



SETTING UP KPI AND MONITORING SYSTEMS

LIFE17 IPE/HU/000017

IMPROVING AIR QUALITY AT EIGHT HUNGARIAN REGIONS THROUGH THE IMPLEMENTATION OF AIR QUALITY PLAN MEASURES

ILDIKÓ BABCSÁNY – ECO-MANAGER KNOWLEDGE CENTRE LEADER
HERMAN OTTÓ NLTD, DIRECTORATE FOR INTERNATIONAL PROJECTS

CLEAN AIR REGIONS INITIATIVE BOOTCAMP, 8-9 SEPTEMBER 2021

ART HOTEL, SZEGED



100% owned by the Ministry of Agriculture

Main areas of activities:

- Environment protection
- Nature protection
- Rural development
- Eco-label

HOI – ENVIRONMENT PROTECTION

Air quality protection – Hungarian National Air Pollution Control Programme

Noise and vibration control – strategic noise maps

Environmental remediation

Best Available Techniques (BAT)



HOI – NATURE CONSERVATION

Co-ordination of the National Biodiversity Monitoring

Nature Conservation Information System

Protection against alien invasive species

„Vadonleső” – Wildwatcher Programme (www.vadonleso.hu)

Mammal of the Year initiative



HOI – RURAL DEVELOPMENT

Secretariat of the Hungarian Rural Network

Preparation of Action Plan, co-ordination, information dissemination

Support for the implementation of the LEADER program

Agricultural vocational training



Development of criteria

Licensing and marketing

Management of the Hungarian National Ecolabel ("Környezetbarát Termék") and the European Ecolabel in Hungary



BUDGET: 15 967 741 EUR

DURATION: 8 years 01/01/19 - 31/12/26 (4 phases, 4 x 2 years)

PROJECT'S IMPLEMENTORS:

Coordinating Beneficiary: Herman Ottó Institute Nonprofit Ltd.

Associated Beneficiaries:

Hungarian Meteorological Service
Vlaamse Instelling voor Technologisch
Onderzoek NV, (VITO)
For the Everyday Culture Assn. (AMKE)
Municipality of Békéscsaba
Békéscsaba Town Development Ltd.
Municipality of Budapest

Budapest District Heating Works
Municipality of Debrecen
Municipality of Eger
Municipality of Kaposvár
Municipality of Karcag
Municipality of Miskolc
Miskolc Communication Ltd.

University of Miskolc
Municipality of Pécs
Pécs Communication Centre Ltd.
Pécs Town Development Co.
Municipality of Szolnok
Municipality of Tatabánya



Project partners

Key stakeholders: Ministry of Agriculture, government offices, air quality experts, representatives of the related sectors: transportation, energy, statistics; universities, NGOs, farmers

