ECONOMIC EVALUATION OF VECTOR CONTROL MEASURES : A CASE STUDY OF MALARIA CONTROL PROGRAMME IN SOUTH-EAST SULAWESI PROVINCE, INDONESIA

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The general objective of this research is to evaluate the effectiveness and efficiency of vector control measures by indoor residual spraying in malaria control programme due to changes in resting behavior of vector in the reduction of parasite rate of malaria at Southeast Sulawesi Province, Indonesia during 1974-1999.

The effectiveness and efficiency of vector control measures by indoor residual spraying depend on the resting behavior of vectors. When the vectors have been changed their behavior to avoid contact with insecticide on the wall surfaces, then indoor residual spraying become wasted. Other factors be affecting the outcome of vector control measures are socio-economic development environment such as per capita income and literacy rate. Data collections were carried out from malaria units at the provincial as well as district and central level, by review documents, reports and records, and interview / discussions.

Results of study show that the effectiveness of vector control measures by indoor residual spraying before changed behavior of vectors seem higher compare to after changed (slopes = -0.2435 and -0.0342 respectively). But statistically, there is no significant different effectiveness between vector control measures before and after changed behavior of vectors (t = -0.9944; p 0.05). The same result also applies to the efficiency of vector control measures (slopes = -0.4761 and -0.0441 respectively) and statistically not significant ($t = -1.1732$; $p < 0.05$).

Since the vector control measures by indoor residual spraying only contributed a small effect to the reduction of parasite rate, an alternative method should be applied. Larviciding by B. thuringiensis seems to be an alternative method of vector control which is supported by surveillance such as case finding prompt treatment and entomological survey. Community participation should be encouraged in the environmental management for vector control measures.

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