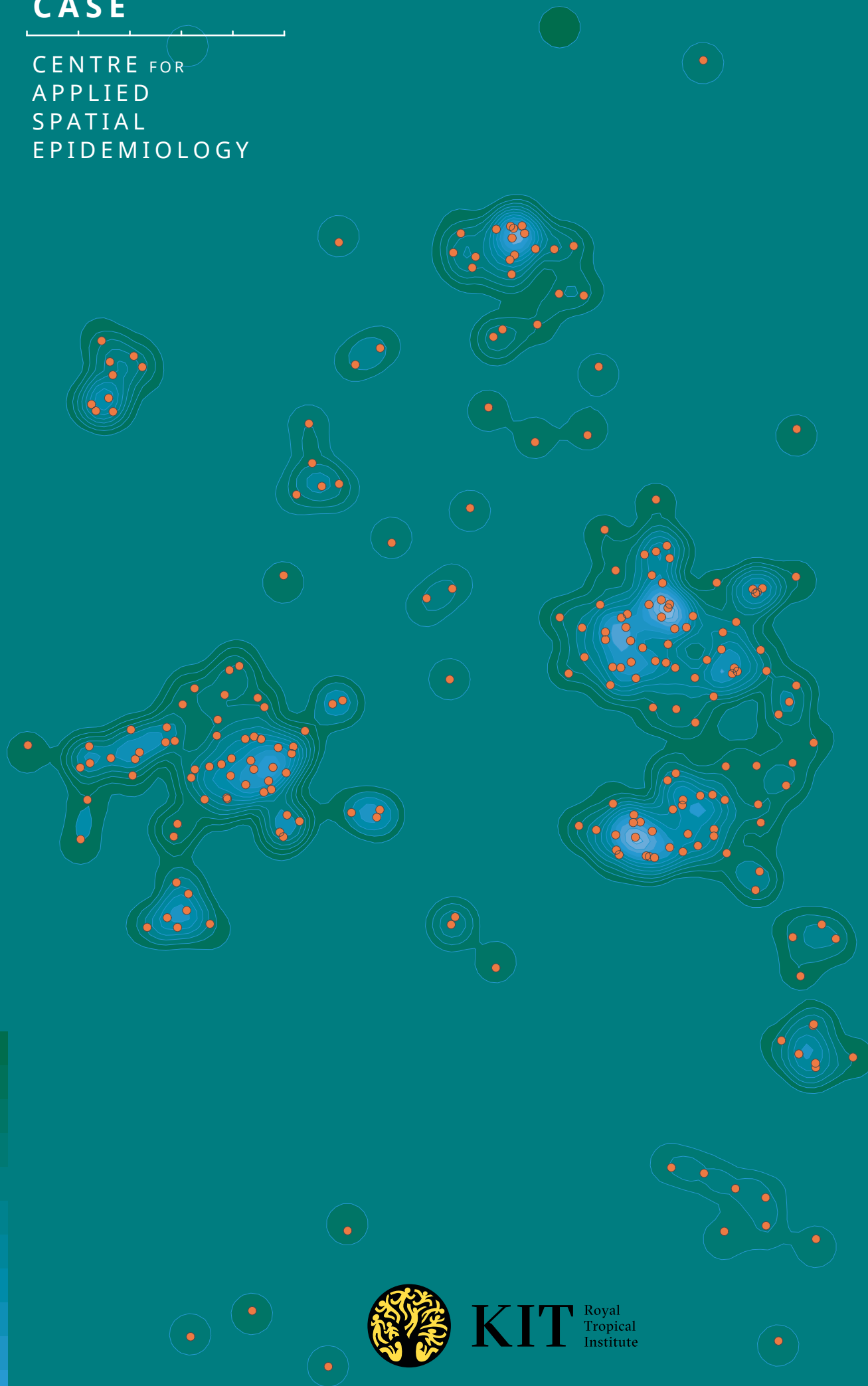


# CASE

CENTRE FOR  
APPLIED  
SPATIAL  
EPIDEMIOLOGY



**KIT** Royal  
Tropical  
Institute

# Who we are

## CASE

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CENTRE FOR  
APPLIED  
SPATIAL  
EPIDEMIOLOGY

**The Centre for Applied Spatial Epidemiology (CASE) supports health professionals to make data-informed decisions. Our geographic analyses provide new opportunities for health managers, data analysts and decision-makers to better understand local variations in disease, learn from these insights, and prioritise health services delivery accordingly.**

KIT Royal Tropical Institute established CASE to improve health interventions by aligning epidemiological approaches with evidence-based best practices. We work together with governments, institutes and NGOs in low- to middle-income countries, and encourage health managers to use available data and spatial analysis techniques to improve decision making and more effectively deliver health care to all.