Advisory Board

~40 member organisations

Other stakeholders: residents, NGOs, non-participating municipalities

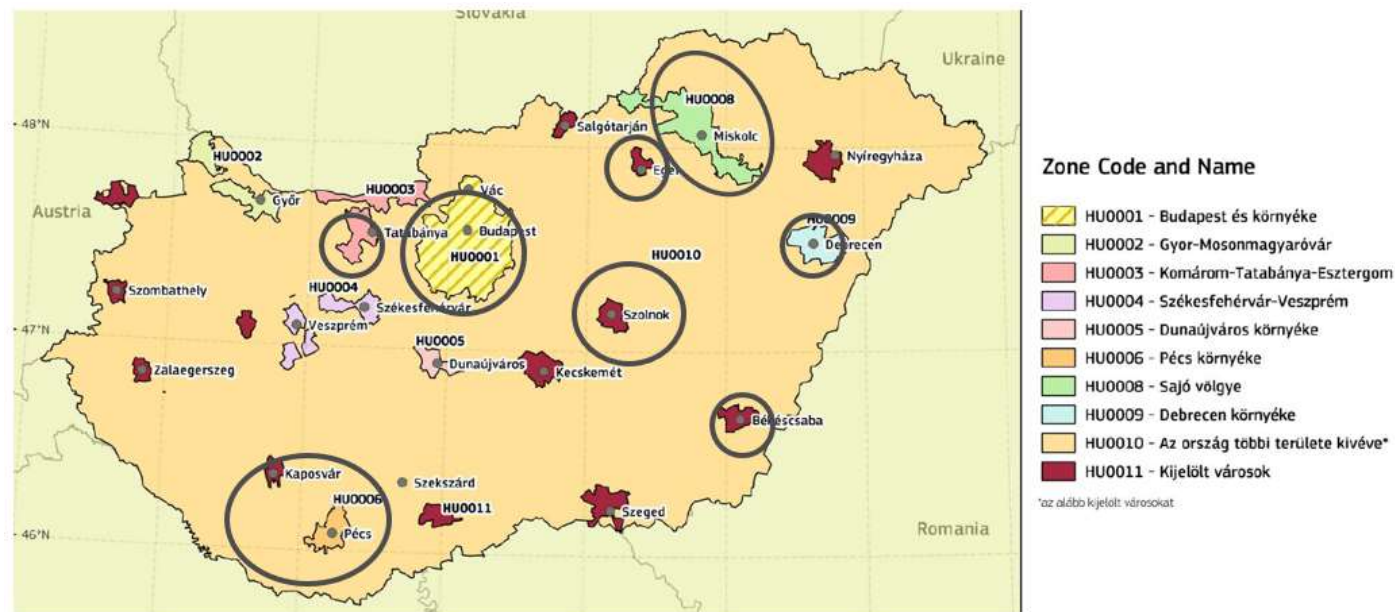


AIR QUALITY AT LOCAL LEVEL - ZONES

Several but not all the air quality zones are involved

Different type of areas regarding size, sectoral emission proportion, social and economic background

Ensure high replicability potential



OBJECTIVES AND SCOPE

Capacity building at the partner municipalities to enhance the revision and implementation of the Air Quality Plans and support other activities related to air pollution

Installation of new air quality monitoring stations

High Resolution Air Quality Assessment Tools for Hungary

Operation of an eco-manager network

Knowledge transfer and dissemination at country level and internationally

Public awareness raising

Regional specific actions - pilot actions

Provides current and historical air quality monitoring data nationwide

The network consists of two major parts: automatic monitoring stations with continuous measure of wide range of air pollutants in ambient air, and manual system with sampling points and consecutive laboratory analysis

<http://www.levegominoseg.hu/>

The web page contains data from automatic network within one/some hours (historical data back to 2004). Data from manual system are updated at least every quarter years (historical data back to 2002). There are also annual assessment reports for both systems as well as for particulate matter (PM10) components (now only in Hungarian).

VM Decree 6/2011. (I.14.) stipulates the number of monitoring stations necessary for a given air pollution zone

