

# Summary of the Climate Change Mitigation and Adaptation Program work in Central Finland

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## 1. Introduction

In Central Finland, there is a Climate Change Mitigation and Adaptation Strategy 2020 that has been published on year 2011. In this strategy the target year is 2020. Since the year 2020 is heading, it is time to update it. The international regulations have also been tightened since 2011 which is another reason for updating the strategy.

In Paris Agreement Finland is part of European Unions agreed targets. Within Paris agreement the Greenhouse Gas Emissions (GHG)-reduction target for Finland is 40 % on year 2030 compared to 2005 level.

As there is one wide strategy for Climate Change Mitigation and Adaptation in Central Finland, no need was seen for another strategy, but to more concrete action program. For this reason in the updating process the Climate Change Mitigation and Adaptation Strategy of Central Finland 2020 was updated to Climate Change Mitigation and Adaptation Program of Central Finland 2030.

## 2. Evaluation of the Climate Change Mitigation Strategy 2020 realization

As a background material, a study about the procurement of the Central Finland Climate Change Mitigation and Adaptation Strategy 2020 was conducted during autumn 2017 (Schwartz 2017). This study „Objectives, Implementation and Development of the Regional Climate Strategy -case Central Finland“ was published as a master’s thesis in the University of Jyväskylä.

In this study, it was seen that the GHG-emissions were reduced comparing the situation in years 2014 to average of years 2004 and 2006 in all the studied sectors. The studied sectors were energy, transport, agriculture and waste. In this study also some projections were done and it was concluded that most probably the GHG-emission reduction targets were about to be met in all sectors except for transport.

As a conclusion, it was seen that the tools for emission reduction were mainly well suited to the climate policy in international, EU and national levels. Only more concrete tools were seen to be worth of adding. The biggest need of GHG-emission reductions were seen to be on the sectors of transport and energy.

## 3. Climate change effects of the regional plan

As part of the Climate Change Mitigation and Adaptation Strategy updating work, effects of Central Finland regional plan to climate change were studied from the aspects of bioeconomy and renewable energy. In this case renewable energy includes wind power and geoeconomy (Valkonen 2018).

In this study, it was seen that the bioeconomy on land use planning offers solutions to the climate change mitigation via three ways:

- Biomass-producing sectors can maintain or increase carbon sinks, if forest management is sustainable.
- In long-lifetime products bio (eg. wood) based products can act as carbon storages.
- Bio-based products may substitute fossil based products such as energy and packages.

The conclusion of the work was that the region can reduce greenhouse gas emissions through bioeconomy and renewable energy if they are based on sustainable use.

The BEA-APP GoA 2.2. Output „Transnational recommendations for improving the perspectives for spatial planning for renewable energies in the Baltic Sea region“ highlights the need for developing new methods for spatial planning of renewables. As part of the updating process a study was conducted about the climate change effects of the regional plan. This evaluation of the land use planning is crucial background information for the spatial planning development.

#### 4. The updating process of the Climate Change Mitigation Strategy

The target of the new program was set to be more concrete program and learning from positive examples. Thus, it was seen that the wide scale of stakeholder groups need to be involved in the process in various stages. This was seen as a necessity since the implementation of the strategy is very much dependent on the stakeholders commitment. The workshops and presentations are presented in Table 1.

Table 1. Stakeholder involvement in process of updating Central Finland Climate Change Mitigation and Adaptation Program.

<b>Date</b>	<b>Stakeholder group</b>	<b>Type of the event</b>
23.4.2018	Experts from RCCF and Centre for Economic Development, Transport and the Environment of Central Finland	Workshop
26.4.2018	Blog of Regional Council of Central Finland	Blog script "Keski-Suomen ilmastostrategia – hyvä strategia?"
27.4.2018	Regional board of the Central Finland	Presentation
3.5.2018	Municipal landuse planners of Central Finland	Workshop
8.5.2018	Environmental sector experts from Central Finland Municipalities	Workshop
15.5.2018	Municipal managers of Central Finland municipalities	Presentation
7.8.2018	Web page publication, press release and information for stakeholders via e-mail, ask for comments and examples from stakeholders and citizens	Publication
17.8.2018	Youth Council of Central Finland	Presentation and workshop
3.9.2018	RCCF executive team	Presentation and discussion
4.9.2018	Forest Council of Central Finland	Presentation
11.9.2018	Transport System Planners Group of Central Finland	Presentation
12.9.2018	Group for Sustainable Life Style in Central Finland	Presentation and discussion

<b>Date</b>	<b>Stakeholder group</b>	<b>Type of the event</b>
26.9.2018	Climate Change Day of Central Finland Municipalities	Seminar
1.10.2018	Experts from RCCF and Centre for Economic Development, Transport and the Environment of Central Finland	Workshop
22.10.2018	Members of Parliament from Central Finland	Presentation
23.11.2018	Board of the Central Finland	Presentation
5.12.2018	Blog of Regional Council of Central Finland	Blog script „Ei tullut hyvä ilmastostrategia - tuli konkreettinen ilmasto-ohjelma“
5.12.2018	Publishing the report	

It was decided that the public may also have a chance to give their opinions about needed actions. Also it was seen that the long strategy report in paper is not the most relevant way to publish the Climate Change Mitigation and Adaptation Program. Thus a web page was planned, designed and published to be the major output of the program. This format also enables the program to be editable and easy to update. In addition to web page, also a publication was made based on the web page.

