

Civil Registration and Vital Statistics & Data Impact

Thailand – Climate- and air quality-related health issues are a key concern in Thailand, accounting for about 31,000 deaths of Thai residents in 2019 according to [WHO's ambient air pollution estimates](#). In April 2022, the [average Thai resident was exposed to pollutant particulate matter 2.5 \(PM 2.5\)](#) at a level that was four times higher than the maximum safe level recommended by the World Health Organization. In 2023, Chiang Mai, a city in the northern region of the country, topped the list of the world's most polluted cities. Thailand's Ministry of Public Health (MOPH) has identified the need to address air quality due to its major threat to public health. As part of this goal, they have committed to strengthening the capacity of Thai public health professionals to analyze mortality and morbidity data in relation to meteorological factors and to develop appropriate materials to communicate this information to inform policies on environmental health in Thailand.

In May 2024, Chiang Mai University and the International Health Policy Program of MOPH in Thailand co-hosted a training in Chiang Mai that used didactic lectures and mentored hands-on exercises to introduce methodologies and tools to analyze the

association between meteorological factors and morbidity and mortality in Thailand. The curriculum was developed by the Data for Health Initiative, in collaboration with Fudan University and Shanghai Municipal Center for Disease Control and Prevention (SCDC) in China. The workshop was facilitated by experts from Shanghai Jiao Tong University School of Public Health and SCDC, and thirty leading public health professionals in Thailand were in attendance. Experts from Thailand also shared their research and data use experiences in this field.

Participants in this training are now developing public health tools, including the Air Quality Health Index (AQHI), and producing analysis of air pollution-related health problems, accounting for both morbidity and mortality in Thailand. The workshop provided participants with exposure to, and networking opportunities with, leading researchers on air quality in Thailand and strengthened relationships between experts in Thailand and China, which resulted in discussions on future collaborations in this field amongst public health agencies and research institutes in both countries.

Based on knowledge gained from this workshop, the MOPH's Health Impact Assessment Division is currently writing a research proposal to assess the health impacts of air pollution and climate change. The National Health Security Office, which manages national medical record data of the universal health coverage system, has agreed to data sharing for research purposes. Furthermore, the Faculty of Public Health of Chiang Mai University plans to continue discussions with the School of Public Health of Fudan University to seek opportunities for future collaboration, including joint publications and research, in this area and broader fields of public health.

The CRVS and Data Impact arms of the Data for Health Initiative at Vital Strategies partnered with institutions in China to develop and test the curriculum for the workshop. Vital Strategies also helped foster collaboration and discussions between the institutions in China and Thailand through technical meetings, discussions, and country exchange visits. Vital Strategies provided coordination and technical support to the development and implementation of the 3-day workshop and will continue to provide a forum for cross country sharing and collaboration. At a more fundamental level, the CRVS program's continuous efforts in data quality assurance and system strengthening supported our partners in China and Thailand to produce reliable mortality data, which is crucial for estimating the impact of various risk factors, such as climate change and air pollution, on health.



Thailand gained support from Chinese experts for a training on the analysis of association between meteorological factor and morbidity/mortality in Chiang Mai, Thailand