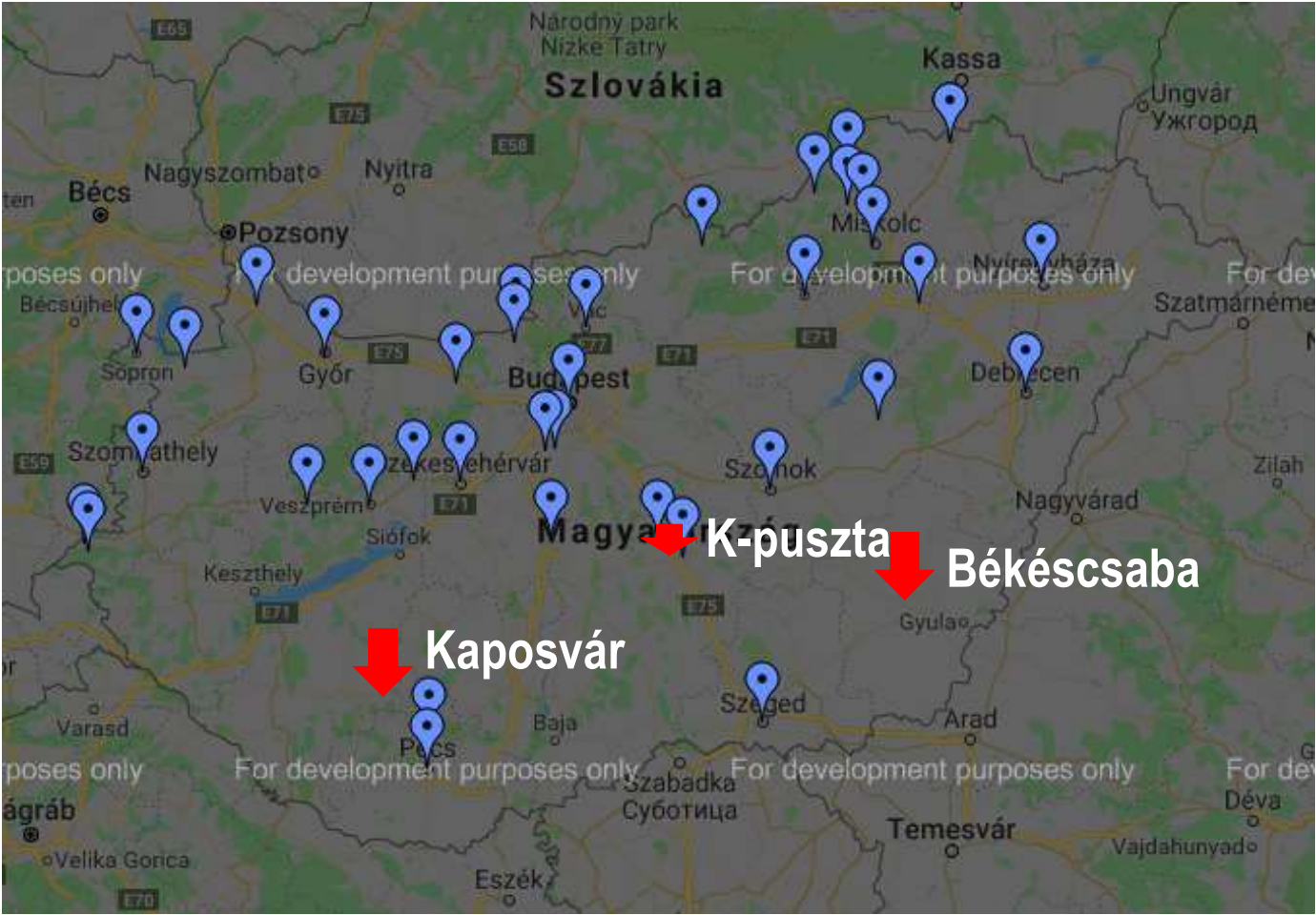
Localisation is revised every 5 years

Currently 54 automatic, 178 manual stations operate

VM Decree 6/2011. (I.14.) and standard determine the installation and operation of a monitoring station (e.g. distance from buildings, measuring height, operational conditions of the instruments, frequency of checks and calibration)

The operator needs to be accredited and trained regularly

INSTALLATION OF NEW AIR QUALITY MONITORING STATIONS



INSTALLATION OF NEW AIR QUALITY MONITORING STATIONS



HungAIrY project adds 2 new stations

Phase I - selection of locations for the stations

- 4 * 2 week air quality protection measurements
- employees of the National Meteorological Service visited possible locations
- as a result of the survey, the locations of the measuring stations have been determined

Phase 2 - public procurement procedures for the installation of the actual stations are being carried out

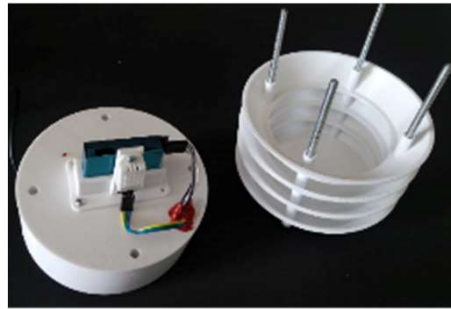
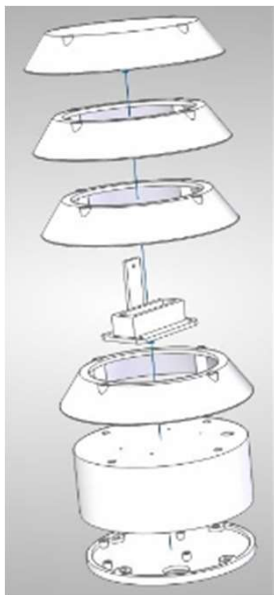
INSTALLATION OF NEW AIR QUALITY MONITORING STATIONS

Additional action - development of the main site of the background air pollution monitoring network; at K-pusztá station

K-pusztá is located in the middle of the country performing standardized background field sampling and monitoring. Long-time monitored pollutants are: tropospheric ozone and particulate matter (PM₁₀ and PM_{2.5})

In 2018, the monitoring protocol of the station was broadened with four new instruments to observe carbon-monoxide, sulphur-dioxide, nitrogen-oxides and ammonium. This system needed to be equipped with calibration tools.

