

SUSTAINABLE EVERYDAY LIFE IN JYVÄSKYLÄ

# RESOURCE-WISE JYVÄSKYLÄ 2040 PROGRAMME

JYVÄSKYLÄ





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# RESOURCE WISDOM IS SUSTAINABLE EVERYDAY ACTIONS

Here in Jyväskylä, resource wisdom means sustainable everyday actions. The fact that we take care of our environment and well-being together. We use energy sensibly and our spaces are flexible for many uses. It is easy to move smartly in our compact city. We consume less and recycle efficiently. Nature can be found and experienced nearby.

In order to mitigate and solve climate change, the depletion of natural resources and the loss of nature, sustainable everyday actions are needed. Many decisions are made in municipalities that can directly or indirectly reduce emissions from everyday life, mitigate the negative effects of operations on the environment and utilize natural resources in a sustainable way. However, the co-operation of the City's residents, businesses and communities is also needed: by working together, we create the conditions for sustainable well-being and a resource-wise lifestyle in Jyväskylä.

The Resource-wise Jyväskylä 2040 Programme signposts the resource-wise work of the City's industries, businesses and subsidiaries, from goals to implementation and monitoring. The programme is based on both national and international commitments and plans, as well as broad-based cooperation in the City organization.

The programme consists of seven themes and includes the goals for 2030, the monitoring indicators for their realisation and more than 180 concrete measures for the current council term. The Jyväskylä City council approved the programme update on 31 October 2022.

[Check out the programme more in detail](#)

You can follow the implementation of the actions up-to-date from the Jyväskylä Environmental Watch Service (only in Finnish).

[Check out the Environmental Watch Service](#)



# THE VISION OF JYVÄSKYLÄ IS A RESOURCE-WISE CITY OF SUSTAINABLE EVERYDAY LIFE IN 2040

## THE RESOURCE-WISE CITY OF THE FUTURE:



### **Produces zero emissions**

A zero-emission city is carbon neutral, which means that climate emissions are minimised and the remaining emissions are primarily compensated by carbon sinks. The City's goal is to reduce emissions by 80 percent from the level of 2007 by 2030.



### **Does not overexploit natural resources**

Resource-wise operation safeguards the carrying capacity and diversity of nature and prevents damage to nature. Natural resources are consumed sustainably and the service life of materials is long and efficient. The aim is to halve the residents' carbon footprint, i.e. the greenhouse gas emissions caused by everyday consumption, by 2030 from the 2005 level.



### **Produces zero waste**

A zero-waste city of sustainable consumption where as little as possible or no waste would be generated. With the help of material circulation and circular economy solutions, waste is transformed into raw material, materials, and energy. In the Jyväskylä region, the amount of household waste will decrease and the recycling rate will increase, reaching a level of 65 percent by 2030. The goal is less waste and more recycling.



### **Creates the conditions for the sustainable well-being of its residents**

With the help of the City's resource-wise work, the conditions are created for the sustainable well-being of the city's residents and a resource-wise lifestyle. The realisation of resource wisdom requires wide-ranging cooperation, resources and commitment across industry and organisational boundaries. The resource-wise and climate actions of the City's residents, businesses and communities are thus important for achieving common visions.

