Adaptation to Climate Change in Hungary and Latvia

Study visit from Latvia to Hungary

October 6-7, 2014

Under the framework of EEA Grans Programme complementary action, a Latvian delegation representing the Programme Operator of EEA Grant LV02 Programme (National Climate Policy) visited Hungary and had a two days meeting with the Regional Environmental Center for Central and Eastern Europe (REC), the Fund Operator of EEA Grant HU04 Programme (Adaptation to climate change). The main aim of the meeting was to share experiences when implementing the adaptation related programmes in Latvia and Hungary. At the same time, following the request by Latvians, information was provided on general climate related issues in Hungary, as observations, modelling, national climate strategy and policies. The meeting was held in the REC Headquarters situating in Szentendre in its Conference Center. The Center is a recently refurbished building utilizing geothermal energy and solar panels, also the building itself is using energy efficiency in the most optimal way.

There were eleven participants from Latvia representing the Ministry of Environmental Protection and Regional Development (the Ministry), and the State Regional Development Agency. From REC the Executive Director and the EEA Grant team were attending. There were representatives of other Hungarian institutions and municipalities invited, as the National Adaptation Center of the Geological and Geophysical Institute in Hungary, the Hungarian Meteorological Service, and Municipality of Szentendre, Municipality of Tat, Lower Tisza District Water Authority.

The meeting was opened by REC Executive Director, Ms Marta Szigeti Bonifert who welcomed the Latvian guests and briefly introduced the REC, its mission and main activities.

The first part of the morning session was dedicated to the REC programme under the EEA G the basic idea and main objective of the programme, then the components and calls were presented. Following this the programme manager made a presentation focusing on practical aspects during the implementation. Discussion and questions raised by the Latvian delegation were related to the procedure, the details of implementation, the level of involvement of the REC staff, the development of the general guidelines, templates and the evaluation process of the project proposals. There is an essential difference between the two teams due to the fact that the REC is not Program Operator, but Fund Operator and consequently is not implementing projects. The Program Operator is FMO with the exclusive decision making right. Latvian guests were interested in how the basic supporting documents and templates were drafted. In the case of the REC, documents and templates developed by the National Development Agency (NDA the national focal point that time) were used as general guidelines, which were adapted by REC for their programme and conditions. Also, the REC followed all the relevant national regulations.

Next the main pillars of the Latvian program were presented by the representative of Ministry of Environmental Protection and Regional Development. This is the ministry in charge of climate policy. The main elements of the program are covering the development of national climate policy including both GHG mitigation and adaptation. The Ministry assigned the tasks to the State Regional Development Agency to develop the calls for proposals and evaluate them, but the Ministry is

monitoring them. The national regulation were elaborated by the Ministry, which took very long time. There are two predefined projects: National Adaptation strategy and National GHG inventory.

Open calls are related to GHG mitigation technologies, , education and capacity building components for enhancing knowledge of society (in form of small grant scheme). The program has two donor program partners (DPP), one for mitigation, one for adaptation related issues. Financial control is made by a relevant department of the Ministry. Monitoring will be on three levels including consultation, project reports following templates and on spot check. For the applicants and future project promoters assistance was provided for improving quality of proposals and then the project management. Proposal guidelines were prepared, applicants were invited for events where they could learn more about the proposal preparation and the requirements of implementation and they had opportunity to ask questions related to the interpretation of regulations and filling of project application form and receive prompt answer. Costs were paid from management costs.

The predefined project on National Adaptation Strategy implemented by the Ministry of Environmental Protection and Regional Development was introduced in a separate presentation. The complex task is including shaping the climate change scenarios and impacts for 2050-2100, the establishment of integrated data base for climate modeling, the development and maintenance of the adaptation monitoring system, the public GIS tool for visualization, database for sector specific information on climate change indicators in particular flood risk mapping and maritime spatial planning, risk and vulnerability assessments and identification of potential adaptation measures and proposal for adaptation strategy. Web platform is being developed on both mitigation and adaptation to climate change.

In the afternoon session two presentations were made by representatives of the Hungarian Meteorological Service. During the first one the meteorological observation system was introduced. The speaker explained how the homogenized interpolated temperature and precipitation data base was developed. Through the CartpatClim project digital climate atlas was developed for a grid of 10kmx10 km using data of 400 climate stations, which are publicly available and can be downloaded. Question was raised regarding the fee for companies requesting additional or more detailed information. It was confirmed that additional services are not for free.

Next presentation was about climate projections summarized the main results of their model runs conducted for Hungary using regional Climate Model (RCM). Significant warming was found in all seasons but not gradual year to year warming (there are fluctuations but the warming tendency is clear). Clear precipitation decrease is projected in summer. For long run it seems that compensation will occur in winter, meaning likely there will be more precipitation. Increase of dry periods, especially in Eastern part of the country can be expected. Precipitation intensity will very probably increase. The representative of the Hungarian Meteorological Service stressed that the RCM is not providing detailed resolution for urban areas, for this downscaling is needed and using 10 km x 10 km grid resolution.

Next agenda point was visiting a mobile dam constructed in the neighboring area of REC premises in Szentendre, where technical expert of the municipality introduced the innovative tool. Following the idea born in 2007, the mobile dam was started to construct in July 2012 and officially completed in 2013. In July 2013 there was a real test of the system- replacing the laboratory test-, when heavy flood reached the area. The real test was very successful proving that the mobile dam is functioning properly and protects the town from flood. The heaviest part of the mobile dam is 70 kg, so it is easy to put parts together and it takes about 4 hours working by 16 people. There is no maintenance cost, no storage cost, since the costs of building a storage of their own was included into the construction

project. The lifetime is expected to be minimum 50 years, the manufacturer's guarantee is for 10 years. At present the restoring work is still going on, there will be several things built to make the surrounding more beautiful.