PM10 SENSOR SYSTEM IN MISKOLC AND KAPOSVÁR



Measuring units developed by Miskolc University

Sensors and tailor-made 3D printed protective cover

60 locations in Miskolc

2 meteorological stations

Webpage for publication

Real-time air quality data and evaluation

PM10 SENSOR SYSTEM IN MISKOLC AND KAPOSVÁR

Location types

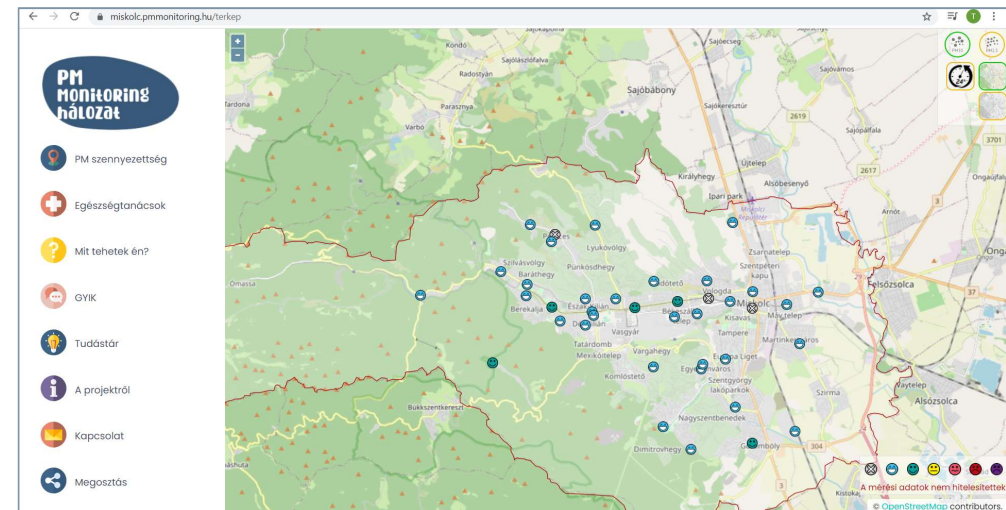
- Reference
- Base network
- Residential areas
- Periphery
- Neighbouring settlements



Official launch on 2 September 2021

Next step – Kaposvár

20 locations



Capacity building at the partner municipalities to enhance the revision and implementation of the Air Quality Plans and support other activities related to air pollution

Eco-manager network at the 10 municipalities and other partners – 23

Fully equipped local eco-manager offices

Eco-manager Knowledge Centre (EKC) at HOI

Regular interactions, trainings, meetings (in person and on-line)

Training materials

- 3 modules
 - environment protection and air quality
 - communication
 - project management
- On-line trainings on all 3 topics
 - 7 trainings



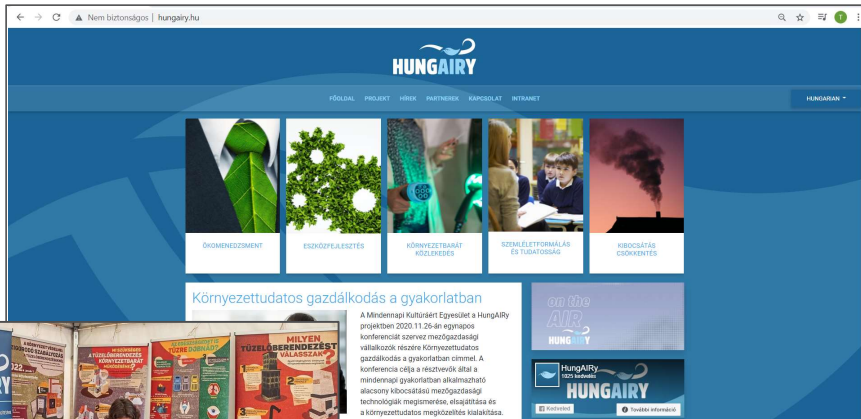
1. Revision of AQPs

2. Monitoring of potential financial sources for environmental and air quality protection related projects

3. Consulting

4. Awareness raising

COMMUNICATION, AWARENESS RAISING



- environmentally friendly solid combustion
- composting, green waste management
- energy efficiency of households
- promoting cycling mobility
- eco-driving
- e-mobility



TARTSD FENN A KÖRFORGÁST!

