

## Vector Control Program Evaluation *Aedes*aegypti in Port Health Office Class II Banjarmasin, South Kalimantan (Case Study Working Area Seaport Banjarmasin)

Totok Purwanto<sup>1\*</sup>, Muhammad Pahrudin<sup>2</sup>, Ghafarul Wududu<sup>3</sup>, Deddy Setya N<sup>4</sup>,  
R. Azizah<sup>5</sup>, SetyaHaksama<sup>6</sup>, Ririh Yudhastuti<sup>7</sup>, Lilis Sulistyorini<sup>8</sup>  
<sup>1,2,3,4,5,7,8</sup> Environmental Health Studies Program, School of Public Health,  
Airlangga University Surabaya, Indonesia  
<sup>6</sup>Department of Health Administration and Policy

**Abstract:-** Activity at the port with such a high mobilization, automatically spreading disease is more rapid and diverse. Seaport working area CTF class II Banjarmasin, South Kalimantan is the working area House Index (HI) is the highest in the buffer area of more than 1%. HI in the buffer area > 1% would be a potential for breeding of *Aedes*aegypti mosquito which can result in the transmission of Dengue Hemorrhagic Fever (DHF). Data in 2013 in the region of Seaports Banjarmasin number of cases of Dengue Fever (DD) there are 22 people and there are 2 people DHF. This research is descriptive sampling technique used was purposive sampling technique, the sample size of 66 people. The data obtained for the primary and secondary, to identify and analyze resources (labor, cost, means, methods) and the activities of planning, implementation, supervision and evaluation, and the results of vector control activities in communities and the conduct of the larvae of *Aedes*aegypti in the perimeter area and buffer area. Measurements conducted document analysis, questionnaire, interview and observation. The results showed the lack of power and the number of functional training in the vector *Aedes*aegypti control program, not maximal implementation of vector control programs namely *Aedes*aegypti mosquito larvae eradication (PSN) only through surveys larvae, while surveys of eggs and adult mosquito surveys are not conducted. Implementation of counseling conducted from house to house, without involving the relevant stakeholders such as community leaders, RT, health center and the port and the low implementation of vector *Aedes*aegypti control program in the community in the Work Area Seaports Banjarmasin is seen with HI > 1% in buffer area, and attitudes towards the implementation of the program by the *Aedes*aegypti vector control officers are still not maximized.

**Keywords:-** Evaluation of the program, House Index

### I. INTRODUCTION

Port is a node out of the meeting or activity ships, goods and people, as well as the spread of disease transformation gate. Activity at the port with such a high mobilization, automatically spreading disease is more rapid and diverse. It is a global threat to public health due to the presence of quarantine diseases, new infectious diseases (*new emerging diseases*), as well as the old infectious diseases that arise again (*re-emerging diseases*). The impact of the disease is the effect of the enactment of the free market or the era of globalization and can cause huge losses both in the economic, trade, social, cultural, and political impact on a country or region.

*International Health Regulations (IHR)* in 2005 in Article 7 states that information regarding Extraordinary Events (KLB), Member States must report to the WHO when detecting outbreaks that may pose *Public Health Emergency of International Concern (PHEIC)* in its territory, regardless of which source. Then in Article 9, paragraph 2 states that the member states, to the extent possible, should notify the WHO within 24 hours after obtaining evidence of risk factors outside its territory that may interfere with public health and may spread to other countries.

To be aware of the spread of vector-borne diseases through the entry port, according to the Regulation of the Minister of Health No. 2348 / Menkes / Per / XI / 2011 on the Amendment Regulation of the Minister of Health No. 356 / Menkes / Per / IV / 2008 has been determined that the Port Health Office (KKP) as a Technical Implementation Unit (UPT) and the spearhead of the Ministry of Health authorized the prevention and control of vector-borne diseases that enter and exit the port to make efforts to break the chain of disease transmission in a professional manner according to standards and requirements that have been set.

