

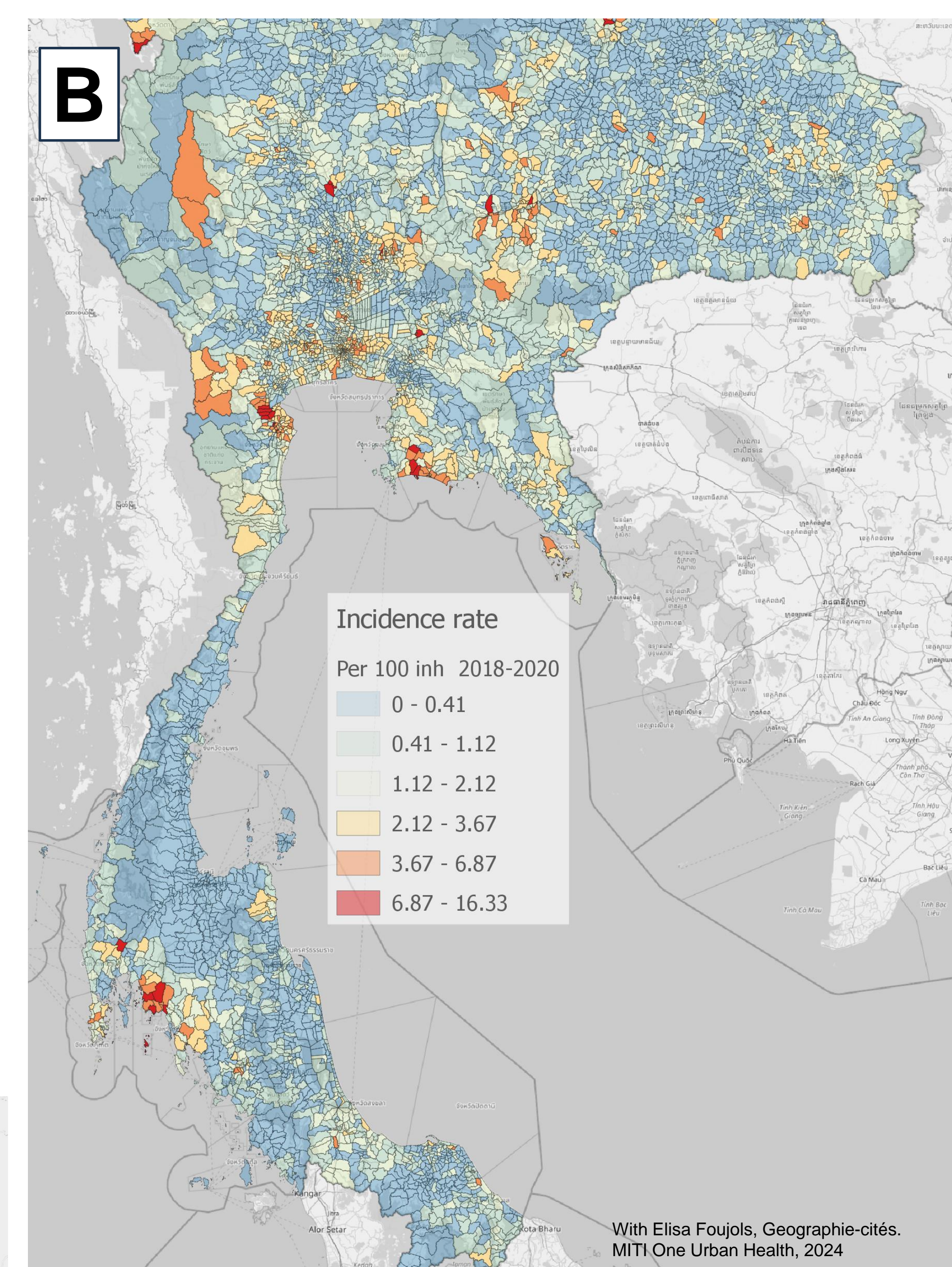
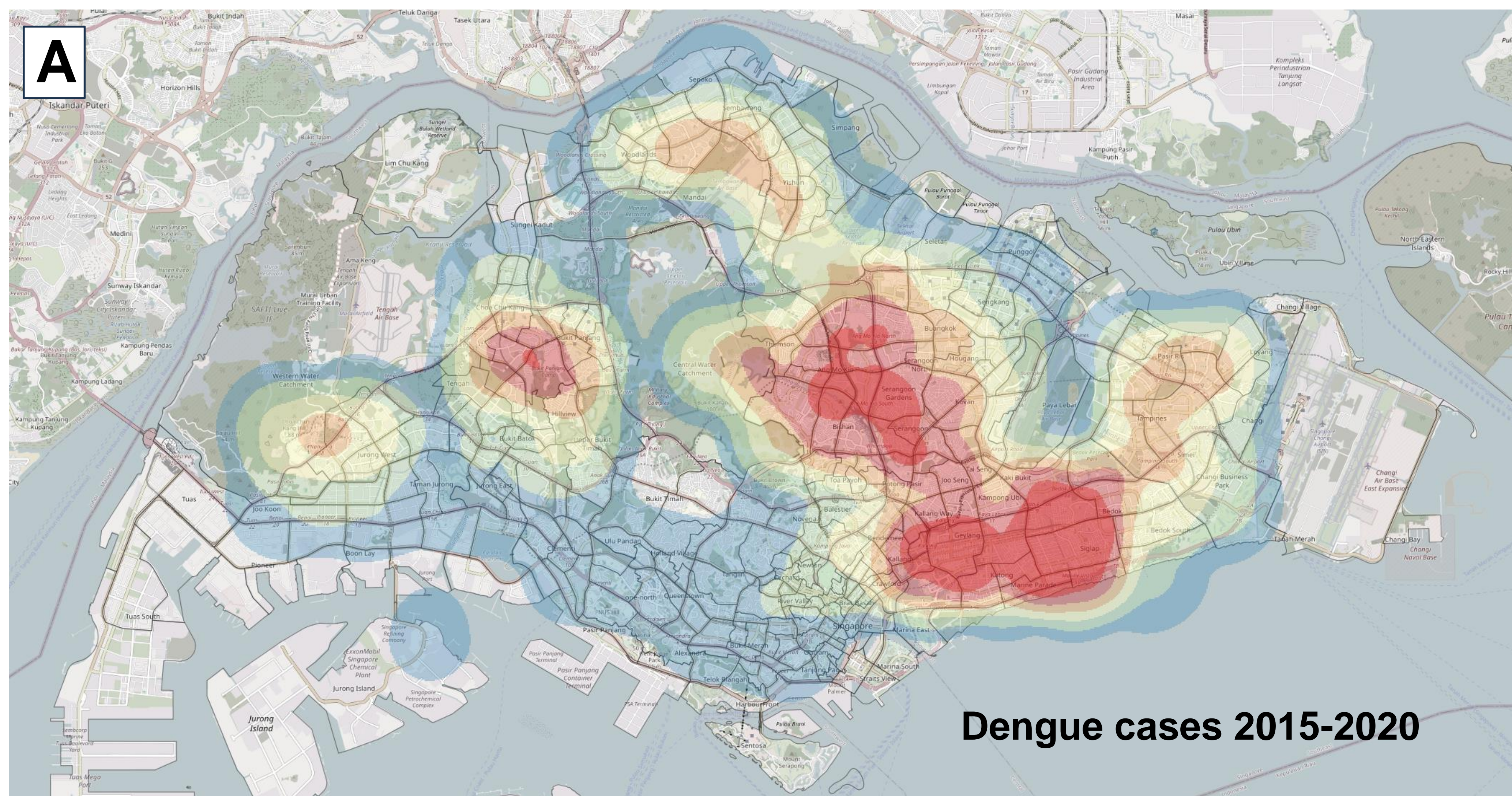
Your risk to get dengue according to where you live

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Work Package 1 of the Space project plays a pivotal role in analyzing the geography of dengue in highly endemic regions. By examining dengue data from Singapore (A), Thailand (B), Vientiane (C), and Delhi (D), our team identifies spatial and temporal variations in dengue epidemics.

In Singapore (A), the collaboration between experienced scientists and proactive local stakeholders, both producing unique health, vector and environmental datasets, enables advanced modeling of environmental factors that influence dengue transmission.