Tudtad, hogy komposztálással elősegíted a szerves anyagok körforgásában tartását?

Mely anyagok komposztálhatók?

- Konyhai hulladékok: gyümölcsök és zöldségek maradványai, kávézacc, dörzs, kávé, tejszínes, tojás, csirkecsontok, gyöngyvirágok, tojások, hagymák.

Kerti hulladékok: rövidnyelű növények ágai, ágak, fenyőág, elhervósult virágok, levágott gyökerek, fűszelvények, fű, szalma, felhullott gyomlók, lehullott falevelek, hervadt virágok.

Egyéb hulladékok: ha megengedjük, akkor szennyezett fa, papír, karton, fű, kőzet, téglák.

Mely anyagokat nem szabad a komposztálóba dobni?

- Élelmiszerek: húskészítmények, csirkecsontok.

Nem biológiai anyagok: műanyag, szilikon, fémmel, üveggel, papírral, szövetekkel, gumival, műanyag csomagolóanyagokkal.

A fésűk, a szék, a szőnyeg, a szőnyegek, a cipők, a csizmák, a ruhák, a játékok, a műanyag tárgyak, az autók.

Veszélyes anyagok, gyógyszerek: fémek, olajok, háztartási szennyezőanyagok, szerves savak, foszforsavak, szerves oldószerek, festékek, színezékek, szerves oldószerek, szerves savak, foszforsavak, szerves oldószerek, festékek, színezékek.

WWW.HUNGAIRY.HU | FACEBOOK.COM/HUNGAIRY | HUNGAIRY.HU



A FÖLD AZ OTTHONUNK, VIGYÁZZUNK RÁ!

Összeadva az a világunk, ha jellemeinkkel együtt az erényeinkkel, a szabályainkkal, a szokásainkkal, a szokásainkkal.

KÖSZÖNKÉD, HOGY VÉLJÜNK EGÝTT A KÖRNYEZETRE!

Tölgyfa hulladék

Száraz papír

Ferula hulladék

Hulladék

Szék

WWW.HUNGAIRY.HU | FACEBOOK.COM/HUNGAIRY | HUNGAIRY.HU



Materials (so far only in Hungarian)

- o posters
- o roll-ups
- o videos
- o leaflets
- o campaign logos

A FÖLD AZ OTTHONUNK, VIGYÁZZUNK RÁ!

A nem megfelelően végzett fűtési fűtés szennyezi a levegőt, pedig a tiszta levegő nagyon fontos minden ember és állomány számára. Szerecsőre más nincs kész csatlakozni. Ha ti is fűtőtűz, akkor emlékeztetünk szociális az itt felhívhatk bejelentés!

MI KERÜLHET A TŰZRE?

- Fűtőanyagok: gyertyák, szálkák, szálkák, szálkák.

Választás a szennyezés: fűtőanyagok, fűtőanyagok, fűtőanyagok.

Fűtőanyagok: fűtőanyagok, fűtőanyagok, fűtőanyagok.
- HOGYAN KELL TÁROLNI A TŰZIFÁT?

Az a fűtőanyagok: fűtőanyagok, fűtőanyagok, fűtőanyagok.

Fűtőanyagok: fűtőanyagok, fűtőanyagok, fűtőanyagok.
- MI AZ, AMI SOHA NEM KERÜLHET A TŰZRE?

Száraz papír, fű, szalma, fű, szalma, fű, szalma.

Dörmögők, fű, szalma, fű, szalma.
- A KÁLYHA BEGYŰJTÁSA

A kályha begyűjtése: fűtőanyagok, fűtőanyagok, fűtőanyagok.

A kályha begyűjtése: fűtőanyagok, fűtőanyagok, fűtőanyagok.