The working area is made up of a Sea Port Port Trisakti Banjarmasin, Jelapat, Taboneo the perimeter area of 32.16 ha and 72.65 ha buffer. Where to buffer area consists of 3 (three) villages namely TelagaBiru

Village, Pelambuan and villages Basirih the number of existing RT 12 RT. According to the Decree of the Minister of Health of the Republic of Indonesia No. 431 / Menkes / SK / IV / 2007 states that the perimeter is the working area of the port according to the rules of government, while the buffer is a buffer region outside the port area with a length of 400 meters from the port boundaries. In the Decree of the Minister of Health of the Republic of Indonesia No. 264 / Menkes / SK / III / 2004 also explained that the authority of the CTF in the buffer area is mosquito control (ha) is the total area in the buffer areas supervised and conducted mosquito eradication. Decree of the Minister of Health of the Republic of Indonesia No. 431 / Menkes / SK / IV / 2007 mentioned that the implementation of the vector mosquito *Aedes aegypti* eradication in the buffer, if the house meets the technical requirements of *Aedes aegypti* index > 1%.

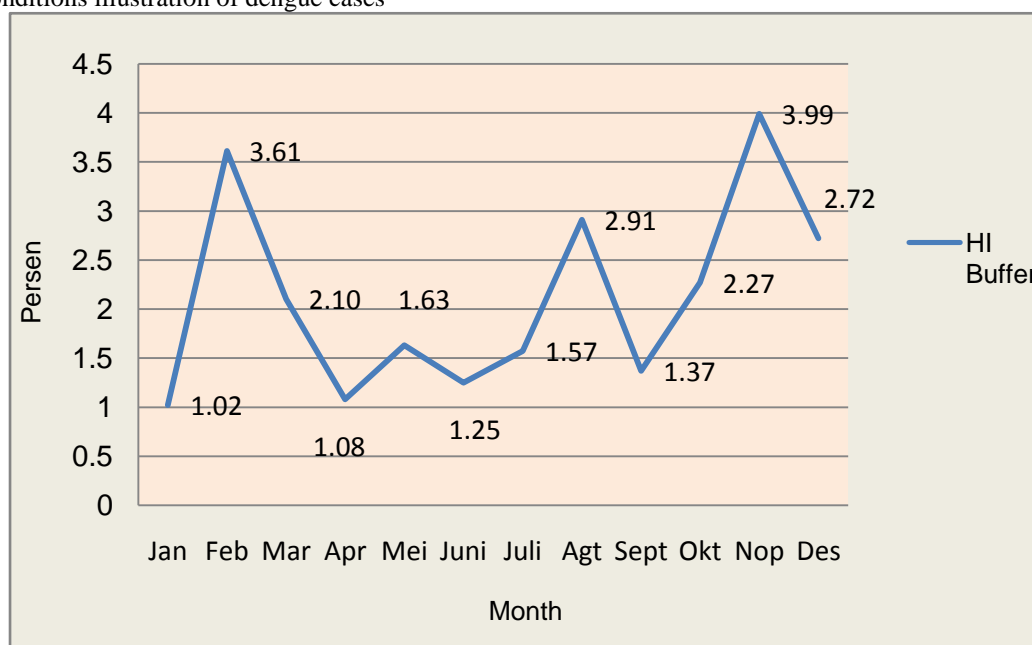
The purpose of this study was to evaluate the Vector Control Program *Aedes aegypti* in Port Health Office (KKP) class II Banjarmasin, South Kalimantan (Case Study Working Area Seaports Banjarmasin).

## II. METHODS

This study is descriptive as it aims to describe a situation objectively and systematically in order to evaluate the vector *Aedes aegypti* control program in the Work Area Seaports class II CTF Banjarmasin Banjarmasin, South Kalimantan, compared with the standard of Decree No. 374 / Menkes / Per / III / 2010, the Minister of Health Decree No. 431 / Menkes / SK / IV / 2007, the Minister of Health Decree No. 1314 / Menkes / SK / IX / 2010 and National Events SOP Port Health Office in the State Entrance 2010. addition of this non-experimental study, which in practice using a questionnaire and in-depth interview guide (*indept interview*). Subjects were taken by *purposive sampling*. The number of samples for study subjects there are 66 (sixty-six) of respondents consists of 5 (five) officials structural (CTF Head, TU Head, Head of Health Services & Cross Region, Head of Risk Management and Environmental Control Head Quarantine and Surveillance Epidemiology), 3 (three) Functional Health Epidemiology, 7 (seven) functional Sanitarian, 1 (one) person entomologist Health, 7 (seven) community leaders, 8 (six) the environmental health worker and 35 (thirty five) people in the community CTF environmental class II Banjarmasin.

