November 2022

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MOnitoring Outbreaks for Disease surveillance in a data science context

Monitoring of emerging health threats in Europe: the innovative epidemic intelligence tools by the H2020 MOOD project

Save the date: 14th December 2022 - Launch of the generic part of the epidemic intelligence platform

The ***MOOD Project*** (Monitoring Outbreaks for Disease Surveillance in a data science context) aims at developing innovative, open-source, and user-friendly tools and services for the early detection, assessment, and monitoring of current and potential infectious diseases threats in Europe in the context of global change including climate change and population dynamics.

Based on real needs and gaps analysis, the MOOD project is building an integrated Epidemic Intelligence platform to support the detection, monitoring, and risk assessment for airborne, vector-borne and waterborne diseases, antimicrobial resistance, and new diseases (disease X, such as COVID-19) with the use of cutting-edge Big Data analysis and Artificial Intelligence.

The platform includes a '*Data and covariates access*' to facilitate the access, visualization, and download of useful, literature-based disease data and their environmental and social drivers (e.g. environment and mobility data), overcoming the barriers of data accessibility and usability. With a user-friendly interface, Epidemic Intelligence practitioners and modelers will be able to save and store search queries, selected layers, locations,

and other spatial and temporal information. This type of data is key for effective disease monitoring, risk assessments as well as modeling.

The '*Event-based surveillance*' module provides the possibility to visualize and download data on disease outbreaks from online media. This component is based on Padi-web, an online media monitoring tool that screens Google News in multiple languages and geographical regions. By processing hundreds of Google News articles per day, PADI-web monitors all MOOD disease models and much more. The aim is to use this unofficial information as a complementary addition to official health monitoring sources, such as ECDC, WHO, and WOAH.

Led by the French agricultural Research and International Cooperation Organization (CIRAD) the consortium of 21 partners funded by the Horizon-2020 scheme is set to launch the beta-version of two components (out of three) of the Epidemic Intelligence platform in early 2023 targeting and involving Public and Animal Health national authorities in Europe and of practitioners at the European Centre for Disease Control (ECDC) and at international health organizations (WHO, WOAH) for feedback and demo sessions.

The first two components of the platform providing 'Data and Covariate Access' and 'Event-based Surveillance Data' will be available for user feedback and demonstrations at the upcoming MOOD event on December 14th, 2022. If you wish to ask for a trial, please contact Cirad and ask to participate in one of the upcoming demo sessions at mood-coordination@cirad.fr

The MOOD Project at glance

The ***MOOD Project*** aims at developing innovative tools and services for the early detection, assessment, and monitoring of current and potential infectious diseases threats in Europe in a context of global change including climate change. The MOOD innovations will address the challenges of cross-sectorial data sharing and valorisation in a One Health framework based on cross-sectoral collaboration for animal, human and environmental health. End-users are the human and veterinary public-health agencies that are responsible for designing and implementing strategies to mitigate the identified risks.

CIRAD is the French agricultural research and international cooperation organization working for the sustainable development of tropical and Mediterranean regions. Along with its partners, it is convinced that agriculture has a central role in the major transitions required to guarantee a sustainable future for every country in the global South. Generating and sharing new knowledge, contributing to innovation processes and building the capacity and skills of stakeholders in those countries to support their sustainable development are the drivers of its operations. In particular, its activities center on issues such as biodiversity, the agroecological transition, climate change, health (of plants, animals and ecosystems), the development of rural territories, and food systems. CIRAD works in some fifty countries on every continent, thanks to the expertise of its 1650 staff members, including 800 researchers, backed by a global network of partners.