# CARBON NEUTRAL JYVÄSKYLÄ 2030

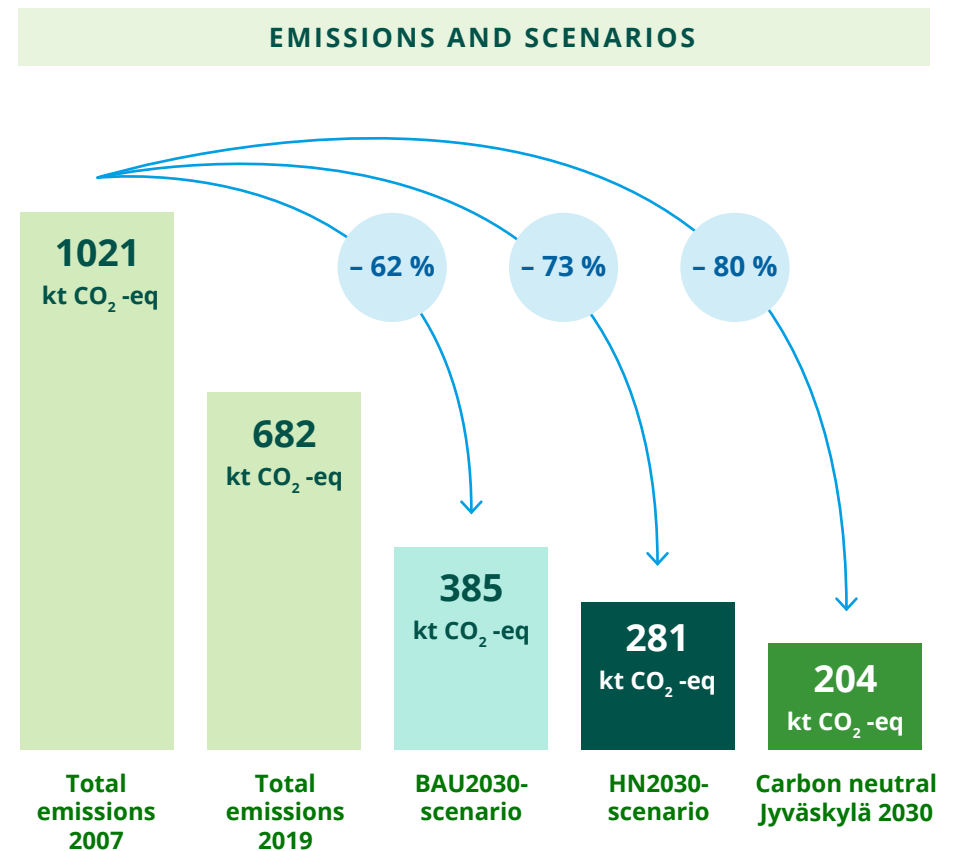
The City of Jyväskylä is committed to achieving carbon neutrality by 2030. This means that the City will reduce its climate emissions by 80 percent from the 2007 emission level by 2030. The realisation of the carbon neutrality goal is monitored by calculating the regional emissions of Jyväskylä. Regional emissions consist mainly of road traffic, electricity consumption, and production of district heating.

**Based on the emission calculations of the Finnish Environment Institute (SYKE)**, emissions in the Jyväskylä region have decreased by 40 percent from 2007 to 2020, i.e. half of the city's emission reduction target. In the autumn of 2022, the Resource-wise Jyväskylä 2040 Programme was updated with measures to further reduce emissions in the coming years.

The remaining emissions after the emission reductions are primarily compensated with the help of carbon sinks located in the City area, for example forests. To goal of Jyväskylä is that the carbon sinks of the City correspond to the emissions generated in 2030.

The future development of Jyväskylä's emissions has been assessed in the spring of 2022 within two different future scenarios. Business as usual (BAU2030) scenario forecasts that regional emissions are going to be decreased 62 percent from 2007 level by 2030 mainly due to executing national climate actions. In carbon neutral (HN2030) scenario, which is based on actions determined in the Resource-wise Jyväskylä 2040 Programme as well as national emission trends, Jyväskylä's emissions would be decreased by 73 percent by 2030. In order to reach

the 80 percent emission reduction set by the City, additional measures are needed especially to reduce road traffic emissions. According to estimates, more than half of the emissions in 2030 would be caused specifically by road traffic.



**THE RESOURCE-WISE  
JYVÄSKYLÄ 2040 PROGRAMME**

**GOALS AND  
MEASURES**

# LOW-CARBON ENERGY PRODUCTION AND EFFICIENT USE OF ENERGY AND WATER



Low-carbon energy production and the rational use of energy and water are prerequisites for transitioning to a carbon-neutral society. Jyväskylä is aiming for carbon neutrality by 2030, in the realization of which measures related to energy production and use play a key role.

