoring's development.

### Team in charge of updating the programme:

Anna-Maria Levy, Urban and Environmental Services

Sari Matinheikki, Central Administration

Jonna Hakala, Environment Office of the Oulu Region

Maarit Talvitie, Environment Office of the Oulu Region

Vesa Miettunen, Environment Office of the Oulu Region

Leena Tuuri, Environment Office of the Oulu Region

Suvi Korpinen, Urban and Environmental Services

Mika Uolamo, Urban and Environmental Services



# Concepts 1/2

**Baana cycle network:** The main network of cycling super highways.

**BOD:** Biological oxygen demand (BOD) indicates the amount of oxygen microbes consume as they dissolve organic matter in aerobic conditions.

**CO<sub>2</sub>-eq:** CO<sub>2</sub>-eq, or carbon dioxide equivalent is a quantity that is used to measure different greenhouse gas emissions. To calculate carbon dioxide equivalent the greenhouse gas emissions are multiplied with their GWP factors (global warming potential) which portrays their effect in global warming in specific time frames.

**Efficiency Rating (E-factor):** Calculated total energy consumption of a building that is weighted with a factor that varies depending on the form of energy used. [kWh/m<sup>2</sup> per year]

**Ecosystem Services:** Ecosystem services mean direct and indirect benefits to people and other ecosystems caused by natural ecosystems. For example, formation of groundwater, maintaining of biological water balance, forest resources, carbon sink, recreation and camping.

**Eco-efficiency:** Eco-efficiency means activity that pursues the production of more services and well-being with less consumption of natural resources. Production and consumption is eco-efficient when the least amount of material and energy consumption produces the largest amount of output; resource consumption is minimised per production unit.

**Energy efficiency:** Energy efficiency is promoting the efficiency of energy consumption so that consumption is reduced.

**Climate proof planning:** focuses on mitigating of and adaptation to climate change. Planning considers the development of population density, regional growth, land use, and building features and examines the immaterial and material benefits offered by ecosystem services to control weather and climate risks among other things.<sup>1</sup>

**Sharing economy:** Forms of joint use that utilises sharing platforms in temporary use of items and services. Sharing economy promotes borrowing, exchanging, renting, recycling, and joint use of items and immaterial services instead of production, sale and ownership.<sup>2</sup>

**Circular economy:** Oulu follows the principles of circular economy, creating new business operation and cooperation. In circular economy, material is utilized efficiently and sustainably and they remain in circulation long-term and safely. Products are shared, rented, repaired, and recycled. Servitisation is a part of circular economy.<sup>2</sup>

**Central dense area:** Areas with population of at least 50 per hectare. Supports intensive public transportation. Measurement range is 250m grid of urban structure monitoring system (YKR).

**Nature restoration:** EU's restoration regulation carries out the biodiversity strategy agreed on by the member states. According to the restoration regulation, the member states must implement treatment actions in nature on bogs, forests, agricultural environments, fells, beaches, seas, and inland waters. Such actions can range from obstructing bog drainage, restoration of grazing in traditional grazing areas, restoration of river beds and creeks toward their natural state, and removal of spruce trees from groves.<sup>3</sup>

**Nature diversity:** Range of species and genes in ecosystems (natural capital) which is a vital part of well-being, economy, and society of humans. Diversity is crucial to ecosystem services, such as pollination, climate regulation, flood protection, fertility of soil, and the production of food, fuel, fiber, and medicine.<sup>4</sup>



## Concepts 2/2

**Material efficiency:** Material efficiency means producing more with less while preserving nature. The aim is to use the least amount of material, ingredients, and energy. All the while attempting to reduce the environmental impact of the product or service throughout its life cycle.

**Contaminated land areas:** Contaminated areas are areas where, as a result of human activity, there is a harmful amount of detrimental substances. The harmful amount of substances causes significant risk for the environment or health, reduction of comfort, or any other form of harm.<sup>5</sup>

**Resource efficiency:** Resource efficiency spans more efficient production of material and energy, recycling and reusing products or waste among other things. Resource efficiency in its wide definition includes the use of air, water, earth, and soil on top of material and energy.

**Resource wisdom:** Resource wisdom is the skill to utilise different resources (natural resources, raw material, energy, products and services, spaces, and time) with consideration and by promoting well-being and sustainable development.

**Efficient public transportation:** Public transport with high capacity and frequent intervals (quicker than 10min/h). For example, a superbuss or tramway that travels mostly on its own lane or in its own space removed from other traffic.<sup>6</sup>

**Densely populated area:** Areas with a population of at least 20 per hectare. A rough estimate for viable public transportation. Measurement range is 250m grid of urban structure monitoring system (YKR).

**Infill development:** Consolidation of city structure on already developed plots with extensions.

**Green Factor:** a tool that presents a plot or block's green efficiency, i. e. how much of the plot's area is different vegetation surfaces (such as trees, bushes, vines, green roofs) and solutions of delaying rainwater.<sup>7</sup>

**Green connection:** Greenspace that connects larger greenspaces into a network that serves people and recreation (recreational connections) and/or the movement and spread of animals and plants (ecological connections).<sup>8</sup>

**Eco-Schools:** An environmental education programme directed to daycare centres, schools, vocational schools, and free-time activity providers.

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