



Green economy boosts local viability





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Local authorities and green economy

A transition to a green economy offers local authorities a way to a sustainable and competitive economy, creating new kind of business activity and green jobs. A green economy, the local climate policy and a sustainable use of natural resources deliver synergy benefits.

Local authorities play a pivotal role in the promotion of the green economy. In 2010, local government accounted for about three quarters of the value of Finland's public procurement market which totalled 35 billion euros. This money can give a major boost to the green economy: by procuring green products and services, local authorities create markets for environmentally friendly solutions, thus making it easier for small enterprises to enter the market. To green their economy, local authorities often seek partners to deliver new solutions, to finance measures and to implement development projects.

The transition to a green economy can become a strategic focus underpinning all municipal development, a goal defined in the municipality's vision and strategy. Local authorities can boost their viability by promoting environmental expertise, environmental industries, and energy- and resource-efficient solutions. This requires a clear, common understanding about what a green economy means in the local government environment and whether the local expertise, businesses, educational system and infrastructure provide a basis for greening the economy. This means that the green economy targets are laid down in all of the municipality's important strategic documents. One such key document is the local climate strategy or programme. Strategies

transfer the goals set for the green economy and local climate policy into the day-to-day operation and choices of local authorities.

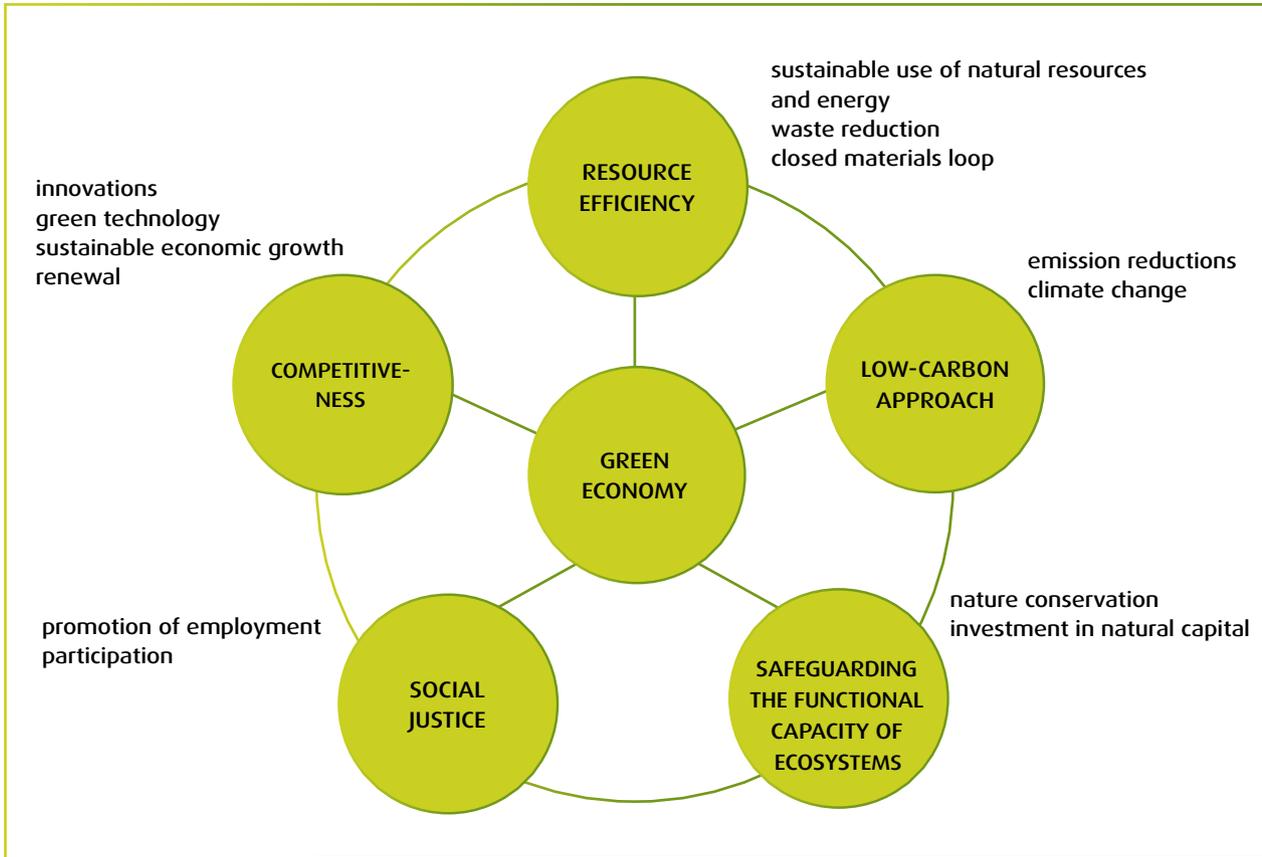
The diagram on the next page presents the elements of a green economy from the perspective of local authorities.

