

City of Turku's Climate and Environment Programme 2009- 2013

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Starting points for the programme

The City of Turku's Climate and Environment Programme 2009-2013 presents the starting points, guiding principles, main targets, indicators, resource impacts, and monitoring for the programme. The background and justification materials and implementation are included as supplementary material in a separate and more extensive existing programme document, which will be processed by the City Board in conjunction with implementation of the City Council's programme decision.

The City of Turku's Climate and Environment Programme is part of the programme structure approved by City Council for the strategic period of 2009-2013. The basis for the programme entity is the agreement between the City Council political groups. According to the agreement:

- A climate and energy programme will be created for Turku to guide the city in its emissions reductions and energy saving.
- During spring of 2009, the possibility of shifting to sustainable development budgeting in 2010 will be examined.
- The target in developing the urban environment is a more compact and unified urban structure, and a reduced need for traffic and energy consumption. Important projects are developing light transport in the city centre and a decision on a public transport programme, including the initiation of regional bus transport with neighbouring municipalities and the completion of assessment and decision-making regarding the impacts, costs and opportunities for implementing a light rail system by the end of 2010.
- The city strives to significantly reduce the load flowing from its areas into waterways and also requires this from others.

According to the guidelines set by the City Board in the preparation phase and the indicative programme structure approved by City Council, the environment programme also includes the climate and energy programme and public transport programme mentioned in the agreement between the City Council political groups. The programme also takes sustainable development budgeting into consideration in the following manner. The progress of climate change and development of international and Finnish climate policy makes the Climate and Environment Programme particularly important from the city's perspective.

In conjunction with the Aalborg Commitments (City Board § 267/2005), Turku has committed to comprehensively promote sustainable development, with regard to controlling climate change in the following manner: "to develop and follow a strategic and integrated approach to mitigate climate change and work toward a sustainable level of greenhouse gas emissions; mainstream climate protection policy into our policies in the areas of energy, transport, procurement, waste, agriculture and forestry; raise awareness of the causes and probable impacts of climate change, and integrate preventive measures into our climate change policy." The National Climate and Energy Strategy (Government Report to Parliament 6 November 2008) states that it would be appropriate to combine municipal measures aimed at controlling climate change into a single entity – a climate strategy – and refers to the Cities for Climate Protection Campaign and the coordinating role of the Association of Finnish Local and Regional Authorities with regard to steering the measures.

Applicable parts of the Cities for Climate Protection Campaign and the Aalborg Commitments have been taken into consideration in the Climate and Environment Programme. The impact of themes and measures has guided preparation of the programme with regard climate and environment protection. Other programme topics, such as housing and land use, have been addressed to a limited extent in the programme structure. The overall aim is more successful climate and environment protection through City of Turku measures and cooperation with civil society, regional, national and international partners.

Guiding principles

Implementation of the Climate and Environment Programme is divided into theme-specific packages of measures which analyse in more detail the challenges associated with each topic, the development targets set and the specified goals, measures and indicators (supplementary material 1). The programme measures will achieve larger reductions in greenhouse gas emissions by increasing the share of renewable energy in district heating and electricity production, increasing energy efficiency in all activities and enhancing sustainable modes of transport. However, the move to a low-carbon operating environment in accordance with sustainable development is an extensive change process in which all programme measures and participation by civil society play a major role.

The theme-specific guiding principles of the programme are:

- In accordance with the Aalborg Commitments (City Board § 267/2005) and the Cities for Climate Protection Campaign, **Turku will continue to promote, monitor and report on sustainable development**, using the Climate and Environment Programme 2009-2013 to strive for more successful climate and environment protection by means of city measures and cooperation with civil society, regional, national and international partners.
- **Turku will reduce greenhouse gas emissions in its area** to a level that is sustainable in terms of the climate while simultaneously taking national and international climate policy guidelines into consideration.
- **Turku will improve energy efficiency in city functions** (Energy efficiency agreement, City Board § 740/2007, and the energy efficiency plan based upon it, City Board § 658/2008), promote the energy efficiency of end users and increase the use of renewable energy sources in energy management in its premises.
- **Turku will increase the use of renewable energy** in district heating production and procurement of city electricity.
- **Turku will increase the use of sustainable modes of transport and mobility** in relation to other forms of transport and reduce carbon dioxide emissions from transport. Community decentralisation in the Turku region and growth in the share of motor traffic as a form of transport will be restricted.
- **Turku will develop public transport** in a way that offers a fluid, pleasant and reasonably priced way of travelling around Turku and its urban area. Zoning will promote the use of public transport and a community structure that supports other sustainable ways of travelling.
- **Turku's procurement will be sustainable**, ecologically, socially and financially. The aim of procurement and logistics is to reduce consumption of material and harmful environmental impacts throughout the lifecycle of a product or service (based on the Government Resolution on the Promotion of Sustainable Choices in Public Procurement 8 April 2009).
- **Turku will reduce the climate impacts of waste management**, in particular by directing biodegradable waste for processing instead of to landfills and by implementing transport logistics in an eco-efficient manner. The amount of waste produced and the need for procurement will be reduced in city activities and various ways of utilising waste will be increased.
- **Turku will reduce its impacts on the state of waters** with regard to ground water, interior waters and the sea area, take action to improve the state of waterways and ground water, and continue to actively promote protection of the Baltic Sea.