In the last session of the first day, two pilot projects awarded within the EEA Grant programme were introduced. Municipalities of TAT and TOKOD introduced the main element of the project, which is a mathematical model using for the estimation of the optimal drainage system to protect the towns and their sewage system from heavy rainfalls. The project is to establish the required database for running the model to optimizing the drainage system. The model run will be replicable in other towns.

Representative of the Also Tisza Videki Vizugyi Igazgatosag (Lower Tisza District Water Directorate located in Southern part of Hungary) presented another pilot project aiming at building proper technical equipment (pumping stations to lift the water from a reservoir to areas suffering from drought, artificial canals) to improve the water balance of the area. The annual average precipitation dropped from 569 mm (1931-1987) to 537 mm (1988-2012) and the drought index (PAI) increased essentially, the water level in soil decreased highly. Since the financial needs are high, the whole work was split according to possible funding sources. The 1st phase of planned works had been completed already. The EEA grant is providing fund for the 2nd phase using the water of Tisza river to ensure water supply and improve drainage capacity in the region.

During the second day the National Climate Change Strategy of Hungary, the National Adaptation Geographical System in Hungary and the Climate Policy of Latvia were presented.

The first presentation was dedicated to introduce the National Climate Change Strategy of Hungary. The speaker presented the main element of the strategy, namely the National De-carbonization Roadmap; the National Adaptation Strategy and the Climate Partnership and Awareness Raising. The current document (which is an outcome of the revision of the first one approved in 2007) is under approval process. Latvian participants were interested in practical aspects of drafting the strategy (information on the institute preparing the strategy, contribution of the relevant ministry, how widely was it discussed, cross-sectoral aspects). The strategy was prepared by a research Institute called Geological and Geophysical Institute of Hungary hosting the National Adaptation Center (NAC) in close cooperation with the National Development Ministry in charge of climate change related issues). There was a wide range of information dissemination also through stakeholder consultations and received altogether about 800 opinions. Afterwards the strategy was revised and sent to the government for approval.

The second presentation was introducing the establishment of National Adaptation Geoinformatic System (NAGiS), currently under development by NAC within the EEA Grant Programme, as predefined project. The system will incorporate different surface, climate and sectoral vulnerability related data with a resolution of 10 km x 10 km for the whole area of Hungary. Work packages were listed, as establishing the system including both required hardware and software, methodological developments identifying and determining vulnerability indicators for water, natural inhabitants, land use, forestry and biomass. The presentation was received by great interest and participants raised several questions on details as what kind of data will be used and how the system will operate. The speaker made clear in his response that the main aim of the project is to establish the system, meaning multiple tasks as managing data acquisition, elaborate methodologies for calculating indicators and fill in with data available at present. The most important output is the system that can manage the data coming from different sources. First step is to collect the right data from the owners. The NAGIS won't own these data, just collect them. There are two types of data: Time scale historical data and

future climate scenario data. Currently the available data will be fed to the system, but once more reliable future climate data will be available, replacement will be made.
There is a governmental decree related to management of the data and maintenance of the NAGIS. The most important outcome of this project will be the methodology and the establishment of the system. Afterwards it can be refreshed more easily using updated information. There will be multilevel interface created where users at different levels will have access to output results.

Finally the Climate Policy in Latvia was introduced by representative of the Climate Change and Adaptation Policy Division of the Ministry covering both mitigation and adaptation aspects. GHG mitigation targets and related policy tools including financial instruments were summarized. The main concern is that what will happen after 2020. The GHG emission by that time will have been reduced already, further reduction seems to be a challenge. As for adaptation related challenges it was communicated that Latvia is also exposed to the impacts of climate change, which likely will be negative as erosion of seaside, intensive storms, health hazard, extreme floods and drought etc. Some adaptation measures started already to be introduced and integrated to sectoral policies.
As for GHG emission their main concern is that what will happen after 2020, the GHG emission had been reduced already, further reduction seems to be a challenge.

As conclusion, the Latvian delegation thanked for REC organizing the two day program. Both partners agreed that open discussions on the details of implementing the EEA Grant programs in Latvia and Hungary were very useful and expressed their wish to have further opportunities to exchange experiences.

Participants: REC (Marta Szigeti Bonifert, Judit Balint, Zsuzsa Ivanyi, Zsuzsa Nagy, Reka Prokai, Zoltan Szabolcs Erdelyi)

The Ministry of Environmental Protection and Regional Development, Latvia (Ināra Buda, Solvita Ciganska, Jānis Gorbunovs, Diāna Stūrmane, Arita Vendta, Krista Pētersone, Māra Melnbārde, Ieva Bruņeniece, Līga Rūtiņa)

The State Regional Development Agency, Latvia (Sandra Cakule, Lelde Laiviņa)

National Adaptation Center of the Geological and Geophysical Institute in Hungary (Peter Kajner, Zsolt Mattanyi)

Hungarian Meteorological Service (Ildiko Dobi, Gabriella Szepszo)

Municipality of Szentendre (Putz Tamas)

Municipality of Tat

Lower Tisza District Water Authority