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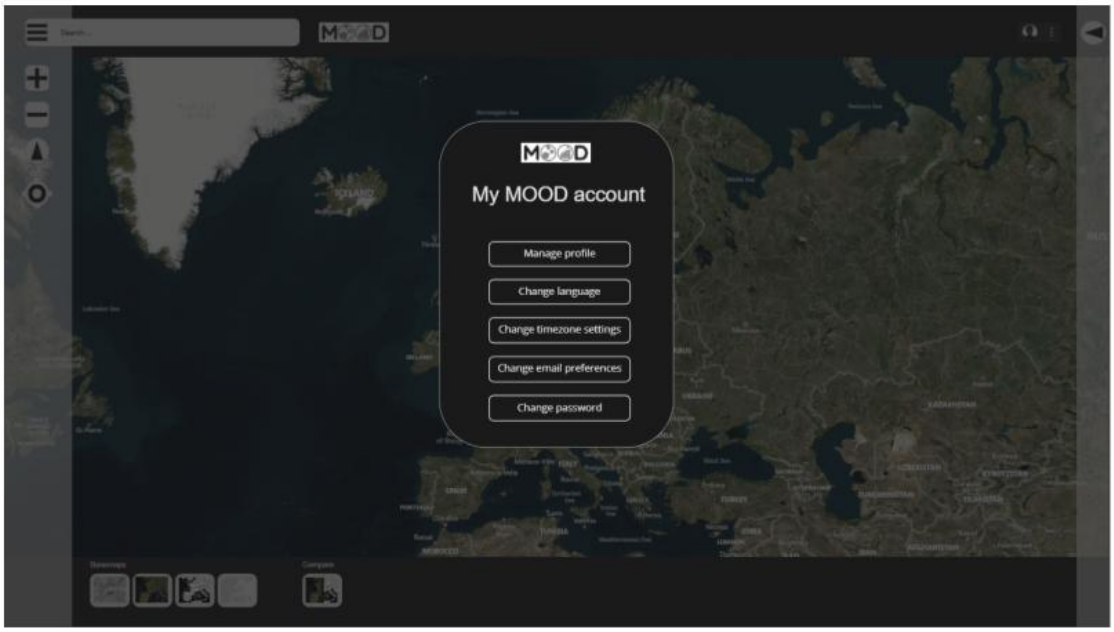
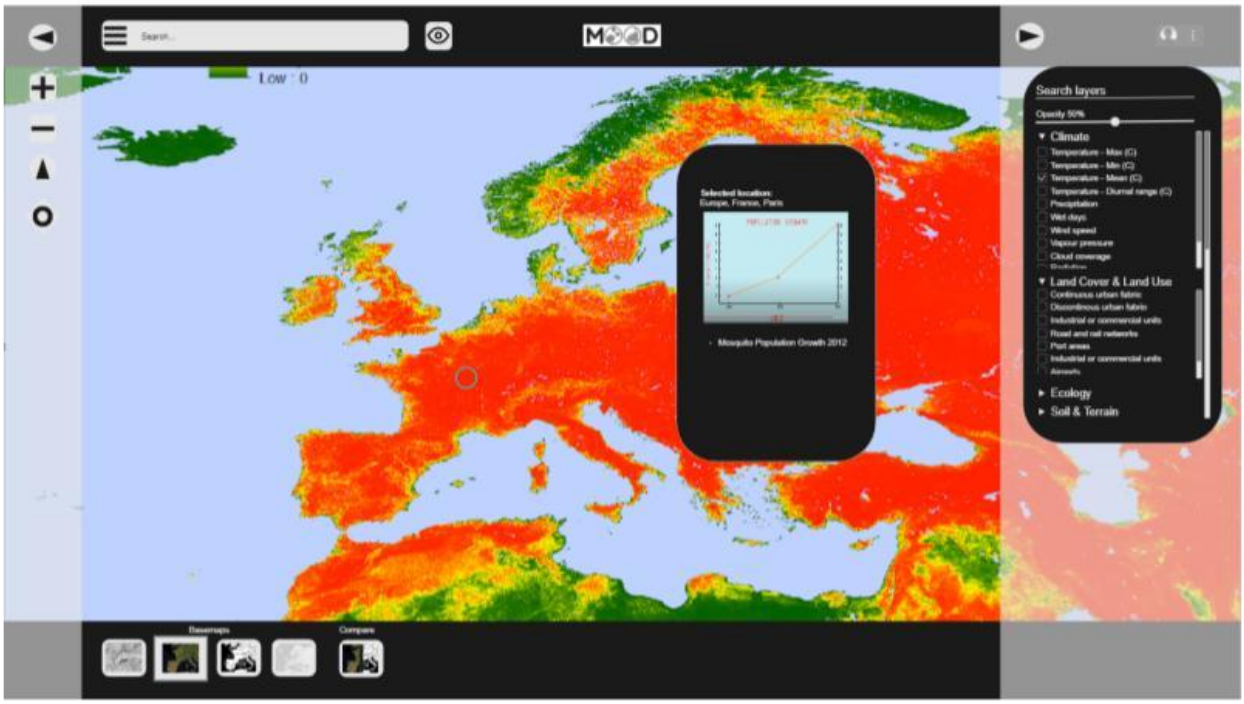
My MOOD account



Data selection



Saved locations

Double map comparison