

Analysis Of Risk Area For Malaria In Military Area Of Operations (AOs) Along Thai-North Cambodia Utilizing Environmental Database And Geographic Information System

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Malaria remains a major cause of disease non battle injury (DNBI) for Thai troops deployed to border areas. To decrease this DNBI, appropriate malaria prevention and control program specific to high risk areas is crucial. Geographic Information System (GIS) was applied to gain information of risk areas for malaria infection in provinces along Thai–North Cambodia borders. Environmental data corresponding to malaria vector such as forest area, area attitude, natural water resource for mosquito breeding, human community as well as mosquito flying range was utilized to conduct an analysis. Resulting computational simulation demonstrated that areas at the border line of Srisakate and Ubonratchathani Provinces have the highest suitable environmental factors facilitating for malaria infection, thus, the high risk areas for malaria infection. However, computational analysis also indicated that the shift and change of risk areas may occur if other factors such as migration of human host and parasite reservoirs as well as public health behavior are taking into account.

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