

Project title and acronym:

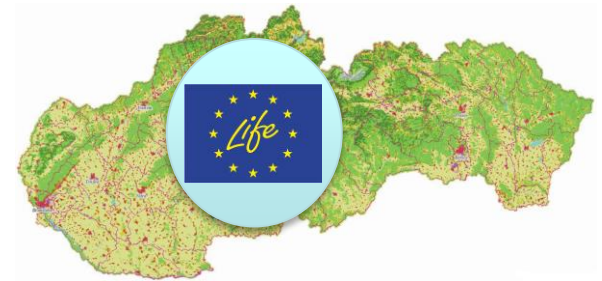
« Improvement of health status of population of the Slovak Republic through drinking water re-carbonization/LIFE – Water and Health »
LIFE17 ENV/SK/000036

PROJECT LOCATION: Central Slovakia

BUDGET INFO:

Total amount: 948,275 €

EC Co-funding: 59.99 %



DURATION: Start: 01/09/2018 – End: 31/12/2022

PROJECT'S IMPLEMENTATORS:

Coordinating Beneficiary: Comenius University in Bratislava, Faculty of Natural Science

Associated Beneficiary(ies): –

OBJECTIVES & SCOPE

The main objective is to improve the health status of residents based on increased drinking water quality through water re-carbonization in two Slovak municipalities, with relevance of our results for the whole Slovak Republic and whole EU territory. This objective will be reached by implementation of the following specific actions:

- Selection of two drinking water sources for treatment by method of re-carbonization.
- Determination of optimal levels of Ca, Mg and water hardness (Ca + Mg) in drinking water favourable for human health through risk analysis.
- Laboratory tests of carbonate rock leaching.
- Development and construction of prototypes for re-carbonization of low mineralized drinking water.
- Installation and operation of two prototypes and monitoring of drinking water quality status.
- Realization of biomonitoring to confirm better health status of residents, depending on improved water quality (Ca, Mg).
- Legislative proposal for inclusion of drinking water standards for Ca, Mg contents and water hardness into drinking water guideline for public supply and bottled water at national level as well as EU level.



EXPECTED IMPACTS

The main impacts of the project are on water quality and human health:

1. Improved water quality (increasing Ca and Mg contents in drinking water) through water re-carbonization
 - a) Small municipality (> 250 inhabitants) ~ (< 20,000 m³/year)
 - b) Bigger municipality (> 2,500 inhabitants) ~ (> 100,000 m³/year)
2. Improved health status of inhabitants:
 - a) Direct impact: at least 10 % of the target group of 2,750 inhabitants (~ 275 people)
 - b) Indirect impact in Slovakia via increased public awareness: at least 1 ‰ of 1,000,000 (20 %) Slovak inhabitants supplied by soft drinking water (~ 10,000 people)
 - c) Indirect impact in EU via increased public awareness: at least 0.1 ‰ of 100 million (20 %) EU inhabitants supplied by soft drinking water (~ 100,000 people)



POLICY IMPLICATIONS

The project is directly related to two main strategic EU documents dealing with Environment and Human Health

- Environment Action Programme to 2020 (EAP)
- Health 2020

EAP – the third key action covers the issue of „Health environment for healthy people“

- Improvement of legislation related to drinking water

Health 2020 – the policy framework aims to support actions across government and society to significantly improve the health of population

- The supply of population by „safe“ drinking water is one of the most important health determinants
- Legislative proposal to include Ca and Mg content between regulated elements in drinking water standards within the WHO and the EU.



CONTINUATION (REPLICATION, TRANSFER, MARKET UPTAKE)

After the end of the project, the following three main activities will continue:

- Continuous operation of two reactors to enrich drinking water with Ca and Mg,
- Monitoring the Ca and Mg content in two sources of re-carbonated drinking water,
- Monitoring health changes in two municipalities with re-carbonised drinking water.

Under the „Replicability and Transferability Plan“, we will provide the transfer of the most important project results, in particular:

- Methodology of risk analysis,
- Detail characteristic of the most suitable rock material for drinking water re-carbonization,
- Methodology of evaluation of changes in arterial stiffness of residents,
- Detail technical documentation of fluidized bed reactor for drinking water re-carbonization,
- Summary of experience, manual for drinking water re-carbonization and its monitoring,
- Possible market uptake plan in two levels:
 - Re-carbonation of soft drinking water in other areas of Slovakia and the EU,
 - Increasing Ca and Mg content in bottled drinking water.