

SURVEY ON CLIMATE CHANGE ATTITUDES OF THE POPULATION

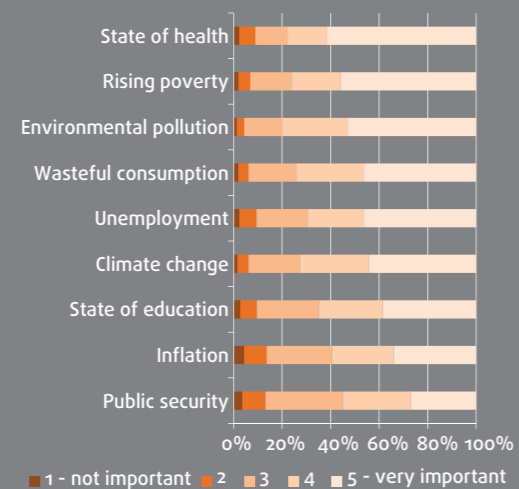
In order to estimate the future state of development of the population, it is essential to obtain knowledge on how society reacts on climate change. We conducted a survey with a sample of more than 3000 people which represents Hungarian adult population according to gender, age-groups, education, types of municipalities and NUTS3 level place of residence.

As a result, we gained insight on how the population conceive climate change and its observed and

future effects; whether people think climate change is an actual challenge for Hungary; how they think they are affected by these new challenges; and which adaptation capabilities do they possess. We also asked about the organisations people are expecting to take action. Moreover, the perception about chances for climate migration was also asked from the respondents.

Climate change is evaluated by the Hungarian population as the fifth most important challenge in the society, lagging behind health issues, environmental pollution, rising poverty or wasteful consumption. Tackling climate change is attributed to individual action, according to the population, but respondents also emphasized the role of the national government. Interestingly, researchers and the academia were put to the first place in dealing with climate-change-related issues.

Do you find the following challenges important in Hungary?



The project receives a € 175 thousand grant from Iceland, Liechtenstein and Norway within the Adaptation to Climate Change program of the EEA Grants.

Fund operator: Regional Environmental Center for Central and Eastern Europe (REC).

Beneficiary: Centre for Economic and Regional Studies, Hungarian Academy of Sciences.

Duration of the project: 5th May 2015 – 31st December 2015.

More information: nater.rkk.hu

eeagrants.org
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LONG-TERM SOCIO-ECONOMIC FORECASTING FOR HUNGARY

SHORT DESCRIPTION OF THE PROJECT

The project, realised by the Centre for Economic and Regional Studies, Hungarian Academy of Sciences, advances adaptation to climate change by forecasting long-term socio-economic development of Hungary until 2050. The research was funded by the EEA Grants in the Adaptation to Climate Change programme. The results of the project will be part of the National Adaptation Geo-Information System (NAGIS). Apart from the literature review and methodological development of the projections, NAGIS will be extended by socio-economic indicators referring to a future state in Hungary. The subject of

our study in the project was the interrelation of socio-spatial processes and climate change on various geographical scales and in different time-frames. The research covered demographic, economic and land-use change, and was completed by a survey on the vulnerability and the adaptation ability of the population towards climate change. Along with the modelling, recommendations were made on how the data submitted to NAGIS may be used; thereby assisting public-policy-formation in both climate and regional policies.

LITERATURE REVIEW

Adaptation capacity to climate change is one of the most urgent challenges of our time. In order to understand and model socio-economic change related to climate change in Hungary, a literature review was carried out, covering the inter-relations of climate change, socio-spatial development and regional policies.

The aim of this part of the research was to evaluate the Hungarian and international literature from the perspective of climate, spatial and socio-economic modelling. The overview took into consideration

regional (sub-national) models, Hungarian national level examples and current EU development strategies and legislation.

The main result of the literature review is that if we aim at describing future state of socio-economic development, climate change must be included in the development of models. This is true in spite of the fact that using climate models in socio-economic adaptation is limited in the sense that those models do not directly take into account socio-economic indicators.