## By 2030:

- Our district heating production is carbon neutral
- We increase the production of solar energy in buildings owned by the city
- We replace the oil heating of the city's buildings with more sustainable forms of heating
- We develop a smart energy system and decentralised renewable energy production
- We utilize the gases generated as effluents in waste and wastewater management into energy
- We improve the energy efficiency of city-owned buildings and outdoor lighting
- We develop water consumption monitoring and reporting and utilise solutions that improve water consumption



# SUSTAINABLE COMMUNITY STRUCTURE AND LOW-CARBON CONSTRUCTION



The Puukuokka city block is a complex consisting of three multistoried wooden residential buildings in the Kuokkala district of Jyväskylä. The block was completed in 2018.

**Photo by Jaana Pinson**

Sustainably built Jyväskylä is based on a compact, dense and intact urban structure, where the most important services are easily accessible on foot, by bike or by public transport. In construction, the emphasis is on supplementary construction and the construction is directed to areas that have already been built instead of recreational areas.

Resource wisdom and sustainability act as the main guiding principles in Jyväskylä, from land use planning to construction and maintenance. The City develops and implements solutions that strengthen the implementation of the circular economy, reduce greenhouse gas emissions and maintain biodiversity.

## By 2030:

- We improve energy efficiency and increase wood construction in the city-owned new and renovation construction sites
- We increase the emphasis on resource wisdom, zero emissions and the circular economy in the city's infrastructure construction and maintenance contracts
- We promote the implementation of low-carbon solutions, circular economy and resource wisdom, for example, in housing solutions by utilising urban development platforms
- We develop and execute climate-wise planning



# CLIMATE-SUSTAINABLE TRANSPORT SYSTEM



The city has built sheltered park-and-ride facilities for bicycles along the most popular routes. There are currently around 15 bike parks and more are being built every year.

**Photo by Kati Kankainen**

In a densely built urban area, such as Jyväskylä, there are good opportunities to create even better conditions for smart mobility and thereby for people's sustainable well-being and a resource-wise lifestyle. Functional and comprehensive public transport, together with a functioning and maintained light traffic network, are the cornerstones of sustainable mobility in Jyväskylä.

In addition to the development of public transport and walking and cycling, the City is taking measures to increase the use of low-emission power sources, for example by expanding the network of charging points for electric cars.

## By 2030:

- We promote the conditions for sustainable mobility and encourage walking and cycling
- We increase charging points for electric bicycles on the city-owned properties
- We increase the number of public transport trips and improve the supply and services of public transport
- We increase the use of low-emission fuels and powers in public transport equipment and in other city consortium equipment
- We increase the number of charging points for electric cars on city-owned properties

# PREPARING FOR THE EFFECTS OF CLIMATE CHANGE AND ADAPTING TO THEM



Mitigating climate change requires continuous measures from various actors. Along with actions aimed at emission reductions, preparation for and adaptation to the various effects of climate change must also be taken into consideration. In Jyväskylä, it especially means being prepared for storm water floods, moisture damage to buildings, disturbances in energy distribution and telecommunications networks, and extreme weather phenomena.

## By 2030:

- We prepare for extreme weather phenomena in the operation of the city's storm water management as well as develop and execute nature-based solutions, such as Green Street solutions, for storm water management
- We stop the spread of introduced invasive species
- We prepare for the effects and risks brought by climate change in forest management, energy production and nature conservation

The first block length of the Puutarhakatu Green Street pilot (Kyllikinkatu–Tapionkatu) was completed in late autumn 2019.

Photo by City of Jyväskylä

# RESOURCE-WISE CONSUMPTION AND CIRCULAR ECONOMY



The Biovaaka system developed for measuring plate waste was tested at Vaajakumpu School in the autumn of 2021.

Photo by City of Jyväskylä

The goal of the City of Jyväskylä is to take into account resource wisdom and the implementation of the circular economy through transversal activities. In the circular economy and sustainable consumption, the efficient and longer-term use of various resources and materials and the recovery of used materials for reuse play a key role. The goal is that the value of the material remains regardless of use. In addition to this, it is important to promote the multi-use and shared use of goods, premises and services. The circular economy is also accelerated through resource-wise and low-carbon purchases.

