

LIFE - Water and Health - Improvement of health status of population of the Slovak Republic through drinking water re-carbonization

LIFE17 ENV/SK/000036

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Project description:

Background

Scientific research shows that people who live in areas where water is low in calcium and magnesium are more prone to cardiovascular disease than people in hard-water areas. They also have higher incidence of respiratory and gastrointestinal problems and diabetes. The two minerals occur in water in soluble ionic form and thus are directly transferred to cells where they are involved in many enzymatic processes. Thus, even a diet rich in calcium and magnesium cannot fully compensate for daily intake from drinking water. There are currently no limit values required by law for calcium and magnesium levels in drinking water.

Objectives

The LIFE - Water and Health project is targeting a long-term improvement in residents' health by re-carbonisation of drinking water. It will carry out biomonitoring of the arterial stiffness of residents before and after calcium and magnesium are added to drinking water in two Slovak towns with soft water. It will use available statistics to assess the impact on respiratory health, diabetes and other conditions. Based on its findings, the project will propose optimum levels of water hardness for human health and seek to have these standards incorporated into national and international guidelines.

LIFE – Water and Health directly contributes to the implementation of the Environment Action Programme to 2020 (7th EAP) and Health 2020: the European policy for health and well-being.

Expected results:

- Prototypes for water re-carbonisation in operation in two locations in Slovakia (one small water source for about 250–500 inhabitants and one

- large water source for at least 2 500 inhabitants);
- Calcium and magnesium in drinking water at the two sites increased to optimal levels with favourable effects on human health;
 - Improvement in the arterial age of residents within two years of drinking water treatment through re-carbonisation (as determined by biomonitoring);
 - Improvement in respiratory, oncological and endocrine health of residents within 2-5 years (as determined by analysis of health statistics);
 - An indirect impact on around one million people in Slovakia with soft drinking water;
 - Defined optimal levels of water hardness for human health; and
 - Advocacy work to have optimal levels of calcium and magnesium incorporated into national and international guidelines for drinking water.

Results

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Environmental issues addressed:

Themes

Water - Water quality improvement

Keywords

water quality, water pollution, public health, drinking water

Target EU Legislation

- Water
- Directive 98/83 - Quality of water intended for human consumption (03.11.1998)
- Directive 2000/60 - Framework for Community action in the field of water policy (23.10.2000)

Natura 2000 sites

Not applicable

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Beneficiaries:

Coordinator	Comenius University in Bratislava, Faculty of Natural Sciences
Type of organisation	University
Description	The Faculty of Natural Sciences of Comenius University in Bratislava (PRIF UK) was established in 1940. The Department of Geochemistry deals with research and educational activities in various fields of geochemistry, including medical.
Partners	None

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Administrative data:

Project reference	LIFE17 ENV/SK/000036
Duration	01-SEP-2018 to 31-DEC -2022
Total budget	948,275.00 €
EU contribution	566,950.00 €
Project location	Stredne Slovensko(Slovakia Slovensko)

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