

EEA/NORWAY GRANT PROGRAMME

Adaptation to Climate Change in Hungary

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REGIONAL ENVIRONMENTAL CENTER

Basic information

- Name of the Programme: **Enhance Resilience to Climate Change Impacts**
- Name of Programme area addressed (referring to the MoU): **Adaptation to Climate Change**
- Name of the Programme Operator: **Financial Mechanism Office, FMO**
- Name of the Fund Operator: **The Regional Environmental Center for Central and Eastern Europe, REC**
- Name and country of origin of Programme partner: **Directorate for Civil Protection and Emergency Planning (DSB,)** based in Norway and acting as Donor Programme Partner (DPP). The program is developed and implemented in a partnership with DSB.



Relevance of the program

The proposed program

- is fully in line with the aims and objectives of the EEA and Norwegian Finance Mechanism: contributes to the wider aims of reduction of economic and social disparities in Hungary, and strengthens bilateral co-operation;
- provides assistance in areas most vulnerable to climate change impacts,
- aims to provide with enhanced understanding and CB for local stakeholders, authorities, scientific community and general public supporting on the ground actions and strategy development
- initiating activities which were missing in Hungary.



Program Preparation

- The proposed program is based on the assessment of the **current situation** in Hungary (knowledge levels, institutional capacity and awareness) through consultation process
- There is a lack of sound base knowledge and overall national/local adaptation governance
- It is a **national priority** for Hungary to build up a climate change adaptation framework (revision of NCC Strategy)



Challenges and needs

- Climate observations and results of the regional climate models project that the warming tendency in Hungary will be continuing in the 21 century. Warming is statistically significant for each season. Precipitation pattern will change
- **GAP: information system** with scientific base to provide with a ground for shaping adaptation strategy at different levels and supporting decision-making and **institution-system/network** promoting adaptation



Objectives of the program

Supporting ultimate goal (enhance resilience):

1. increase the understanding, knowledge on climate change impacts, vulnerability in Hungary in sub-regional **geographical detail** as well as in **sectoral areas**
2. promote planning and **actions** for increased climate resilience on local and sectoral level,
3. raise **awareness and build capacity** on climate change and particularly on impacts/vulnerability
4. show examples of **replicable projects** reducing the impacts of unavoidable climate change, builds resilience to climate impacts



Components of the program

The program intends to address the “adaptation challenge” with three different components which are inter-related to each other:

C1: Establishing a sound base for supporting adaptation related decision making - National Adaptation Geographical Information System-NAGiS

C2: Capacity building for municipalities

C3: Pilot projects



Component 1: C1_NAGiS

The system enables to have the necessary **input on required data** for sectoral assessments as well as for local vulnerability and resilience planning.

Components:

C1.1 – Development of NAGiS: development of the core of a country-wide system, 10kmx10km (climate data, digital terrain data, water, land-use and biodiversity related data)

C1.2 – Extension of NAGiS to other sectors
(agriculture, forestry, socio-economic etc)

C1.3 - Improvement of the knowledge base of NAGiS
(improving climate projections)



Component 2: C2_Local adaptation

Capacity Building

Raise awareness and build capacity for action on local level both in the local government and public aiming at:

- Build capacity of municipalities for developing and implementing local adaptation strategies and action plans
- Build long term stakeholder cooperation at local level for developing and implementing local adaptation strategies and action plans



Component 2: C2_Local adaptation Capacity Building (cont.)

C2.1 – Capacity building for local adaptation work

- Set strategy/methodology for the capacity building activities
- Develop training materials
- Develop guidelines for stakeholder cooperation
- Organize trainings

C2.2 – Support for the development of local adaptation strategies

- Stakeholder consultations and involvement
- Development of a long term adaptation strategy
- Development of a shorter term Adaptation Action Plan



Component 3:C3_Pilot projects

Main objectives:

- Bringing the information gathered toward **implementation**
- Support for **resilience building** activities in line with local planning/needs,
- Projects to be supported should address **common adaptation challenges** and should be **replicable** in other parts of the country



Areas of interest

One of the biggest challenges:

water availability (too much, too little), impacting ecosystems and the life of population on the country-side where income levels and general economic well-being is already lower than in cities

The program plans to support two pilot projects addressing two different aspects of the water related challenges:

1. Focus on **water retention** potential of a given area with measures **to limit water run-off**
2. Address **water scarcity** issues on areas where water is **not sufficient** to maintain agricultural practices of local population.



Pilot project sub-program

Aims for enhanced resilience to climate change

The program plans to support two pilot projects addressing **two different aspects of the water** related challenges:

1. Focus on **water retention** potential of a given area with measures **to limit water run-off**
2. Address **water scarcity** issues on areas where water is **not sufficient** to maintain agricultural practices of local population.



C3/1 Water saving pilot project

- The project is planned to focus on the water retention potential of a given area with measures to limit water run-off and to provide for other precipitation saving applications, gray water use which can also decrease the load of municipal drainage systems in case of extreme precipitation.
- The project can have several components addressing different water retention and water saving methods and giving examples of physical infrastructure how it could work.
- It can increase the surface of grass areas and tree coverage near water bodies to decrease evaporation and eutrophication, serving also recreation purposes
- Min number of population: 5,000



C3/2 Resilience building pilot project

- The pilot project is to:
- to address water scarcity issues areas with high aridification,
- build resilience in areas to maintain agricultural practices,
- its results should improve the livelihood of significant number of population on the impacted area.

The call supports both preparatory and physical infrastructure building activity which addresses both **water supply and drainage** related challenges in an environmentally friendly manner.

The project should be **sustainable** on a long run, however, for the project period maintenance costs can be also financed from project sources.



Target groups

There is a variety of target-groups:

- **Component C1:** climate projections, research institutes/groups, universities, government agencies dealing with sectors impacted by CC, + general public, media, political decision makers
- **Component C2:** local authorities and local stakeholders (NGOs, educational institutions)
- **Component C3:** local governments, local institutions of central government agencies, NGOs, local citizens



Outcomes

Expected outcomes of the projects:

- developed systems for information exchange on climate change adaptation;
- developed strategies and measures for adapting to climate change;
- increased capacity to assess vulnerability to climate change; and
- increased awareness of and education to climate change adaptation.



Outputs

- Realization and operation of NAGIS, a harmonized, reliable geographical information system for whole Hungary, to be applied for National Adaptation Strategy
- Providing with territorial distribution of data (projected climate parameters, impacts and vulnerability on different systems and economic sectors) to be applied Local Adaptation Strategies and Action Plans
- Training materials
- Concrete solution for local problems





Thank you for your kind
attention!

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