

## **LIFE Project Proposal**

- 1. Sub-programme:** LIFE Environment and Resource Efficiency
- 2. Sector:** Water
- 3. Member state of the coordinating beneficiary:** Hungary
- 4. Expected duration:** 3 years (01. 07. 2018 – 30. 06. 2021.)
- 5. Coordinating beneficiary:** LIGHTTECH Lámpatechnológia Ltd.
- 6. Associated beneficiaries:** Research Centre for Natural Sciences, Hungarian Academy of Sciences, S-Metalltech 98 Ltd. (Hungary), National Institute of Environmental Health (Hungary), Netglob Systems S.r.l. (Romania)
- 7. Expected total project budget – EU financial contribution requested:** 2.7 million EUR – 1.6 million EUR
- 8. Title of the project:** Development of drinking water quality water for agriculture by the use of novel adsorbent technologies and AOP methods
- 9. Short summary of the project:** The contamination of drinking water and irrigation water from groundwater and surface water sources poses significant challenges in Central and Southern Europe (Slovakia, Hungary, Romania, Greece, Italy, Spain). Due to special geological conditions and human activity, these water sources contain in many cases toxic inorganic contaminants (arsenic, iron, manganese, boron, etc) and harmful organic micropollutants (pesticides, pharmaceuticals, bacteria, etc.). Our project is dealing with the production of good quality irrigation and drinking water - so it is indirectly related to food safety as well. On the one hand, we investigate the occurrence of contaminants in water bases and, on the other hand, we develop and test a pilot, unique complex technology that can be a proper solution for the bioaccumulation (accumulation) of contamination. In designing the technology, we strive for the development and application of totally chemical-free water purification processes. Another objective is to keep the technologies running without supervision; i.e. through the development of a special data transfer system, the corresponding interventions are performed by the feed-back of data arriving to an operator center. The MET Water Units (MWU) are installed at different sites of the given agricultural plant and are organized into a GSM network via the Monitoring and Service Center. The aim of our pilot project is to demonstrate its broader innovative applicability in Europe's private and public agricultural sectors on which after the LIFE project, a larger project can be built based on European corporate co-operation. The main result of the project can be that the users of the developed technology meet the requirements of e.g. Regulation (EC) 178/2002 laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety and Regulation (EC) No 183/2005 laying down requirements for feed hygiene.