## By 2030:

- We reduce the generation of waste
- We increase the municipal waste recycling rate to 60 percent
- We recycle and utilise effluents from waste and wastewater supply more efficiently
- We increase the utilisation rate of city-owned facilities and improve waste sorting and recycling on the city-owned properties
- We take the low-carbon and circular economy aspects into greater account in the city's purchases
- We reduce the food waste from the city's meal services to a maximum of 8 percent
- We increase the proportion of vegetarian food on the menus of meal services
- We increase waste management and circular economy instruction to early childhood and basic education
- We utilise actively the city's Tavarat kiertoon system (Goods for recycling) in furniture recycling



# ATTRACTIVE AND DIVERSE ENVIRONMENT



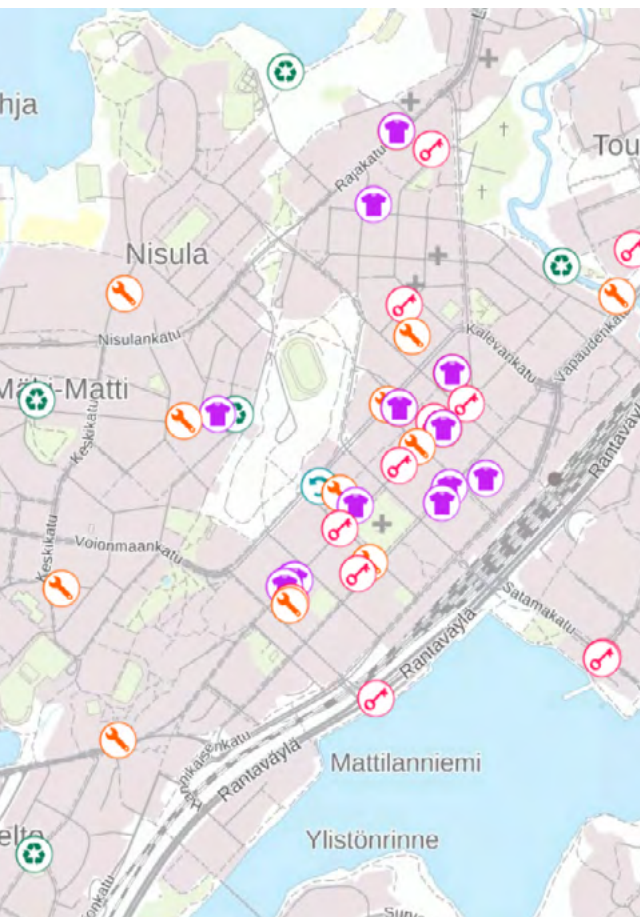
Diverse nature secures the conditions for life on earth: it produces clean air, water, food, raw materials, and carbon sinks, and contributes to mitigating and adapting to climate change. This is why it is also important in Jyväskylä to maintain and protect our diverse nature.

Safeguarding and restoring natural values and expanding the nature conservation network are actions through which the city promotes the preservation of natural diversity in its area. In addition to ecological values, nature offers city dwellers experiences and recreational opportunities.

## By 2030:

- We ensure the good condition of surface and groundwater
- We develop and maintain an ecologically high-quality nature conservation network
- We increase the diversity of habitats with the help of urban greenery
- We reinstate nature values by restoration
- We minimise the environmental damage caused by the city's operations and compensate for the remaining damage
- We protect nature values as part of land use
- We further improve the accessibility of nature and the hiking route network
- We increase the diversity of nature in the forests owned by the city and at the same time take into account ecological, economic and recreational values in the management of forests
- We maintain and increase carbon sinks in the city area in order to bind the generated emissions

# EVERYDAY RESOURCE WISDOM AND RESPONSIBILITY



In autumn 2022, the Sustainable Lifestyles Roadmap was opened. The map service of the City of Jyväskylä has its own map level on which the services provided by Jyväskylä that support the sustainable lifestyle of the residents have been compiled.

