

Adaptation to climate change in Latvia: agrarian sector

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INTRODUCTION

The climate change level projections indicate on possible increase in the average temperature in the subsequent 30 years in Latvia. For further development of Latvian countryside in the climate adaptation measures, the agrarian sector is of great importance-farming and agriculture which, consists of small production units in fragmented rural infrastructure, thus creating unequal applicability of tools and knowledge. Institutions, that develop plans of policies, programs of activities, create binding conditions and develop administration system, assign a minor role to the preventive matters of climate change adaptation. Therefore, in the adaptation to climate change it is necessary to assess the knowledge and attitude of the main involved target groups.

The aim of the research is to evaluate existing experiences in climate change adaptation approaches in Latvia, compare with similar solutions in other Baltic Sea Region countries and elaborate suggestions for adaptation options in most sensitive and nationally important sectors

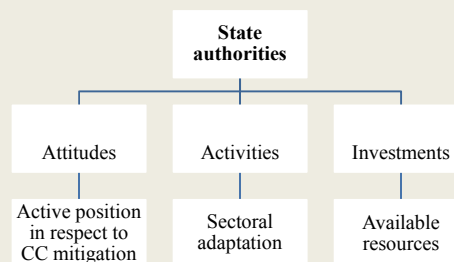
MAIN IDENTIFIED PROBLEMS

- Poor representation of the country in climate models
- Inadequate sampling of uncertainties in the chain of climate change to impact scenarios
- Lack of good data for model evaluation
- Fragmentation of existing information on climate change impacts and adaptation measures- need for systemic and interdisciplinary researches
- Missing capacity in climate change modelling and major doubts on the applicability on possibilities for using these approaches
- Lack of research and information on climate change impacts on ecosystems, on ecosystems goods and services
- Missing knowledge on the systemic character of climate change system and impacts, and therefore - how to adapt to climate change
- Evaluation of adaptation economic effectivity; non adaptation costs

PRIORITY ACTIVITIES

1. Develop climate change scenarios that integrate environmental, land-use, geographical and socio-economic aspects
2. Develop tools for multi-disciplinary research (for combining various types of information)
3. Impacts on habitats and organisms
4. A more precise data, with special focus on spatial models and risk maps, as well as improvement of monitoring needs;
5. New and/or improved models on risk assessment
6. Studies on basic ecosystem mechanisms and interactions under climate change;
7. More focused impact assessments for sectors (e.g. health, infrastructure, tourism, agriculture, biodiversity and societal groups);
8. Multi-disciplinary studies, such as synthesis studies, scenarios development, socio-economic assessments of climate change impacts, cost-benefit analysis, social science.

VERTICAL STRUCTURING



UNCERTAINTY

Uncertainty is an inherent part of climate scenarios. Uncertainty increases when scaling up from greenhouse gas emissions, to projecting global and regional warming and further up to presenting scenarios on ecosystem changes. Variability and uncertainty in climate projections are greater for smaller geographical scales and hence the simulations for an individual country have poorer certainty than those for the global level. Uncertainty principle is essential at development of adaptation approaches.

ELEMENTS OF THE PLAN

Climate change adaptation plan should have three major elements: First, it describes the status of activities and analyses gaps within the system. Second, it provides recommendations for actions to support decisions. Best practice examples illustrate ways and opportunities how to cope with different challenges. Finally, it is outlined what specific funds are available for specific activities