The Climate Change Mitigation Program formed in a web page during time from August to October. The content was done in workshops, as expert preparation and with help of public comments and examples via web page.

As part of the updating process, BEA-APP GoA 2.2. Output „Transnational recommendations for improving the perspectives for spatial planning for renewable energies in the Baltic Sea region“ was integrated to the program updating. All in all, the role of spatial planning is important in climate change mitigation work. During the climate change mitigation and adaptation program work in Central Finland, there was a workshop for landuse planners. The possibilities of the land use planning in climate change mitigation and adaptation work was identified in the workshop. As an organization responsible for regional land use planning, the experts of RCCF considered the draft version of GoA 2.2 recommendations in relation to spatial planning. Based on these, examples of good practices about spatial planning in climate change mitigation and adaptation work were to the program.

The Climate Change Mitigation and Adaptation Program of Central Finland 2030, is based on good examples of practices used. About renewable energy and land use planning, the good examples introduced, include a study conducted about the potential wind energy areas of Central Finland. Another example is a geoenergy symbol for the whole Central Finland in the regional landuse plan.

## 5. The Climate Change Mitigation and Adaptation Program of Central Finland

For the updated Climate Change Mitigation and Adaptation Strategy of Central Finland four themes were selected. Themes were selected to be such that are such that a region may have effect on and such that are big emission sectors in the region. Thus selected themes were energy, transportation and production. In addition, adaptation was seen to be an important thing and was selected to be fourth theme.

### 5.1. Energy

Energy theme contains the questions of the energy saving and energy efficiency as well as the consumption and production of electricity, heating energy and transport fuels. Two targets were set for this theme, namely 1. Increasing energy efficiency and 2. Transition to local renewable energy sources.

The actions to reach the target 1 include the Energy Efficiency deal of Municipalities in Finland, ways of promoting energy saving like consultation services and the changes in infrastructure like the extract heat recovery -systems. The actions to reach the target 2 includes promotion effect of public investments, building the gas traffic fuel stations and taking the renewable energy sources into account in regional land use planning.

### 5.2. Transportation

Transportation theme contains the ways of moving and transportation as well as the ways of reducing the need for transportation. Three targets set to this theme were 1. Increase in walking and cycling, 2. The more compact urban areas, the better services and 3. Diversity in transport and in services of transportation.

The actions to reach the target 1 include building better conditions for cycling, increasing services for bicycle renting and increasing amount of electric bicycles. The actions to reach the target 2 includes promoting of moving services, distance services and distance work and making more compact urban areas. The actions to reach the target 3 includes e.g. new car sharing services and encouraging to use of public transport

### 5.3. Production

Production theme contains sectors of agriculture, forestry, industry, building and waste treatment. The main purpose is to increase resource wisdom and circular economy and to increase the new sustainable products, production ways and subsectors. Three targets set for this theme were 1. Promotion of circular economy and recycling, 2. Towards sustainable products, materials and subsectors, and 3. Changes in food production and consumption.

The actions to reach the target 1 include ways of promoting for circular economy, developing products from wastes and promoting new ways for recycling. The actions to reach the target 2 includes different innovations how renewable biobased materials are used to replace fossil fuel materials like the production of wood-based textiles, and promoting wood construction. The actions to reach the target 3 include promoting of new, local plant-based protein sources, promoting use of local low-value fish and various ways for reducing food wastage.

### 5.4. Adaptation

Adaptation to climate change differs from other themes as in this theme the question is not about reducing emissions but to adaptation to changing conditions. Three targets set to this

target were 1. Studying the effects and anticipating, 2. Information and awareness and 3. Preparation via infrastructure.

The actions to reach the target 1 include studying the effects of the different forms of extreme weather conditions, studying effects of the land use to climate change and increasing adaptation capacity to changes via studies. The actions to reach the target 2 include various ways of informing different groups of citizens and various networks municipalities can use for their climate change mitigation work. The actions to reach the target 3 includes various green infrastructure solutions for controlling the urban disperse waters and taken care of working of society via cabling power lines from air lines under the ground.

## 6. Summary

The updating process of the Climate Change Mitigation Strategy has consisted of different parts. First step was a background study of the evaluation of the Central Finland Climate Change Mitigation and Adaptation Strategy 2020 targets. The possibilities of land use planning, especially regional land use plan were evaluated from the aspect of climate change effects. The actual updating process of the Central Finland Climate Change Mitigation and Adaptation Program included a lot of stakeholder and citizen involvement.

As a main output of WP2.4 from RCCF are the web page of the Central Finland Climate Change Mitigation and Adaptation Program 2030. Also a report is published. In the Program there are four themes: energy, transportation, production and adaptation. There are two to three targets for each theme. The actions to reach the targets are presented via examples of practises that already exist in (mainly) Central Finland. Thus the idea is to show that we already have good practices which we can learn from each other.

## References

Climate Change Mitigation and Adaptation Program of Central Finland, web page:  
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