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Climate change and biodiversity

findings of a survey on national climate change policies of seven CEE countries

Introduction

Climate change is clearly a top priority issue among environmental matters today. Considering the size of the threat, the capacities devoted to the issue, as well as the interconnectedness of environmental and development issues, what is happening in the field of climate change is largely decisive for the state of environment.

Unfortunately there are many attempts nowadays to make climate change a separate sector and seek technological solutions for the mitigation and adaptation challenges. However, as experience shows, such approach does not lead to long term solutions, but instead expand the problem and transfer environmental pressure to other fields. There are already signs that climate change actions lead to ecosystem degradation, which in turn further deteriorates also the climate problem.

As being parties of the Kyoto protocol, EU Member States are obliged to develop their national programmes on climate change mitigation and adaptation. CEEweb has compiled a questionnaire about these strategies in order to assess CEE governments' approach to climate change. Our goal with this survey is to draw EU and national decisionmakers' attention to the critical points and deficiencies in current climate change policies and thus prevent adopting further false "solutions".

Professional NGOs from five Central and Eastern European EU Member States (Czech Republic, Hungary, Latvia, Romania, Slovakia) and two additional countries from the region (Macedonia and Serbia), have filled in the questionnaires. In this document you can find the summary of these, as well as our recommendations for a sufficient and holistic climate policy.

What we found in National Climate Strategies

If we apply the DPSIR model (Driving Forces-Pressures-State-Impact-Response) to the changing climate (being the State) and its adverse effects (being the Impacts), our Responses will be the mitigation and adaptation measures. These Responses can target either the Pressures or the Driving

Forces, however, we believe that aiming only at the environmental pressures we might have several measures, yet leaving the driving forces untouched we will not achieve our goal. Instead, we expand the problems by eliminating one pressure and enhancing another. To give an example, if we focus only on CO₂ emission in climate change mitigation, there are several technological solutions to draw back the emissions – from the energy efficiency through the carbon capture and storage systems to the agrofuels, just to mention a few – but on one hand, the savings due to the technical solutions can easily be overgrown by the fast increase of needs, and on the other hand, some of these, first of all the intensive farming of agrofuels, seriously endanger biodiversity.

That is why several questions in our questionnaire were focused on the drivers. We believe that no sufficient climate policy can exist without realizing and targeting the **driving forces**. We think that the main driver of climate change is the **constant economic growth** in terms of growing energy and material use. None of the countries that we asked have identified this basic principle in their National Climate Strategy. However, two countries (Macedonia and Serbia) mention it in their related documents (see Sources), but they do not have Climate Strategies yet. Consequently, none of them propose the decrease of demands, namely, the use of energy and material under a certain carrying capacity. On the contrary, they expect further growth in use of electricity (Macedonia), intensification of agriculture and demand of energy in transportation (Hungary). However, some countries (Czech Republic, Hungary, Serbia, Slovakia) mention that there should be some changes in the structure of production and consumption, e.g. production should be shifted towards lower energy-intensity, and consumption towards higher energy-efficiency.

But even the **environmental pressures** – which are in the scope of the strategies - are not covered fully. In fact, none of the strategies we analysed deal with the whole scale of pressures, they focus mostly on the greenhouse gas emissions, first of all, CO₂. All countries but Macedonia (who does not have quantitative obligation under Kyoto) propose that the emission of CO₂ and other greenhouse gases should decrease under a certain limit, which is mostly the implementation of EU legislation and therefore in most cases it can not be counted as domestic policy. The emission of other polluting compounds, however, is not mentioned by any strategies (except for the Serbian Sustainable Development Strategy), although these also can significantly contribute to climate change by the weakening of ecosystem services. Only few countries recognize that beside direct ones, there are many by-pass (indirect) pressures leading to climate change, the identifying of which requires a coherent system-thinking (Czech Republic, Serbia). None of them count with virtual pressures.

In our understanding, **the emissions, the excessive use of natural resources and the degradation of natural ecosystems** are equivalently important causes of climate change. In case of natural resources, we think that a realistic pricing (e.g. tax or quota on natural resources) could help avoiding their over-exploitation, which is mentioned in the Czech and Hungarian strategies, but only generally. In the Czech Republic, continuously increasing tax on electricity, coal, gas and petrol is planned, whereas the Hungarian Strategy describes a possible tax reform with new taxes imposed in the proportion of natural resources used, and at the same time lower taxes on human labour and income, but there are no concrete provisions. All countries but Macedonia plan to minimize the waste of material and energy through closed cycles in the production and consumption.