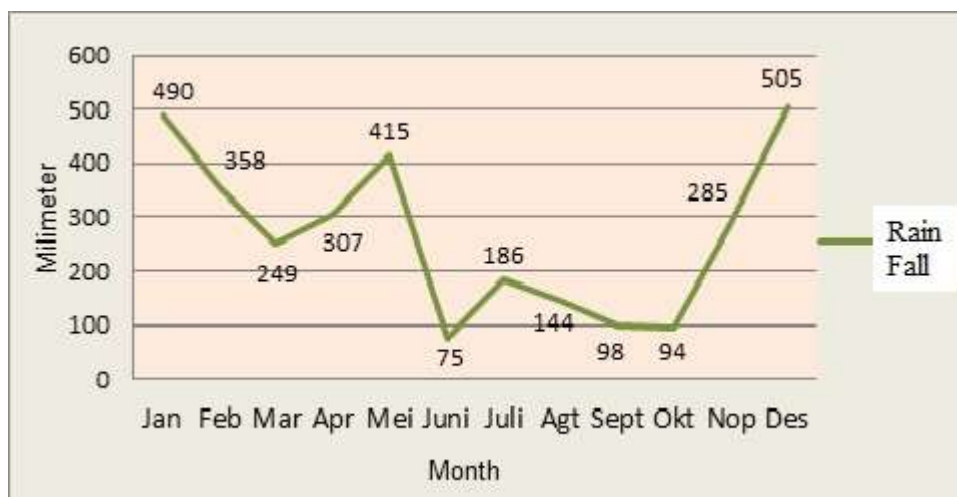
## III. RESULTS AND DATA ANALYSIS

### 1. Conditions illustration of dengue cases

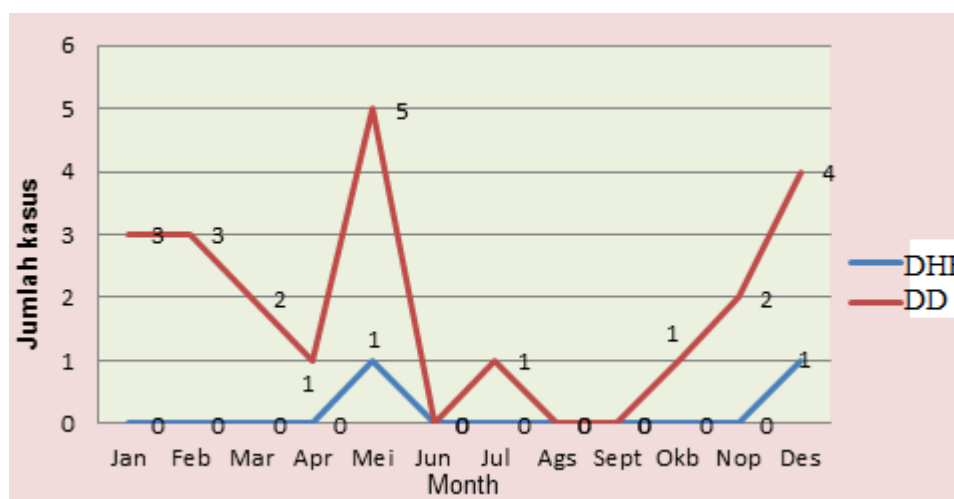


Source: processed by the researcher, 2014

Figure 5.1. Trend House Flick *Aedes aegypti* Index Buffer Work Area Regional Seaports Class II CTF Banjarmasin Banjarmasin, South Kalimantan in 2013



Source: processed by the researcher, 2014  
 Figure 5.2. Rainfall trends in Banjarmasin, South Kalimantan in 2013



Source: processed by the researcher, 2014  
 Figure 5.3. Trend DHF and DD in the Work Area Seaports Banjarmasin, South Kalimantan in 2013

**2. Funding**

Health financing sourced from a variety of sources, namely: government, local government, private sector, community organizations, and society itself. Therefore, adequate health financing, integrated, stable, and continuous vital role for health service delivery in order to achieve various objectives of health development.

**3. Means**

Means observation vector *Aedes aegypti*, Personal Protective Equipment, Materials insecticide

**4. Methods**

Technical instructions (guidelines) and pelaksanaan instructions (guidelines) activity vector *Aedes aegypti* control program refers to Kepmenkes No. 431 of 2007 and the National SOP CTF activities in the State Entrance P2PL Director General of Ministry of Health of Indonesia in 2010.