WWW.HUNGAIRY.HU | FACEBOOK.COM/HUNGAIRY | HUNGAIRY.HU



OPERATION OF THE NETWORK

Eco-manager meetings

Additional trainings on the 6 topics the project puts emphasis on

Further trainings on the communication of these topics

Regular reports (every quarter)

EKC audits (every six months)

On-going communication - phone, emails, Slack direct messaging

Meetings in person at the municipalities' offices

The AQPs of the participating settlements were updated in 2016

The revision of all AQPs has been started in Phase I

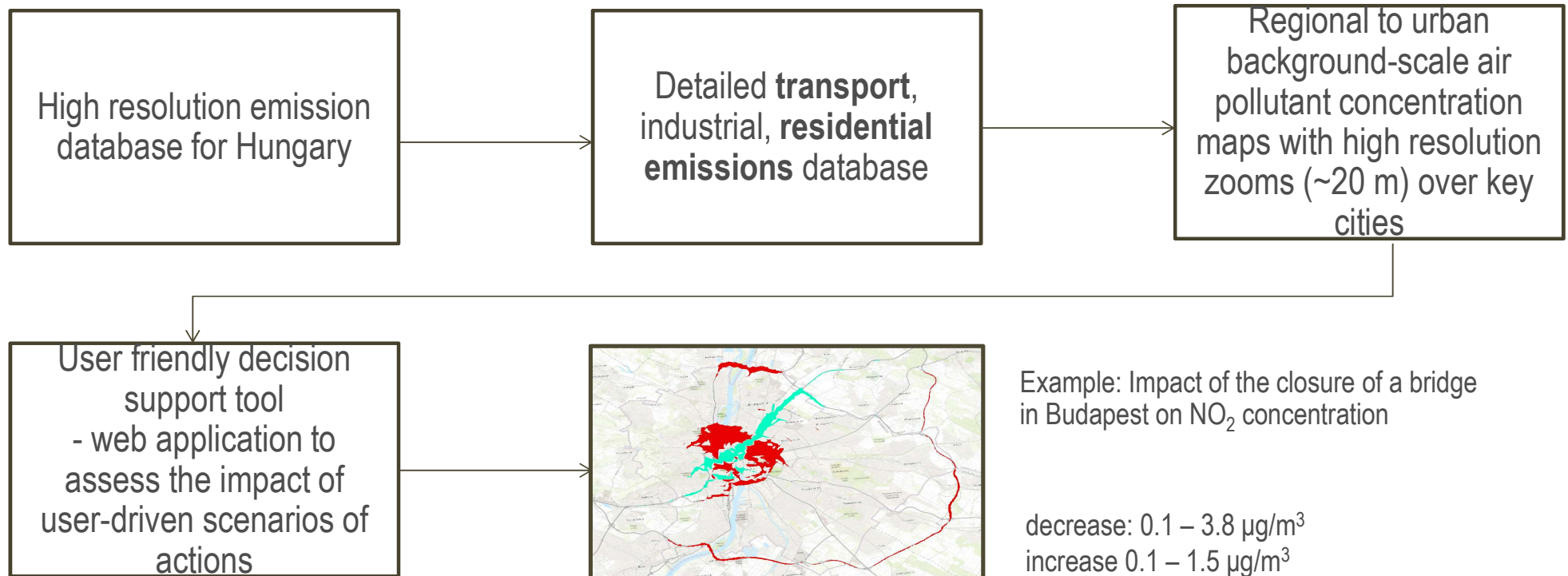
The review of AQPs is carried out by the relevant county Government Offices, with the help of local municipalities (eco-managers), the National Meteorological Service (OMSZ) and, if necessary, other external experts