Local authorities can take measures to green the economy particularly in economic development policy, land use, transport, energy production, municipal engineering, water services, waste management, education and information, and public procurement. These functions together with programmes such as the EU Structural Funds Programme, the national growth agreements between state and local governments for urban regions and the national Innovative Cities programme (INKA) provide a sound foundation for joint development projects between local authorities, research and development organisations and enterprises.

At best, local authorities can derive numerous benefits from greening the economy: increase employment and improve the business environment of SMEs; improve cooperation with higher education institutions and

WHAT IS GREEN ECONOMY?

Green Growth is defined as low-carbon, resource-efficient economic growth based on safeguarding the functional capacity of ecosystems while promoting well-being and social justice. (Prime Minister's Office Publications 4/2013).



research institutes; improve resource-efficiency and build the bio-based economy; improve resident health and well-being; build sustainable local economy with support from eco-system services, tourism and recreational use

of nature; improve the security of food supply; and save both money and the environment through sustainable drainage systems for storm water.

**SUSTAINABLE GROWTH AND JOBS
2014–2020
FINLAND'S STRUCTURAL FUNDS
PROGRAMME**

Finland's Structural Funds Programme for 2014–2020 aims at sustainable growth and jobs. One of the Programme's objectives is to increase the share of renewable energy and locally sourced energy, and to improve energy- and resource- efficiency. The means to achieve this is to adopt innovative renewable energy solutions and tap into business opportunities in energy- and resource-efficient products. Further, the delivery of climate targets and a sustainable use of the increasingly scarce natural resources require that society adopt patterns of consumption and behaviour that are consistent with low-carbon living. Local authorities can promote low-carbon lifestyle through urban planning and other functions.

The Programme offers local and regional authorities an excellent chance to implement climate measures and green the economy. Finland is allocating at least 25 per cent, or 56 million euros annually, of the European Regional Development Funding (ERDF) to transition to low-carbon economy. The goal is to transform Finland into a low-carbon society and make the country a forerunner in environmental know-how, clean technology and sustainable natural resources policy. Low-carbon options and energy efficiency are cross-cutting objectives of diversifying livelihoods, increasing the number of growth companies, creating new services and of research and innovation.



Local industrial and innovation policies and green business

Local authorities can plan and implement industrial policy measures that will green the economy and increase employment. To give some examples, local authorities can:

- Participate in and launch projects that promote the green economy, and form environmental know-how and business partnerships;
- Network with environmental actors (enterprises, educational institutions, associations);
- Provide advisory services and support functions to enterprises;
- Promote demand- and user-driven innovations in the field of green economy;
- Establish think tanks with businesses;
- Invest in innovative public procurement that promotes green economy;
- Include climate targets in their economic development strategy;
- Assess the impacts of their projects and investments on climate and employment;
- Improve coherence between local climate and employment policies.



Land use as a means of promoting the green economy

Land use in line with a green economy focus requires an energy- and material-efficient (eco-efficient) urban structure that enables well-functioning public transport, short commuting distances, accessibility of services, efficient systems of transport, renewable energy, preservation of natural resources and natural reserves and new environmental industries.