- **Turku will promote the diversity of nature** in all city activities. The goal is to ensure that inhabitants have a healthy, pleasant and stimulating living environment. A key attractive factor is a network of green and conservation areas that maintains and ensures the conservation of the diversity of nature, and also serves as an important carbon sink.
- **Turku will increase environmental competence and responsibility** through environmental education for children, young people and adults. This will encourage people to take environmental aspects into consideration in all decisions and choices related to activities. Environmental competence lays an essential foundation for green economy trades.

Targets guiding activities of the City Group

The table below presents the main targets related to the theme-specific guiding principles and the indicators used to monitor them as well as the resource impact of realising the targets. The packages of measures that will lead to achievement of the targets and the parties responsible are presented in a separate, more extensive programme document (supplementary material 1):

Guiding principle	Target	Indicator (or indicators *)	Resource impact (2010-2013)
To reduce greenhouse gas emissions.	A reduction of at least 30%/inhabitant from the 1990 level by 2020 and a reduction of at least 20% in total emissions.	Emissions calculated in a consumption-based manner using the Kasvener model (t-CO ₂ -equivalent, monitored in relation to the annual reduction according to the target)*.	Use of labour and investments to implement the programme.
To improve energy efficiency.	A 9% improvement from the 2005 level by 2016 (Energy Efficiency Agreement).	Energy savings per year (MWh/year).	Produces energy savings. Investments mainly implemented according to the ESCO principle (external capital, which is repaid from the energy saved).
	20% improvement from the 2005 level by 2020 (EU's indicative target).	Energy savings per year (MWh/year).	Working time reserved for personnel training.
	The City of Turku's new construction will be implemented in an energy-efficient manner, mainly as low-energy construction while renovation will aim at improving energy efficiency.	The share of low-energy and passive buildings, improvement in energy efficiency.	May increase planning and implementation costs, permanent energy savings, counselling.
To increase the use of renewable energy sources.	An increase in the amount of counselling to support energy-efficient construction. At least 50% of district heating will be produced using renewables by 2020.	The share of renewables in district heating production.	Investment costs included in the Turku Energy plans.
	100% of the electricity purchased by the city will be produced using renewables by 2013.	The share of renewables in electricity procured by the city.	An increase of about EUR 50,000-100,000 in the cost of the city's electricity per year.

To promote the use of sustainable modes of transport and develop public transport.	The share of light and public transport in Turku is over 55% in 2013 and over 66% in 2030.	Modal split* (2013)	
	The city will make a decision on a programme to develop pedestrian and bicycle transport by 2010 at the latest.	Decision made	Implementation cost estimate specified in conjunction with programme approval
	A bicycle route network through downtown Turku will be completed in 2015.	Progress of the network and its inclusion in the Municipal Property Corporation's annual investment plan.	The overall cost estimate for construction is EUR 2-4 million.
	Construction of the bicycle route network will be expedited by utilising lighter implementation options.		
	An annual increase of approximately 2% in the number of journeys by public transport.	Number of journeys by public transport* (annually)	Requires major infrastructure investments and increased subsidisation to develop public transport.
	The regional public transport organisation is operating in 2012.	Establishment of the organisation.	Distribution of costs between those in the organisation and the municipalities using its services.
	Public transport becomes faster in relation to private car traffic.	Travel time on public transport (measured annually)	
	More efficient implementation of public transport benefits (traffic lights and lanes) starting in 2010.	Implementation of benefits annually.	Investment costs of EUR 0.5-1 million per year.
	Full implementation of public transport trunk route network by 2020.	Implementation of trunk route network.	Cost impacts on investments and subsidisation will be assessed in conjunction with the decision on arranging public transport.
	The City will make a decision on the public transport system in 2010.	Decision made.	
	The first trunk routes will operate in 2011.	Trunk route operations.	

