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SUMMARY

The Mapping of Geographical Information System (GIS) Environment And Spread of Malaria in The District Of North Bengkulu

Malaria is a disease transmitted by the Anopheles mosquito and caused by Plasmodium where a very wide distribution of more than 100 countries in tropical and sub-tropical. Indonesia is one country that is still at risk of malaria due to morbidity and mortality are still high, especially in areas outside Java and Bali, Papua, Maluku, Nusa Tenggara, Sulawesi, Kalimantan and Sumatra because the area is a transmigration area that contained a mixture of people coming from areas that are endemic and not endemic malaria and is still often an explosion of cases or outbreaks that cause death (Widoyono 2011 and Soedarto, 2011).

Bengkulu Province is one of the transmigration areas outside Java-Bali and including malaria endemic areas of the disease, which has 10 District / City with stratification Anual numbers Parasite Incidence (API) High Case Incidence (HCI) with API> 5 ‰ much as two districts, District North Bengkulu and Mukomuko (PHO Profile of Bengkulu in 2013). Based on data from the Provincial Health Office in 2013, the Annual Parasite Incidence (API) is the highest from 2011 to 2013 there were in North Bengkulu. In 2011 the API 19.39 per 1000 population, in 2012 with the API 23.24 per 1000 population and 13.42 per 1000 population (P2PL, Bengkulu Provincial Health Office in 2013). As we know that malaria related to environmental information such as topography, temperature, rainfall, land use, mobility of people. It has a variety of places and a great time, so the ability to use GIS as a tool to determine the density distribution of malaria incidence in plantations and forests of North Bengkulu Bengkulu Province. According Boulus (2004), the use of GIS is a step reflecting evidence-based decision making.

This type of research is observational with cross sectional design. The samples used were malaria patients were based on microscopic results obtained from the data Puskesmas and Puskesmas Housing Air Bintunan North Bengkulu Regency Year 2014 and are willing to become research respondents. Primary data obtained from interviews using a questionnaire covering the characteristics Respondents Respondents cultural and social environment, observation by observation sheet covering natural and built environment (breeding places), and perform measurements including topography and climatology (the natural environment, and home-made respondents) and mapping home incidence of malaria by GPS Garmin 62S.

Results of this research is the Anopheles mosquito Breeding places artificially include an 42.42%, 37.88% gutters, 15.15% puddle of water used to trace the vehicle and 1.52% respectively rice paddies, puddles former cattle trail and Regions River Flow. While the Anopheles mosquito breeding places naturally include 37.5% puddle naturally, 20.83% of small rivers and streams, and 4.17% puddles on the tree. Altitude regions are in ≤2000 meters, 97.6% ambient temperature> 30 ° C and 88.1% humidity ≥60%. The characteristic feature of the

majority of malaria incidence of 64.3% aged <18 years, 54.8% female, 90.5% Javanese ethnic group, 38.1% last high school education, 50% worked as a farm worker, 45.2% long stay <5 years, 47.6% have an income of Rp. 1,000,000 - Rp. 1,500,000 and 83.3% less have the knowledge. Housing conditions majority 95.2% incidence of malaria has not closed ventilation, 69% had walls covered timber / boards, 71.4% had the ceiling is not closed, 59.5% had a roof made of zinc, 52.4 % have tiled floors covered houses and 73.8% are clothes hanging. Social and cultural environment in the majority of forest plantations and 66.7% have a habit of going out at night, do not have the habit of sleeping outdoors at night, 88.1% no mobilization, 64.3% use mosquito nets, 90 , 5% did not put up wire netting on the ventilation, 69.0% did not use mosquito reject, 64.3% did not have a big cattle, 97.6% found the support of health-care facilities are good and 97.6% thought that the lack of efforts of health workers the prevention of malaria. Level density between the incidence of malaria in the plantations has clumped pattern (cluster).