8 AQP revisions have been finished, the AQPs are published

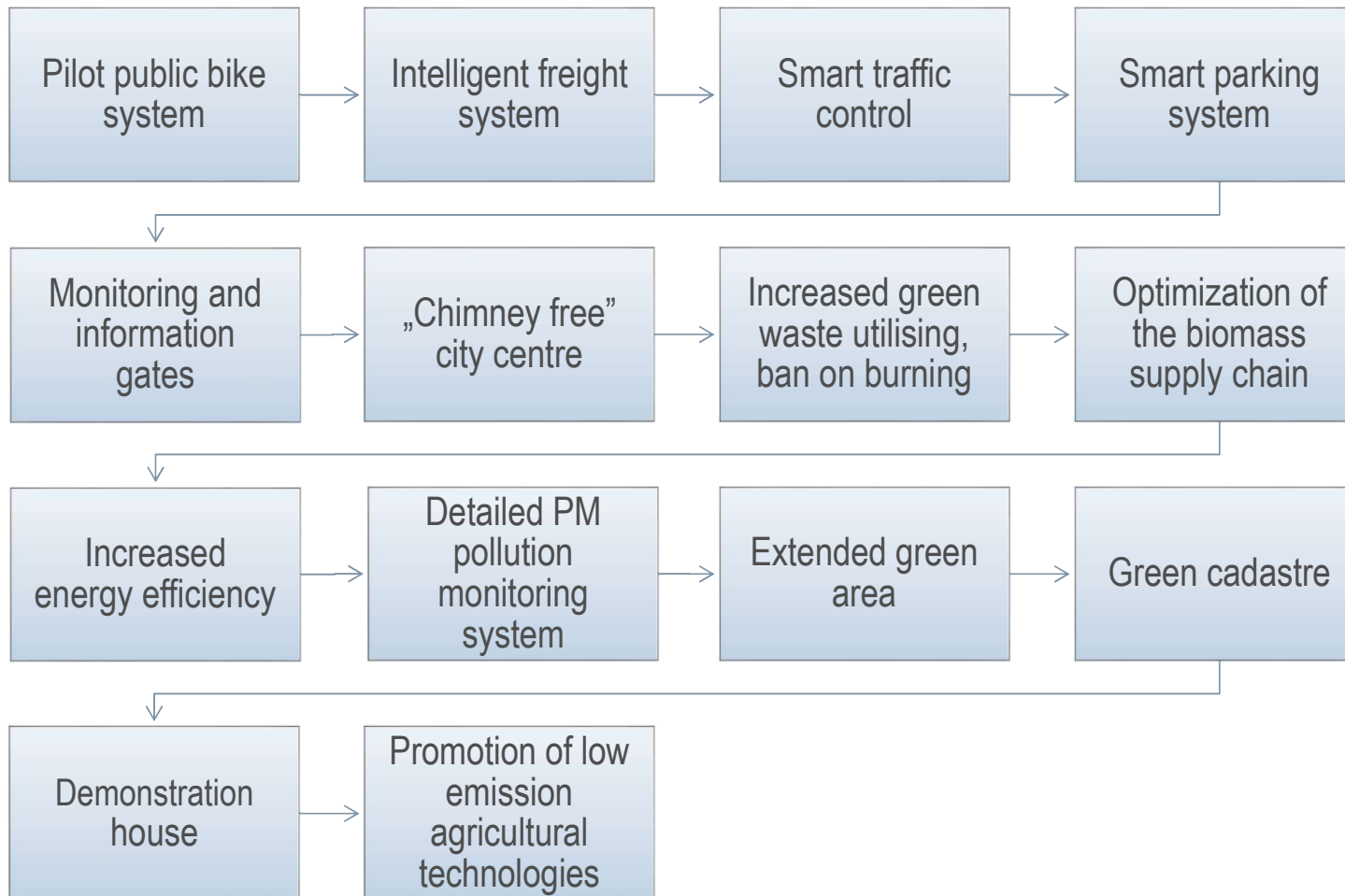
Budapest has the final draft with the relevant county Government Office