Sustainable procurement and logistics.	Improvement in traffic safety and decline in the number of injuries by about 2.5% per year.	Number of people injured in traffic accidents each year.	Annual investments of approximately EUR 0.5 million in traffic safety investments and work.
	Sustainable development criteria will be taken into account in all city tenders in 2013 (intermediate target of 80% in 2011).	Use of sustainable development criteria in calls for tender annually (share of all calls for tender).	May raise procurement prices somewhat but will conserve natural resources and emphasise social responsibility.
	10% reduction in internal city transports from 2008 to 2013.	Number of internal transports/year (% reduction).	Will lead to savings.
Reduced climate impacts from waste management.	Less than 10% of community waste will end up in landfills in 2016.	Share of community waste in landfills, %.	Cost-relatedness of waste management fees.
The city will reduce impacts on the state of waters.	Decreased waste water emissions in sparsely populated areas.	Will be specified in the water management development plan.	
	Decrease in the load caused by stormwater.		Investments required by the stormwater programme included in the budgets of the Municipal Water Works Corporation and Municipal Property Corporation.
	Centralised waste water treatment will be profitable	Treatment results in line with recommendations of the Baltic Sea Marine Environment Protection Commission.	
	Decrease in the load entering the sea via the Aurajoki River.	Reduction in long-term average nutrient load.	
To enhance the diversity of nature.	Valuable natural sites in the city area will be comprehensively protected by 2013.	Protection decisions on areas marked with SL in the town plan (share of all SL reservations).	No new resource needs (some work in the Environmental Protection and Planning Offices).
Increased environmental expertise and responsibility.	Approximately 30% of daycare centres and educational institutions have a green flag symbol or some other external symbol of sustainable development work in 2013.	Share of all daycare centres and educational institutions with an external symbol of sustainable development.	Participation fee of EUR 100-500/unit/year (totaling approx. EUR 15,000/year). Will produce savings in waste, water and energy costs.

At least one eco-support person will be designated for each administrative unit in all sectors, municipal enterprises and affiliated companies by 2013.

The share of all administrative units in the sectors, municipal enterprises and affiliated companies with an eco-support person.

Working time for participation in planning, instruction and training.

* Certain indicators directly illustrate the City Group activities while others also describe the impact of activities outside the City Group. Some measures are monitored annually and others every 1-5 years.

Monitoring of programme implementation

The aim for monitoring of the Climate and Environment Programme is to ensure programme implementation and realisation of its targets. Furthermore, common sustainable development reporting by the six largest cities in Finland will be used to monitor implementation of sustainable development in Turku in relation to other cities, and sustainable development budgeting will be used to direct the city organisation towards operating in accordance with sustainable development.

A comprehensive execution plan has been prepared for the implementation of the Climate and Environment Programme principles and targets. This plan presents an analysis of the relationship between the operating environment and programme measures and the measures, responsible parties, schedules, indicators and resource needs in accordance with the theme-specific targets.

The Cities for Climate Protection Campaign lays down the guidelines for measures related to climate protection in Turku's Climate and Environment Programme. Compiling, approving and implementing the programme means updating the Climate Protection Campaign measures. The city will complete basic measures in accordance with the Climate Protection Campaign:

- (1) an inventory will be made of greenhouse gas emissions and sinks in the municipal area,
- (2) a greenhouse gas emission development forecast will be compiled for the next 10 and 20 years,
- (3) a minimum target for emissions reduction will be set,
- (4) the principles and main targets of the emissions reduction plan will be approved by City Council and implementation by the City Board, and
- (5) implementation of the plan will be organised, monitored and reported upon.

Programme coordination will be arranged in the Environmental Affairs sector, but the programme will be implemented throughout the entire city organisation. Eco-support persons will be trained for organisation units to provide support for monitoring and implementation.

Monitoring will be divided into three parts:

- 1) Implementation of the targets specified in the Climate and Environment Programme will be monitored on a yearly basis (or continuously) according to the indicators set for the programme.
- 2) General monitoring of sustainable development in the community, which is based on existing cooperation between the six largest cities in Finland, will be reported upon every second year (or less often) and development trends published annually on the Internet.
- 3) Monitoring of sustainable development budgeting in conjunction with the financial statement.

Realisation of climate and environmental targets and promoting sustainable development will also require that civil society participate in the programme targets. A participation system will be developed during 2010 in conjunction with programme implementation.