Everyday resource wisdom and responsibility are implemented every day in Jyväskylä. The City does not undertake this work alone, but companies, communities as well as City residents and tourists visiting Jyväskylä are involved. Individuals are raised and trained in everyday resource wisdom through environmental education and training, as well as by increasing general environmental awareness, for example through communication and counselling. Cooperation with different stakeholders, for example within network, research or project work, is also essential in the progress of resource wisdom and responsibility work.

## By 2030:

- We develop future resource-wisdom skills through education and training
- We increase the environmental awareness of the city residents through counselling, communication, and campaigns
- We develop and implement operating models, services and tools that promote the residents' resource wisdom and everyday circular economy
- We organise more environmentally responsible events at the city sports venues
- We support the construction and development of environmentally responsible business operations
- We increase the amount of green financing and emphasise responsibility in the investments made by the city
- We promote responsible tourism
- We carry out research, development and innovation activities that promote resource wisdom in close cooperation with the University of Jyväskylä and Jyväskylä University of Applied Sciences
- We also promote the resource-wise action of the city internationally

- Cooperation project "Towards resource wisdom" with Sitra (2013–2015).
- The wise use of resources was chosen as one of the spearheads of the City Strategy 2013–2016.

- Commitment to the European Commission's energy and climate agreement for local actors (Covenant of Mayors).
- Signing up for the extension period of the municipal energy efficiency agreement 2017–2025.
- Society's Commitment for Sustainable Development.
- Commitment to the principles of Fair Trade. Jyväskylä received the Fair Trade City title in March 2016.
- Circwaste – towards a circular economy project (2016–2023), in which the city of Jyväskylä has two sub-projects of its own.

- The resource-wise Jyväskylä 2040 programme was drafted and approved.
- Climate leaders project 2019–2020.
- Climate actions of resource-wise companies (REIVI) project 2019–2020.
- Jyväskylä was chosen as the Circular Economy City of the year.

- REDI(4)2030 = City of Jyväskylä resource-wise digital portal project (2022–2023).
- Update of the Resource-wise Jyväskylä 2040 Programme.
- The nature-positive Jyväskylä commitment together with the University of Jyväskylä, the Jyväskylä University of Applied Sciences and the Jyväskylä Educational Consortium Gradia.
- The Environmental Watch service was launched.



2013

2014

2015

2016

2017

2018

2019

2020

2021

2022

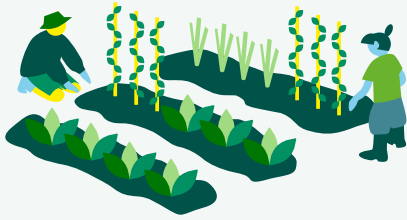
- City of Jyväskylä's commitment to resource wisdom.

- Measuring the effectiveness of resource-wise measures to support the management of sustainable cities (REMI) project.

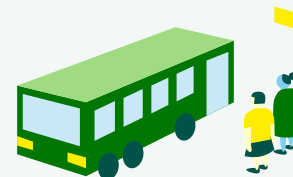
- Economic and climate management of resource-wise municipalities (REETTA) project.

- Jyväskylä urban area's land use, housing and transport (MAL) agreement.





## NETWORK COOPERATION



# GLOSSARY

**CLIMATE CHANGE** refers to the increase in the amount of greenhouse gases, especially carbon dioxide, in the atmosphere as a result of human activity. Greenhouse gases intensify the greenhouse effect in the earth's atmosphere, as a result of which the climate warms. Warming also causes changes in precipitation, which further increases and intensifies extreme weather phenomena, such as heat waves, droughts, floods, hurricanes, and forest fires. As a result of warming, the amount of snow and ice decreases, the sea level rises, and the distribution of plant and animal species changes. In addition, changing rainfall and meltwater are also reflected in the quantity and quality of freshwater resources.

**CARBON DIOXIDE EQUIVALENT (CO<sub>2</sub>EQ.)** describes the combined climate-warming effect of different greenhouse gas emissions. Carbon dioxide equivalents are usually reported in tons, and the abbreviation used for them is tn CO<sub>2</sub>eq.