Tatabánya contracted an external expert, the revision is being carried out

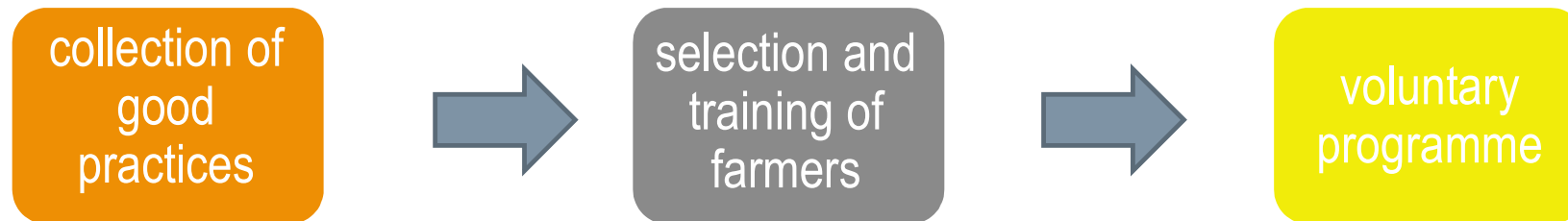
USER FRIENDLY DECISION SUPPORT TOOL



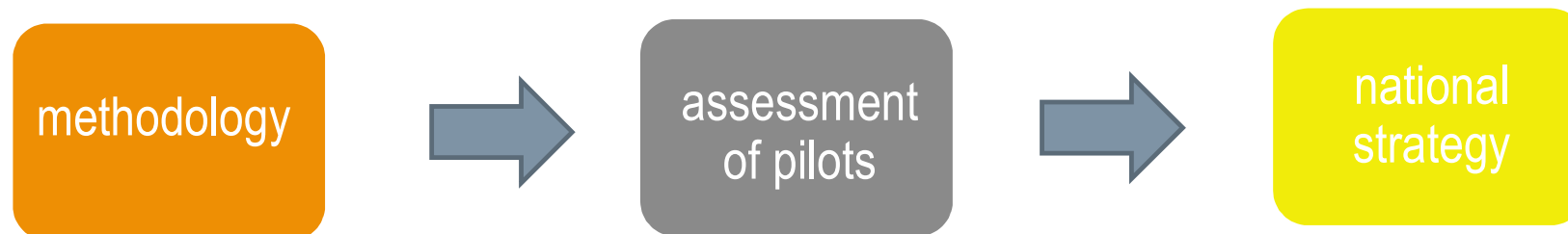
PILOT ACTIONS – MAIN TARGETED AREAS: TRAFFIC AND RESIDENTIAL EMISSIONS



agricultural voluntary programme



optimisation of the woody biomass supply chain



COMPLEMENTARY ACTIONS

- Several actions must be taken at national, regional, and local levels to reduce air pollution considerably
- Eco-managers are to monitor funding programs and open calls as well as to facilitate the development of proposals at local level
- Eco-managers and the experts of the relevant authorities work closely together during the regular AQP revisions, ensure the smooth integration of the accepted proposals into the AQPs
- All partners report the details of the complementary actions to the coordinating beneficiary and together they identify the future interactions between LIFE IP HungAIRy and the complementary actions

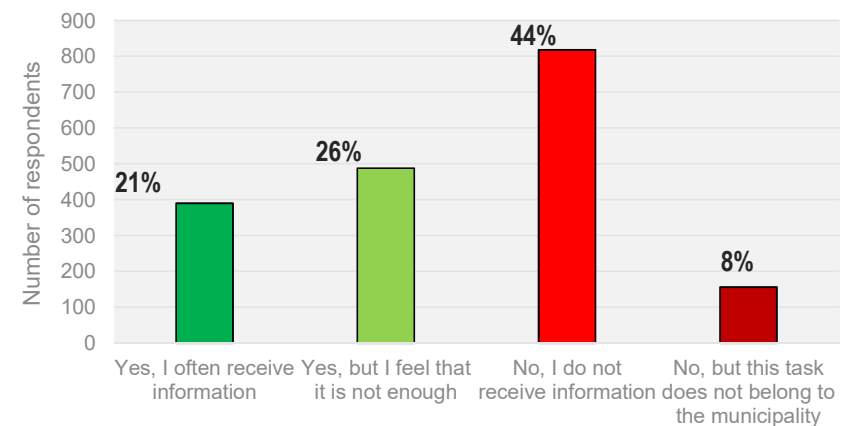
Type of action/measure	Number of action/measure	Amount foreseen in the application & during the project duration (EUR)	Amount spent by Interim Report (EUR)
Increasing energy efficiency	176	472 739 697 EUR	236 229 660 EUR
Developments in the transport sector	41	316 717 958 EUR	201 218 433 EUR
Increasing or improving green surfaces	24	36 166 395 EUR	19 182 808 EUR
Awareness raising	3	109 603 EUR	12 490 EUR
Total	244	825 733 652 EUR	456 643 390 EUR

Data as of 17 March 2021

- Social and economic impacts of the project activities are also monitored
- A non-representative questionnaire survey was performed in 2020 to determine the baseline
- The questionnaires covered the following topics: general issues related to air pollution, green waste management, heating and energy efficiency, environmentally friendly transport, characteristics of the living environment
- The survey will be repeated in 2022, 2024 and 2026 to assess the impacts



Do you think the municipality provides enough information to increase your knowledge on air quality protection?



THANK YOU FOR YOUR KIND ATTENTION



Ildikó Babcsány
Directorate for International Projects
HungAIRy



www.hungairy.hu



hungairy@hoi.hu



+36 30 726 1551



facebook.com/hungairy



LIFE IP HUNGAIKY project is financed by the LIFE Programme of the European Union