Examples of means of land use planning that local authorities can apply to green the economy:

- Strengthen strategic land use planning and make the green economy and climate policy targets a strategy priority;
- Ensure well-functioning public transport and efficient transport systems;
- Improve the cohesion of urban structures in a systematic and orderly manner, taking account of the existing structures, transport systems and infrastructure;
- Coordinate land use, housing, transport and services, giving consideration to proximity, flexibility and multiple and shared use;
- Ensure that land use planning creates opportunities for environmental industry and for the management of material and energy flows;
- Secure the use of renewable sources of energy;
- Introduce energy system reviews for land use planning projects;
- Ensure eco-efficient solutions for waste

management, wastewater management and storm water management;

- Promote ecotourism and recreational use of nature.



Sustainable transport solutions

In Finland, transport accounts for one fifth of the country's greenhouse gas emissions, having therefore a central role in a green economic transformation and local climate policy targets. Safeguarding the accessibility of regions is also an important development goal of a country with long distances and low population densities. Examples of measures that local authorities can take to promote the accessibility and sustainability of transport:

- Increase awareness of sustainable transport options and the climate impacts of different means of transport;
- Reduce passenger vehicle transport and the need to use private cars, and improve public transport;
- Improve public transport connections and nodes;
- Introduce creative solutions for the improvement of public transport in sparsely populated areas;
- Improve city logistics;
- Develop intelligent transport and information based traffic control;
- Support social innovations, such as car sharing, city bike schemes and organisation of 'walking buses' for school children;
- Promote walking and cycling and build bicycle routes, car-free city centres and pedestrian zones;
- Create opportunities for installing new propulsion solutions, such as electric car charging points;
- Draw up procurement criteria for vehicles, which support eco-innovations and low-carbon solutions (for example electric, hybrid and gas- and ethanol-powered cars).



Green energy economy

A key means of greening the economy is to make changes to energy production and energy consumption with the aim to slow down climate change, secure the energy supply and improve energy self-sufficiency.

Examples of measures that local authorities can take to promote green and low-carbon energy economy:

- Offer development platforms for innovative solutions that will improve the energy efficiency of new and renovated buildings;
- Adopt first-generation innovative energy solutions in building ventilation, in the optimisation of indoor temperature and in lighting;

- Create water- and energy-saving social innovations;
- Conduct a renewable energy review in the municipality;
- Set a target for renewable electricity sourcing;
- Extend regional and district heating networks using renewable energy;
- Promote local small-scale heating businesses;
- Develop holistic solutions for the use of local renewable energy;
- Adopt innovative renewable energy solutions in the municipality's own energy and heat production, in the heating of buildings, and in vehicles;
- Develop methods of recovering energy from waste;
- Promote social and customer-driven innovations of renewable energy production that will boost local employment;
- Provide development platforms for intelligent electricity networks.

Green measures to improve the energy efficiency of municipal buildings include:

- scanning buildings with an infrared camera and making the necessary adjustments;
- optimisation of ventilation and indoor temperature;
- power-saving features of IT equipment and practices for their use;
- real-time monitoring of electricity consumption;
- water-saving measures;
- advice and guidance on saving energy;
- eco-support activity at working places;
- low-energy renovation of buildings;
- heat recovery ventilation;
- optimisation of indoor and outdoor lighting.



Green and eco-efficient communities

The value of the municipally-owned infrastructure, i.e. public utilities, roads, parks and buildings, totals about 65 billion euros. From the point of view of a green economy, the construction and maintenance of infrastructure offer great potential for local authorities to improve their resource-efficiency. Green infrastructure is a new concept which encourages us to see the environment as a resource which, if well managed, is capable of delivering a wide range of commodities and services.