Our general impression of the climate strategies is that they focus mostly on technologies and pay less attention on **biodiversity and ecosystem services**. In our view, **sufficient cover of natural or semi-natural habitats** is indispensable both for its direct climate-regulating role, for its adaptation capacity and for its role in biogeochemical cycles, providing various ecosystem services to man. While the climate-regulating role of decreasing CO₂ level can be expected only on the long term, and happens on the global scale, that of natural surface cover operates on the short term and on local and regional level. When it comes to the adaptation, it is obvious that a mosaic-like, diverse landscape providing diverse connections between locations of natural habitats is the most viable. But if we look at the strategies, no countries propose that the cover and coherence of natural or semi-natural habitats should not further decrease. None of them propose, either, that the structure of landscape as a whole should be diversified, to strengthen natural interactions and ecosystem services including climate regulation (it is mentioned in the Serbian Sustainable Development Strategy).

There are however several provisions listed in the strategies in the sectors of forestry, agriculture and conservation. Most countries (Hungary, Latvia, Macedonia, Romania, Serbia) promote the increasing of the forested area and reforestation of not used agriculture land, but sometimes they favour species which are not native (Hungary). At the same time, close to nature forest management is also mentioned quite frequently (Hungary, Latvia, Macedonia, Romania). In agriculture, supporting environment-friendly methods, soil- and water-friendly technologies, extensive and ecological farming, traditional methods and locally adapted breeds are often mentioned (Hungary, Latvia, Macedonia, Romania, Serbia). But nobody aims to take steps against expansion of intensive agriculture and large monocultures which cause the isolation of habitats. The Hungarian strategy also has several provisions

in conservation, e.g. maintaining heterogenic structure of habitats, fighting against invasive species, ensuring permeability of the landscape for species migration and establishing green corridors (the last two also mentioned in the Serbian Sustainable Development Strategy). No countries plan to reconsider and, if needed, enlarge the area of protected land and Natura 2000 in the light of climate change.

All seven countries aim to satisfy the future needs of energy with increased share of **renewable energy sources**. Although most of them prefer also sources which are not depletable (Hungary, Latvia, Macedonia, Serbia, Slovakia) the most emphasis is put on **biomass and biofuels**. All countries plan to increase their share. In our view, energy plantations and biofuel production must be carefully thought-out, because the intensively cultivated large homogeneous fields can limit the natural resources' ability of renewing, withdraw biological diversity and further worsen the structure of land cover due to their high demand of territory and chemicals. Only two countries (Hungary and Romania) aim to protect forests and other natural or semi-natural ecosystems from the land use change due to the growing need for biomass, and no countries determine the possible locations and maximum areas of biomass plantations. We think that the last two provisions should be vital for every climate strategy.

All strategies aim to **raise public awareness** about climate change. Most of them propose a **permanent consultation body** on climate policy, for the synthesis of knowledge, development of adaptation strategies, and sectoral integration (Hungary, Macedonia, Serbia, Slovakia. In the Czech Republic it already exists, was not proposed by the National scheme, but the body meets just 2 times a year for 2 hours.) But only few of them propose to integrate the policy of climate change in various other policies, in order to make a **coherent environmental policy** with holistic approach. There are connections mentioned towards agri-environmental and forest-environmental programmes (Hungary, Macedonia, Serbia), Water Framework Directive activities (Hungary, Macedonia, Serbia), rural development (Macedonia, Serbia), regional development plans (Hungary, Macedonia), authority permissions (Macedonia) and energy policy (Czech Republic, Hungary, Macedonia, Serbia). All strategies but the Czech one aim to support scientific research on the ecological aspects of climate change.

Recommendations for a sufficient Climate Strategy

In our view, a powerful national climate strategy should deal with the whole system of production and consumption, instead of seeking for technical solutions while accepting unsustainable growth in various sectors, such as energy, agriculture, transport, etc. We cannot rely only on the better efficiency of technological solutions, as long as our demands are growing in the current rate. The strategy should give structural answers to the challenge of climate change, resulting less environmental pressure and better adaptation ability to climate change at the same time. Eventually both adaptation and mitigation need the same measurements, a new macro-structure with lower demand of natural resources and space. Adaptation activities, which have positive feedback to the drives of climate change, in other words, which further increase environmental pressures, should be avoided. Instead of listing various implementations, the strategy should give a framework by assigning the realistic price of natural resources, or making them less available, which could help the society finding the right answers themselves. Laying a tax on greenhouse gases and natural resources, or introducing a quota of natural resources in the market could be such frames. The patterns of production and consumption must be turned in a way that changes products and services with high demand of energy and material to those of low demands. Production and consumption should be connected to cycles both vertically and horizontally in various points, so that these cycles are harmonized with biogeochemical cycles, and minimize the waste of material and energy.