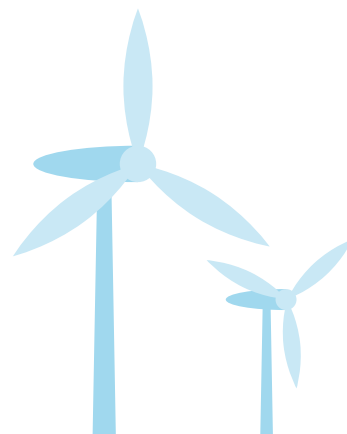
**CARBON FOOTPRINT** refers to carbon dioxide emissions caused by human activity. The carbon footprint can be determined for a company, organisation, activity, or product. The carbon footprint takes into account not only carbon dioxide emissions but also other significant greenhouse emissions, such as methane and nitrous oxide.

**CARBON HANDPRINT** is a concept that describes the climate benefits (emission reduction potential) of a product, process or service for its user. Anyone can create a carbon handprint - a state, a company, an association as well as an individual person. For example, when a company produces a carbon handprint for its customer, the customer can reduce their own carbon footprint. The carbon handprint emphasises positive effects in the future, while the carbon footprint focuses on negative emission effects now.

**A CARBON SINK** is a process, activity, or mechanism that removes a greenhouse gas, greenhouse gas precursor, or aerosol from the atmosphere. Carbon sinks are measured by the amount of carbon dioxide they remove from the atmosphere. Other greenhouse gases are commensurated as carbon dioxide equivalents using coefficients determined by the IPCC.

**CARBON STOCK** refers to the form of carbon in which it is bound, for example, in wood or other biomass, and is therefore not free in the atmosphere.

**CARBON NEUTRALITY** means that only the total of CO<sub>2</sub> emissions that can be absorbed are produced. The carbon footprint of a carbon-neutral society, product or system over the entire life cycle is therefore zero.



**SHARING ECONOMY** means a new economic way of thinking, where the ability to use goods, services and other commodities is more important than owning them. Various digital platforms and applications often enable the implementation of the sharing economy in practice.

**SUSTAINABLE DEVELOPMENT** is global, regional, and local continuous and controlled social change, the goal of which is to secure good living opportunities for current and future generations. This also means that the environment, people and the economy are taken into account equally in decision-making and operations.

**CIRCULAR ECONOMY** refers to a production and consumption model in which existing materials and products are used as much as possible by borrowing, renting, reusing, repairing, refurbishing, and recycling. In this way, the life cycle of the products is extended.

**ENERGY CONSUMPTION RELATED EMISSIONS** include the combined carbon footprint of households as well as emissions from municipal purchases and investments as well as private residential construction investments. The carbon footprint of households, i.e. the emissions caused by consumption, consists of the consumption of food, goods, services, as well as the emissions caused by transportation and living.

**DEMAND FLEXIBILITY** means flexibility in the use of district heating, which reduces the power demand in the energy system during consumption peaks. Thermal energy is not necessarily saved in demand flexibility. The goal is to make the temporal transfer of heat consumption more optimal for the entire district heating system. Demand flexibility can improve the economics of energy production and reduce environmental harm.

**BIODIVERSITY** is the spectrum of ecosystems (natural capital), species and genes in the world or in a certain habitat type. It is essential for human well-being, as it produces services that sustain economies and societies.

**BIODIVERSITY LOSS** means the collapse of biodiversity caused by human activity, which is ongoing all over the globe. Nature is disappearing a hundred or even a thousand times faster than at any time in human history. The sixth extinction wave in Earth's history is underway.

**RESOURCE WISDOM** is the ability to use various resources (natural resources, raw materials, energy, products and services, facilities, and time) in a premeditated way and in a way that promotes well-being and sustainable development.

**INTRODUCED INVASIVE SPECIES** means a plant, animal, or other living species whose migration outside its natural range has been unintentionally or intentionally facilitated by humans. With the help of humans, an introduced invasive species has therefore crossed natural barriers to spread, such as continents, seas, or mountains, and has spread to an area where it would not have spread naturally without human help.





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**2040 PROGRAMME**

[www.jyvaskyla.fi/en/resource-wisdom](http://www.jyvaskyla.fi/en/resource-wisdom)

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