Examples of measures that local authorities can take to build and maintain green and eco-efficient communities – and promote the green economy in doing so:

- Adopt a life-cycle approach to decisions on investments, especially on those concerning energy consumption;
- Establish clear criteria for energy efficiency and material efficiency for public contracts and assignments related to the infrastructure and construction;
- Ensure in the procurement of real estate management and maintenance services that the

service provider has expertise in energy efficiency, and secure the proper functioning of building services engineering systems;

- Include the optimisation of material efficiency and energy efficiency in the procurement criteria;
- Take account of the use of eco- and cost-efficient methods when determining the duration of construction;
- Lay down eco-efficiency requirements for the municipality's machinery and transport equipment;
- Set eco-efficiency targets for facilities rented by the local authority;
- Agree that cleantech solutions should account for at least 10 per cent of the total construction and building procurement costs;
- Prioritise eco-efficient materials in building projects;
- Assess the impacts of building projects on the use of natural resources;
- Favour non-toxic materials and building products, renewable materials and sustainably produced wood products;
- Promote the use of local renewable energy in buildings;
- Look into the possibilities of recycling, and preventing the generation of, demolition materials and surplus soils;
- Tap into the opportunities offered by a green infrastructure (for example green roofs and green walls) and by sustainable drainage systems for storm water;
- Offer platforms and environments for developing and testing eco- and cost-efficient methods and healthy and renewable materials.



Photo: The Monikopuro brook (City of Espoo).

Eco-efficient water services and waste management

Waste reuse and recovery of energy and materials from waste offer considerable opportunities for new kinds of green business activities, energy-saving and reduction of greenhouse gas emissions.

Waste recycling offers other benefits as well: it has been calculated that it results in 25 times more jobs than landfilling and 10 times more jobs than incineration. In the Finnish context this means that the achievement of a 50 per cent recycling rate would create over 10,000 new jobs.

Examples of measures that local authorities can take to promote green economy through water services and waste management:

- Use life-cycle calculation to reduce the adverse environmental effects of waste management;
- Adopt cleantech solutions in waste management procurement relating to the prevention of waste generation and to the separation, collection, transport, recycling and treatment of waste,

emphasising the creation and implementation of cleantech solutions as first references (new or essentially improved cleantech solutions);

- Improve waste management through new technological solutions and product development;
- Include material and energy efficiency targets in the development plans for water services;
- Participate in the further development of environmental impact assessment of water services;
- Work together with higher education institutions and enterprises to promote the recovery of sewage sludge and biowaste and the cycle of nutrients in nature;
- Work together with enterprises in the field to improve the thermal efficiency of pumps and other motors of wastewater pumping stations and pressure water booster systems, and to improve the operation and the eco-efficiency of wastewater treatment and biogas plants;
- Improve the recovery of energy contained in wastewater and sewage sludge.



Photo: Tampere Regional Solid Waste Management.



Education and information encourage green economic transformation

Local authorities can help establish the principles of green economy through education, information and encouragement and by offering sustainable choices for the community.

Examples of how local authorities can promote the green economy by means of education and information:

- Intensify cooperation with regional agencies dealing with sustainable development and energy issues to make information and advice available to enterprises and residents in their daily lives;
- Improve interaction between research institutes, the local government, enterprises and local residents to launch processes such as the Carbon Neutral Municipalities project;
- Make local government officers and local politicians more committed to the promotion of a green and low-carbon economy;
- Develop eco-support activities and other corresponding means of interaction to make local government operation more eco-efficient;
- Use social media, social innovations and other channels to improve the effectiveness of environmental and climate communications.



Green and sustainable public procurement

In spring 2013, the Finnish Government adopted a resolution for the promotion of sustainable environmental and energy solutions (cleantech solutions) in public procurement. The resolution encourages the local as well as the central government to reduce their use of energy and materials and to prevent adverse environmental impacts during the lifecycle of a product, a service or a building.

Examples of measures that local authorities can take to promote the green economy through public procurement:

- Procure solutions that advance the achievement of energy and environmental targets and utilise cleantech solutions in the most economically advantageous manner;
- Focus on creating and implementing new or essentially improved cleantech solutions;
- Become involved in developing and using life-cycle calculation and calculators in order to reduce costs and improve energy and material efficiency;
- Develop procurement criteria for energy efficiency and the optimisation of material efficiency;
- Use the databank offered by the Motiva advisory service for sustainable public procurement.



