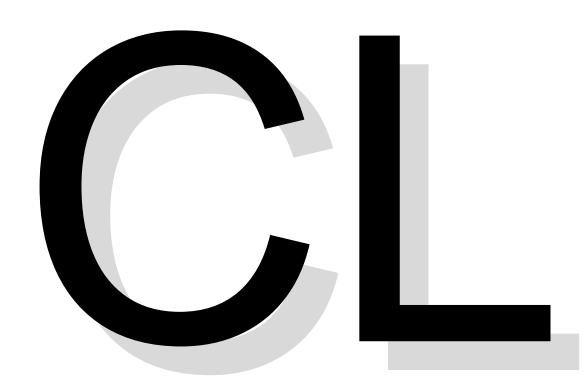# Providing better understanding of climate and environmental drivers of sand fly borne diseases – the CLIMOS project

HORIZON-HLTH-2021-ENVHLTH-02-03

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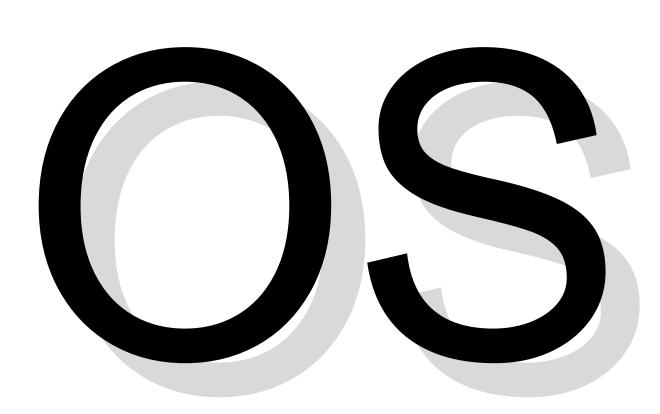
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Over the last two decades, three successive research consortia (EDEN, EDENext and VectorNet) aimed at improving knowledge, surveillance, and control of vector-borne diseases in Europe and neighboring countries. Among these, sand fly-borne diseases including leishmaniasis and phlebovirosis represent an important public health and veterinary concern. A novel effort to tackle sand fly borne diseases (SFBDs) – the CLIMOS project, started in September 2022.

CLIMOS - Climate Monitoring and Decision Support Framework for Sand Fly-borne Diseases Detection and Mitigation with Cost-benefit and Climate-policy Measures –

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aims to complement and build on previous efforts, bringing together researchers, health-care and veterinary practitioners, technology platform designers and at-risk communities, to conduct innovative and applied research seeking to better prepare for current and future impacts of climate and environmental changes on human and animal health, using sand flies and the diseases they transmit as a model system.

In its data analysis and modelling part CLIMOS will:

- Collect and systematize project-generated or already available (outside) vector, pathogen, veterinary, health, climate, environmental and (socio-)economic datasets,

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and prepare those for share and use. These will include large sandfly surveillance database from previous European efforts (with historical data staring at 1900);

- Analyse and model climate and environmental drivers of vector, pathogen, veterinary and health SFBDs data, using standard and advanced statistical analysis approaches, environmental niche modelling and developed AI algorithms;

- Develop, iterate and validate an Early Warning System and informational web and smart phone tools, for use by various stakeholders and particularly by national health information systems. In doing so, developing SFBDs Open Biomedical Ontologies.