

Global Health Resilience



The Global Health Resilience group is a transdisciplinary team of researchers working at the interface of epidemiology, climate change, planetary health, biology, mathematical modelling, and data science. Our mission is to co-create policy-relevant digital tools, to enhance preparedness and response to emerging infectious disease threats in climate change hotspots. Our data, modelling and decision-support tools are co-developed alongside climate scientists, social scientists, science communication experts and software engineers at the BSC, as well as leading international researchers and public health, disaster risk management, environment and humanitarian agencies in Latin America & the Caribbean, Asia, and Africa. The Global Health Resilience team also hosts the [Lancet Countdown in Europe](#), an international collaboration tracking the health impacts of climate change and the health co-benefits of climate action across Europe.

Objectives

- Co-develop digital infrastructure and data harmonization tools to allow researchers and users to link, interrogate and use multi-scale spatiotemporal data to understand the links between environmental change, inequity and infectious disease outbreaks and emergence.
- Apply cutting-edge modelling techniques, including Bayesian modelling, machine learning and artificial intelligence to enhance disease surveillance and early warning and response systems.
- Tailor policy-relevant monitoring tools, indicators, impact-based forecasting models and early warning systems at sub-seasonal to decadal time scales, to improve understanding, anticipation, forecasting of future risks of disease emergence and spread.
- Contribute to a global community of practice around policy-relevant climate and health tools.
- Ensure digital tools have a downstream impact by better integrating climate and health research in local, national, regional, and international policy.

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