NINE STEPS TOWARDS A GREENER MUNICIPALITY

- 1) A green and low-carbon economy is made visible by promoting environmental business activities and innovativeness and by focusing on environmental know-how. The greening of economy is also reflected in the visions and strategies of local authorities.
- 2) Environmental know-how is seen as a key to developing more sustainable forms of business activities. Environmental know-how is focused on energy efficiency and material efficiency, material and process technology, environmental engineering, environmental consulting and cleantech solutions.
- 3) Innovation, new experiments and demonstration environments are seen as important elements of local government renewal.
- 4) Even if a local authority already has business activities focusing on resource-efficiency and environmental-friendly solutions, new steps are taken for further development. Local natural and other resources lay a solid foundation for such development.
- 5) Local authorities provide access to data resources to enable fast improvement of the city's other key functions, such as construction, waste management, energy distribution, and intelligent services in the field of welfare and well-being.
- 6) Local authorities seek eco-efficient solutions in structural planning and construction of urban regions.
- 7) Local authorities recognise the importance of public procurement for local economy and take action to improve the efficiency, innovativeness and environmental liability of public procurement.
- 8) Interaction between different sectors and actors is increased. Strategy documents emphasise the importance of cooperation and networking.
- 9) A green and low-carbon economy and business activities balanced with the carrying capacity of ecosystems are regarded as integral elements contributing to the municipality's viability.

Financing of green economy projects



Several of the examples given in this brochure can be deemed as projects suitable to be funded through the Finnish Structural Funds Programme 'Sustainable growth and jobs 2014-2020'. The funding provided out of the Structural Funds will focus on research, development and innovation; the basic functions and infrastructure of organisations will not be funded, however. Examples of measures that can be taken within low-carbon projects to be funded out of the Structural Funds Programme:

- Support the development and commercialisation of low-carbon products, services and production methods, and introduce new technology;
- Support the prototypes, piloting and demonstrations of new low-carbon products, materials and production methods;
- Develop low-carbon transport systems and modes of transport;
- Develop innovations and technologies improving the energy efficiency of housing;
- Create networks and forms of cooperation to make better use of material and energy flows;
- Support the region's business activity by developing the research, development and innovation infrastructure; make use of piloting, experiment and demonstration environments;
- Create development platforms for and increase cooperation in research, development and innovation

The European Union contributes to the development of Finnish regions through the European Regional Development Fund (ERDF) and the European Social Fund (ESF). Between 2014 and 2020, a total of 2 640 million euros of structural funding will be granted for projects in mainland Finland. One half of the sum will be paid by the European Union and the other half out of national funds.

between universities, higher education institutions, research institutes, vocational institutions, the general government and enterprises.

Funding can be applied for as of spring 2014. More detailed information on how to apply will be published on the Internet at www.rakennerahastot.fi. Please contact regional councils and the Centres for Economic Development, Transport and the Environment for more information on funding offered by the Structural Funds and other funding instruments for European regional cooperation and by the European Neighbourhood Instrument (ENI) for cooperation with Russia.

Funding is also available from other European Union's financial instruments besides the Structural Funds, for instance from the LIFE Programme and the EU framework programme Horizon 2020.

The green economy is also promoted at a national level. Further information on funding opportunities is available from several sources, such as the Strategic Programme for the Cleantech Business, the Finnish Funding Agency for Technology and Innovation (Tekes), the Finnish Innovation Fund Sitra and the Academy of Finland.

If judged by the usual economic criteria, several measures related especially to energy-saving and material efficiency are, in fact, very profitable even without third party funding.



**Additional information on climate issues is available
in the online brochure 'Local government and climate
change' published by the Association of Finnish
Local and Regional Authorities and available at
http://shop.kunnat.net/product_details.php?p=324**



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