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### About KIT Royal Tropical Institute

CASE was established by KIT Royal Tropical Institute. KIT is an independent centre of expertise and education for sustainable development. We assist governments, NGOs and private corporations around the world to build equitable and sustainable societies. Our work focuses on health care, gender, economic development and intercultural cooperation.

Dedicated to the Sustainable Development Goals (SDGs) of the United Nations, our experts' work focuses on producing measurable, independent results. More than 80 expert staff work across disciplines including public health systems, epidemiology, sexual and reproductive health rights, agricultural innovation, food value-chains, gender relations, and inclusive finance. The knowledge we generate is disseminated through assessment & advisory services, research, teaching, training, and agenda-setting events.

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CASE combines technical expertise in the fields of spatial statistics, geo-data management and impact evaluations with a broad content knowledge of various infectious and neglected tropical diseases — including Tuberculosis (TB), HIV, and Malaria, among others — to support disease control programs. Over the last decade, we have been a leader in spatial epidemiology research and the development of Geographic Information System (GIS) tools and services for disease control.

Epidemiology traditionally focuses on the local conditions of a fixed geographical area where people experience disease. However, innovations in GIS and geoinformation technologies now allow us to measure and quantify the increasingly mobile and dynamic environment in which people are exposed to health hazards and disease. At CASE, we provide the tools to visualize the local nature, progression and spread of disease.

# Our Products & Services

Learn more at:  
[www.kit.nl/match](http://www.kit.nl/match)

Learn more at:  
[www.kit.nl/health/study](http://www.kit.nl/health/study)

## THE MATCH APPROACH

A cornerstone of the Centre for Applied Spatial Epidemiology is the MATCH Approach. This innovative geo-spatial analysis framework evaluates the effectiveness of interventions in the context of the local disease risk, burden and health efforts. This information is crucial to inform local interventions. We link data to policy objectives, combine and simplify complex data into a more intuitive format and build capacity for data management and analysis. The MATCH Approach employs and analyses multiple — and often underused — sources of geographically, temporally and demographically disaggregated data on epidemiological risk factors. This enables decision makers to use their program data to make better informed decisions supported by local evidence. MATCH is currently being applied to support TB programs around the world to identify persistent gaps in program functioning which lead to over four million people with TB not being diagnosed or reported globally. MATCH provides a valuable tool to identify geographic areas where TB case detection, diagnosis and reporting can be strengthened.

## TRAINING AND EDUCATION

Using innovative geo-spatial tools opens new perspectives on how we consider the effect of geographic contexts on health. To ensure that these innovations are accessible and become embedded in routine analyses and presentation, continuous knowledge transfer and capacity building amongst data managers, analysts and M&E experts is required. Simultaneously, outputs of the application of analytical tools need to be critically appraised and interpreted within local context to provide value for planning. As part of our projects and program support we train local counterparts and work closely with stakeholders. In this way we build capacity and create ownership of the process and outcomes which will inform health planning, beyond the support provided by KIT.

KIT also houses an education centre with Masters' programmes and advanced courses for health professionals — all aimed at strengthening health systems around the world. The courses are offered in cooperation with the Vrije Universiteit Amsterdam.

## DATA DISCLOSURE AND PROCESSING

Much of the effort required to generate maps and apply spatial analysis to routinely collected programme data relies on the availability and accessibility of health data. Recently, many health programmes have adopted electronic data systems, such as the DHIS2, to collect, store and manage project data. This data is accessible via customizable interfaces which allow users to perform basic analysis for monitoring purposes. To leverage these applications and fully disclose the data contained within these resources, CASE developed a GIS plugin which makes data stored and managed using DHIS2 fully interoperable with Quantum GIS, therefore enabling the integration of data across various geographic units and scales.

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