Although increasing CO₂ level is one of the most severe pressures, narrowing the strategy's scope to sectors directly emitting greenhouse gases could easily play down other environmental interests, first of all, biodiversity. Beside emissions, further important pressures leading to climate change are (1) qualitative and quantitative degradation of (semi)natural habitats and (2) excessive use of natural resources. All three kinds of pressure have to be the subject of the strategy, with the same priority.

It is vital for every country to ensure the best possible operation of ecosystem services by saving their natural interactions and structures, which will protect man against climate change even if the limitation of CO₂ level is failed. It is absolute necessary to limit further degradation of green areas, as well as to stand for the largest possible reconstruction of natural cover. A mosaic-like, diverse landscape is preferred providing diverse connections between locations of natural habitats. To achieve this, size of the fields should be maximized, and semi-natural habitats should be constructed between them.

Payments in agriculture and forestry should not favour intensive farming methods. Owners of land with high ecosystem services should get special subsidies.

It is worrisome, that excessive biomass and biofuel use is supported by the EU and the governments. Taking land from nature in order to grow biomass is much more harmful for the Earth's ecosystem, than the – supposed – advantages which biomass use means in term of 'energy security' and CO₂ concentration. Therefore, before giving permissions of biofuel and biomass production, the possible locations and maximum areas of plantations must be determined in order to avoid damage of nature. By no means should permission be given for transforming natural or semi-natural land into plantation. Otherwise, biomass production might further increase CO₂ and CH₄ load due to the degradation of habitats and ecosystem functions, which can be orders of magnitude bigger than the emission saved by the biomass grown on the area.

Furthermore, switching to renewable energy can only be effective in environmental view, if it substitutes fossil energy, instead of simply contributing to the growing energy demand of man. Even though, sources which are not depletable (solar and wind energy) must be preferred to biomass.

Climate change must be integrated in environment policy as a whole, in order to preclude making a new separate sector. Environmental policy should have a coherent and holistic approach.

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Sources

Czech Republic:

A. NATIONAL PROGRAM TO ABATE THE CLIMATE CHANGE IMPACTS IN THE CZECH REPUBLIC (2004)

English version (110 pages):

[http://www.env.cz/www/klima.nsf/defc72941c223d62c12564b30064fdcc/e4d45341c003b8f6c1256e2e00442c70/\\$FILE/D-71-04-reviewed%20NPCC.pdf](http://www.env.cz/www/klima.nsf/defc72941c223d62c12564b30064fdcc/e4d45341c003b8f6c1256e2e00442c70/$FILE/D-71-04-reviewed%20NPCC.pdf)

B. Evaluation of the NATIONAL PROGRAM TO ABATE THE CLIMATE CHANGE IMPACTS IN THE CZECH REPUBLIC (2007)

(no english version)

C. Fourth National Communication of the Czech Republic on the UN Framework Convention on Climate Change Demonstrable Progress Report on Implementation of the Kyoto Protocol (2005)

English version (100 pages):

<http://unfccc.int/resource/docs/natc/czenc4.pdf#page=85>

Hungary:

National Climate Strategy (Nemzeti Éghajlatváltozási Stratégia 2008-2025. Környezetvédelmi és Vízügyi Minisztérium, 2007.)

http://klima.kvvm.hu/documents/14/NES_6.4c.pdf

Latvia:

Klimata pārmaiņu samazināšanas programma (Climate change mitigation programme) 2005.-2010; issued by Cabinet of Ministers on April 6, 2005; Regulation nr Nr.220;

Romania:

no strategy was approved yet since Romania is a EU member.

According to Mr. Attila Korody, minister of Environment Ministry and Sustainable Development a new Strategy regarding climate change is expected to be approved in the near future.

The source of documentation in filling the questionnaire is the official web site of Environment Ministry (www.mmdd.ro) and an electronic newspaper related the environment (www.green-report.ro).

Slovakia:

Strategy of SR for fulfillment of obligations of Kyoto protocol (Stratégia SR plnenia záväzkov Kjótskeho protokolu)

Macedonia:

Second National communication on climate change (draft report) because R.Macedonia has not prepared Strategy for climate change yet.

more about this document can be found at www.unfccc.org.mk

Serbia:

In Serbia there is no adopted National Climate Strategies Document, yet. It is in plan for 2011. Some principles in this issue could be found in the following documents:

1. NATIONAL SUSTAINABLE DEVELOPMENT STRATEGY, Adopted by the Government of Republic of Serbia on May 9th 2008, available in Serbian language on <http://www.prsp.sr.gov.yu/attachment/attachment/Strategija%20odrzivog%20razvoja.doc?id=497>

CEEweb for Biodiversity is a network of non-governmental organizations in the Central and Eastern European region. Our mission is the conservation of biodiversity through the promotion of sustainable development.