THE CASE OF MALARIA AND ITS RELATIONSHIP TO VECTORIAL CAPACITY OF *Anopheles farauti* LAVERAN (DIPTERA: CULICIDAE) ON COASTAL ECOSYSTEM (BIAK NUMFOR REGENCY) OF PAPUA PROVINCE

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ABSTRACT

BACKGROUND: Biak Numfor regency had high number of malaria cases in Papua Province. This regency is an area with coastal ecosystem. *Anopheles farauti* was reported as one of the main vectors of malaria in Papua. Vector capacity (VC) is a quantitative entomology indicator used to measure contagious potency of malaria in endemic areas. Vectorial capacity is the rate (usually daily) at which a bloodsucking insect population generates new inoculations from a currently infectious case. Vectorial capacity is the product of the eight components; vector longevity is a key component. It is a measure of potential rather than actual rate of transmission, because it includes no parasitological information. This study aimed to estimate VC of *An. farauti* Laveran (Diptera: Culicidae), and to determine its relationship with of malaria cases in Biak Numfor regency.
SUBJECT AND METHODS: Methods used to calculate VC values were: (1) Human landing collection, (2) Ovarial surgery, and (3) ELISA test. Data of malaria cases were obtained from the Regency Health Office of Biak Numfor.
RESULTS: Vector capacity values in Biak Numfor coastal ecosystem were within the range between <0.01 to 0.05. This result indicated that *Anopheles farauti* mosquito was a potential malaria vector and it increased the contagious risk of malaria in coastal ecosystem.
CONCLUSION: *Anopheles farauti* mosquito is a potential malaria vector and it increases the contagious risk of malaria in Biak Numfor coastal ecosystem.

Keywords: Biak Numfor regency, vectorial capacity, *Anopheles farauti*.

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