

Letter to the Editor

GIS for Dengue Surveillance: Strengthening Collaborations

Dear Sir:

We congratulate Duncombe and colleagues¹ for their interesting review concerning the role of the geographic information system (GIS) for dengue surveillance. They provide examples, particularly from the developing countries, showing the various functions of GIS to automate spatial identification, visualization, analysis, and decision making aiming to assist dengue-related public health actions. Despite the challenges, the authors advocate the use of open access technologies and international collaboration to improve dengue surveillance at the sub-national, country, and regional levels. Although we agree with the international collaboration proposition, on the contrary, we doubt that this initiative alone could lead to improvement of dengue surveillance at a sub-national level.

Incomplete data and untimely reporting are the main challenges to surveillance systems in developing countries. Although the authors mention some technical challenges confronted by developing countries, they do not sufficiently recognize issues in their individual health systems,² particularly decentralization policies, which interfere with comprehensiveness and accuracy of surveillance systems. Indonesia and the Philippines are among the dengue-burdened countries that have decentralized various health policies in the last decade, leading, in our view to at least three anecdotal phenomena. First, until well established, decentralization policy leads to structural and regional changes. Elimination, formation, amalgamation, and expansion of regions have problems in initial implementation, for example in causing troublesome spatial data processing and analyses. Second, more autonomous authority in the lower level has initiated idiosyncratic local rules and procedures. Unfortunately, national policies have not been implemented with decentralization of procedures and data collection/exchange. Third, policy makers at the national level are still confronted with inequities and gaps among regions in terms of human resources, fiscal capacity, local health problems, and infrastructures (including information and communication technologies) when commencing this reform. Finally, recommendations to foster international

collaboration for GIS dengue surveillance should be balanced with efforts to strengthen surveillance capacity at national and subnational levels, particularly with regard to standard data collection, exchange and sharing.

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