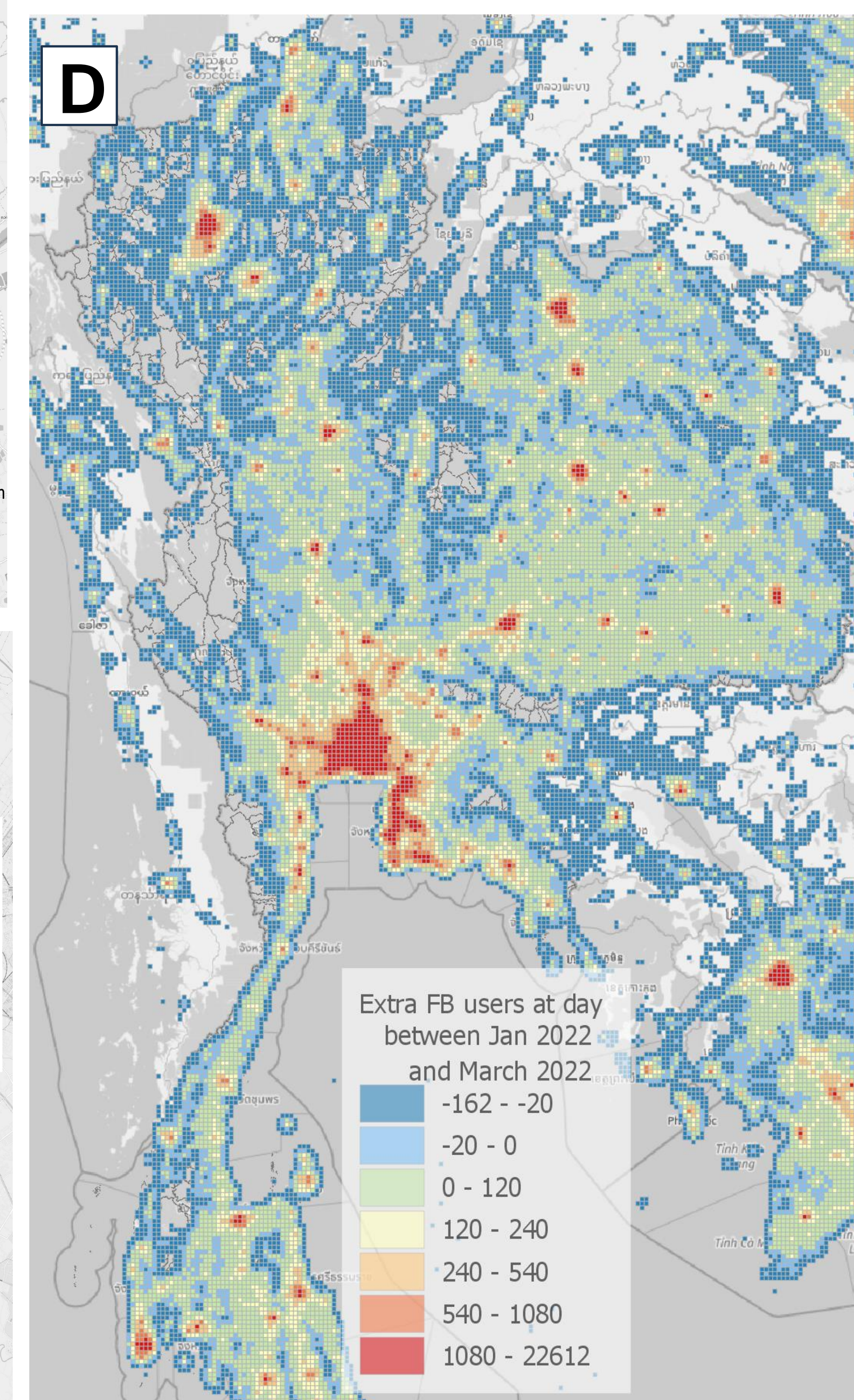
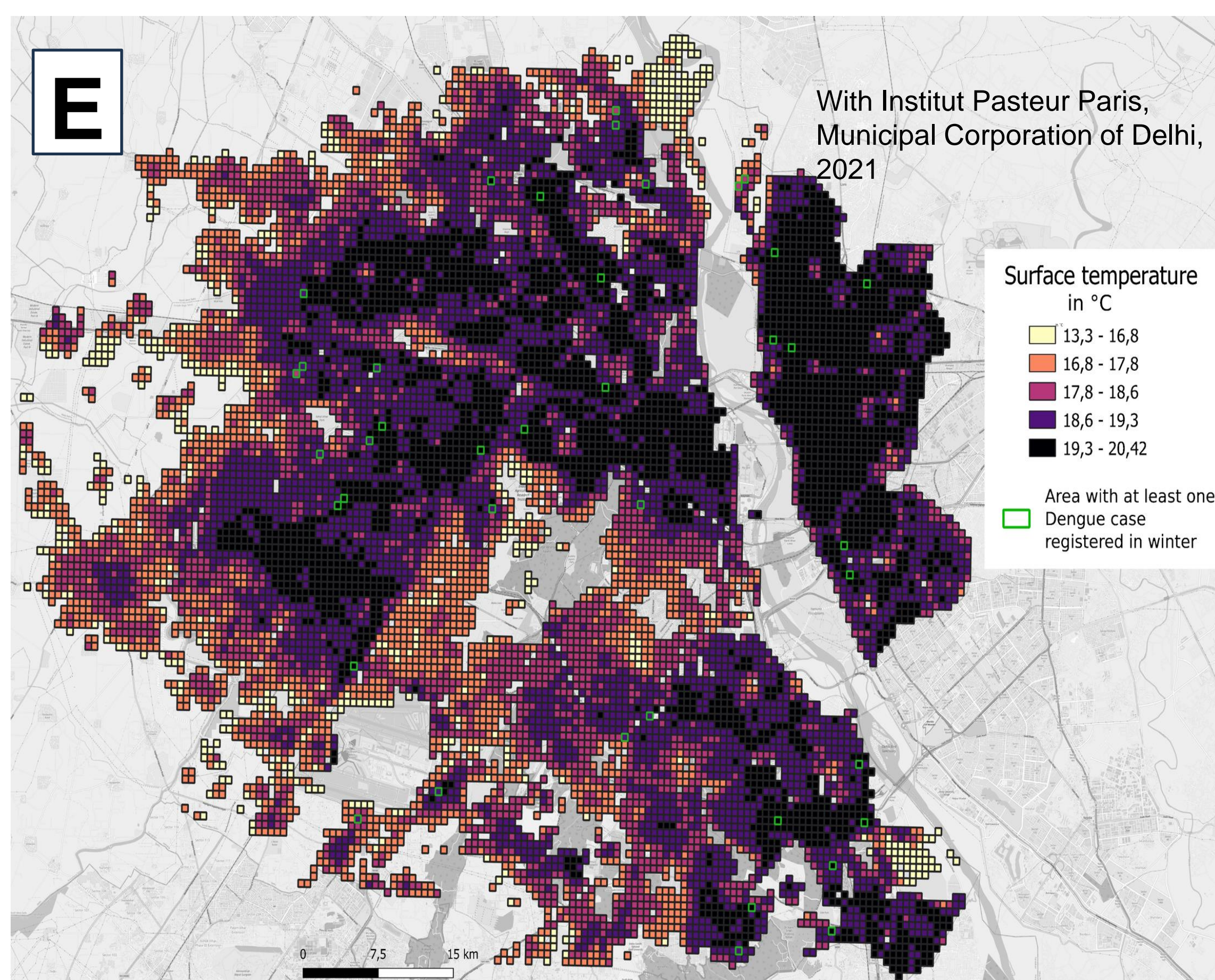
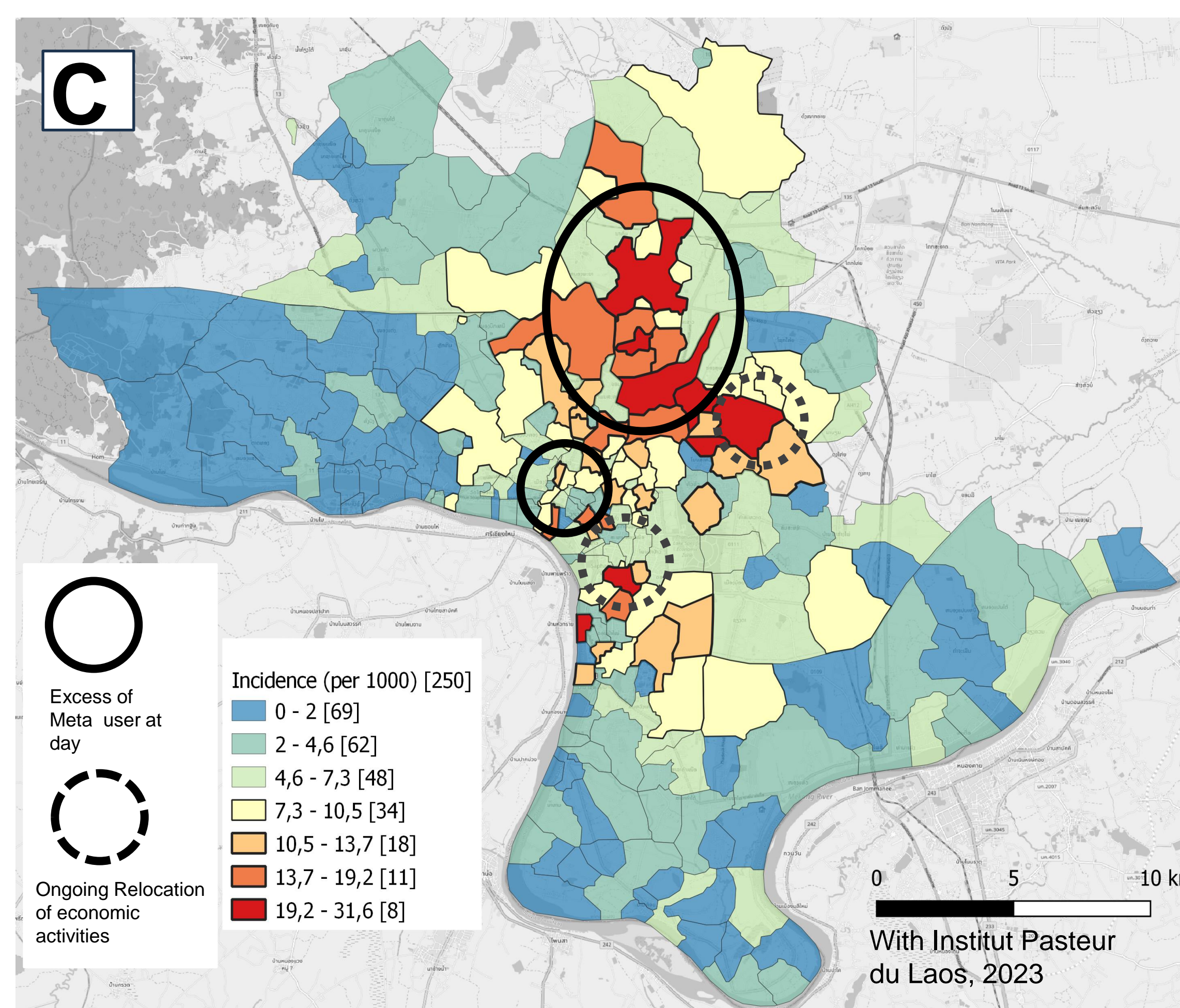
Regionally applied, this approach not only enhances predictive capabilities but also empowers local efforts to combat dengue more effectively with strategies tailored to specific community needs. Thanks to these local collaborations, partners in Work Package 1 have already identified several risk factors associated with the regional spread of dengue.



1° Urbanization (B): Due to the adaptation of its primary vector, *Aedes aegypti*, to cities, dengue hotspots are increasingly found in the south of Bangkok, the Southern Region, and other rapidly urbanizing areas. Worldwide urbanization could greatly benefit from local policies that support comprehensive infectious disease control plans.

2° Human Mobility (C/D): Analysis of real-time social media data across Southeast Asia, collected every 8 hours, shows a clear pattern in Vientiane. Areas with high daytime activity see more dengue cases. As dengue is often asymptomatic, infected individuals continue to commute, potentially spreading the virus to mosquitoes.

3° Climate change and urban disparities (E): In Delhi, a mix of infrastructure deprivation and urban heat islands allows the dengue virus to persist during traditionally cooler winter months. These UHI provide temperatures suitable for mosquito survival and breeding, as the lack of proper water infrastructure forces residents to store water at home, creating ideal breeding sites.



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