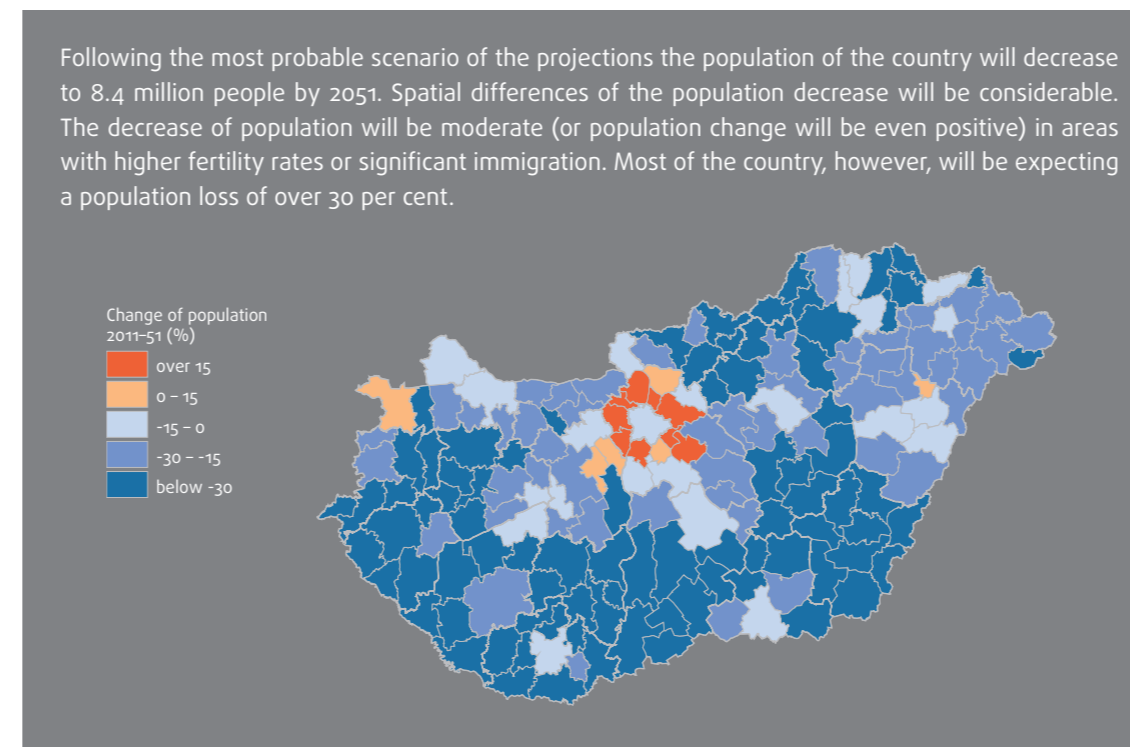
DEMOGRAPHIC PROJECTION

The demographic projection of the research estimated future demographic development at LAU1 level in Hungary. This part of the project is essential to define the number and demographic composition of people who might be severely affected by climate change.

Our projection uses a cohort-component method, as it does not necessitate complex data inputs, is

to be calculated by using easily understandable methods, is fully replicable, reliable and approved by international population projections.

Calculations covered Hungary at the LAU1 level until 2050. Apart from that, a national level simulation was carried out in order to estimate occurrences of certain diseases and causes of death which might be related to climate change.

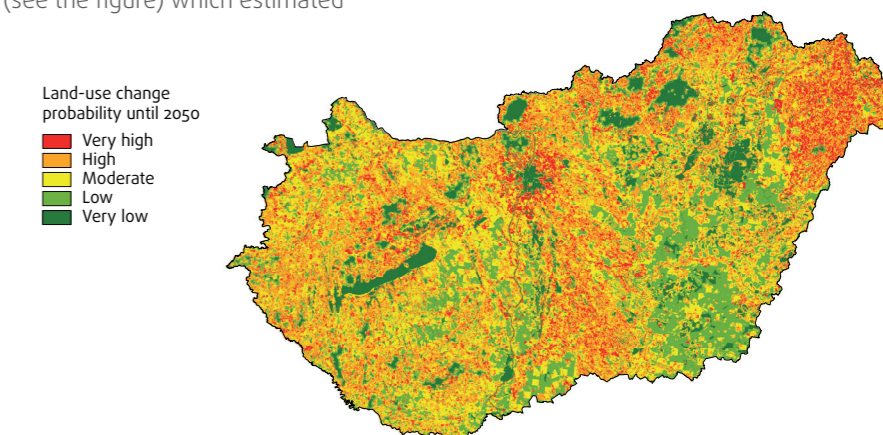


LAND-USE MODELLING

A complex investigation of current global and regional environmental challenges necessitates the evaluation of land-use patterns and the estimation of future land-use conditions. This part of the project used the Land Change Modeler software for defining future land-use and land-cover patterns in Hungary. The two outputs of the modelling were a soft forecast until 2050 (see the figure) which estimated

land-use change, and a hard prediction for land-use categories by 2030.

The results foresee a homogenisation of land-cover in Hungary. Forests will be expanded considerably, artificial surfaces in a moderate degree. The area of heterogeneous agricultural areas, as well as arable land, grasslands and pastures will decrease.



ECONOMIC FORECASTING

The future change of the most important economic indicators were also forecasted in the course of the project. Because of the characteristics of economic indicators, forecasts until 2050 are uncertain, thus several scenarios and possibilities were considered. We opted for a macro-economic structural model framework. This describes a state of equilibrium

with standard variables explaining future change of the main economic indicators (GDP, consumption, labour input, etc.). The national-level model was downscaled to NUTS3 level, allowing measurements of sub-national inequalities of economic development.