**IV. DISCUSSION**

Qualified health and human resources in sufficient quantities and distributed has been shown to give a positive effect on health outcomes. Based on in-depth interviews that the information obtained in the section Risk Control Environment (PRL) class II CTF Environmental Health Banjarmasin number of personnel there are 8 people, consisting of 7 people and 1 person entomologist sanitarian. From the annual report data CTF Banjarmasin class II in 2013 mentions that the number of environmental health personnel 12 people. When referring to the Decree of the Minister of Health No. 1314 / Menkes / SK / IX / 2010 the number of

environmental health personnel in the work area Seaports Class II CTF Banjarmasin, South Kalimantan not meet the standards. Numbers of environmental health personnel are eligible for CTF II class is 14 people. While in terms of quality, both competence and training that they have. Environmental health personnel in the work area Seaports CTF Banjarmasin educated class II D III minimum of Environmental Health. Referring to competence environmental health education in accordance with No.Kepmenkes 1314 / Menkes / SK / IX / 2010 are of the D III environmental health.

Information from the respondents, said that environmental health workers amounted to 12 people based on class II CTF report data Banjarmasin in 2013, yet it becomes the energy functional and technical training functional. No. Kepmenkes 1314 / Menkes / SK / IX / 2010 on the Standardization of Human Resources, Environment Infrastructures in CTF mentioned that the role of environmental health professionals in conducting eradication and prevention of all vectors of diseases that may pose a risk of a public health emergency events are troubling the world, should have been trained in the identification of vector, food and beverage sanitation control, fumigation monitoring, water monitoring, wastewater, air.

Meanwhile, when viewed HI per month in 2013, based on figure 5.1 there is a trend in *Aedesegypti* larvae HI buffer area from January to December 2013, where HI is highest in February is 3.61% and in November is 3.99%. The highindex House is supported also by the rainfall in 2013, when the see figure 5.2 from January to December 2013 there is a trend in rainfall, which occurred in January of high rainfall is 490 mm, the month of May with 415 mm rainfall and in December with 505 mm rainfall. Was when the number of cases seen per month DD and DHF in 2013, in which case the highest DD in May as many as 5 cases with 1 case of dengue cases and DD December 4 cases with 1 case of dengue. The presence of DD and DHF cases in May and December, due to one factor rainfall in May and December of 2013 are still high, supported HI *Aedesegypti* larvae in the buffer area of more than 1%.

Health financing sourced from a variety of sources, namely: government, local government, private sector, community organizations, and society itself. Therefore, adequate health financing, integrated, stable, and continuous vital role for health service delivery in order to achieve various objectives of health development. Based on information from the control section chief of the environmental risks and the means of observation vector *Aedesegypti* eradication mention that the means of observation and eradication of *Aedesegypti* vector in accordance with the National SOP CTF activities in the State Entrance P2PL Director General of Ministry of Health of Indonesia in 2010.

In accordance with the statement of the respondent, that the CTF class II Banjarmasin using Technical Guidance and Guidelines activity vector *Aedesegypti* control program refers to Kepmenkes 431 in 2007, 374 in 2010 Permenkes, Kepmenkes No.1314 of 2010 and the National SOP CTF activities in 2010. This is certainly that in conducting vector *Aedesegypti* control program work area Seaports Banjarmasin already applying all the rules according to the standard operating procedures.

## V. CONCLUSION

Still the lack of power and functional training in the vector *Aedesegypti* control program, still not maximal implementation of vector control programs, namely the eradication of *Aedesegypti* mosquito nest (PSN) only through surveys larvae, while surveys of eggs and adult mosquito surveys are not conducted. Implementation of counseling conducted from house to house, without involving the relevant stakeholders such as community leaders, RT, health center and the harbor. The low implementation of vector *Aedesegypti* control program in the community in the Work Area Seaports Banjarmasin is seen with HI > 1% in buffer area, as well as public attitudes towards the implementation of the program by the *Aedesegypti* vector control officers are still not maximized.

## VI. BIBLIOGRAPHY

- [1]. Berntsen, Christopher Friis, Syverud, Kai Hansen. (2009). The dengue prevention, surveillance and control program in the state of Morelos, Mexico. Oslo Faculty of Medicine University
- [2]. Candra, Budiman (2012). Introduction to Environmental Health. Jakarta. Book Medical Publishers.
- [3]. Kuntoro, H. (2011) Basic Philosophical Research Methodology. Surabaya. Cheap Reader
- [4]. Marlinae, Lenie., (2011). Evaluation of Hemorrhagic Dengue Vector Control in Endemic Regions in South Kalimantan in 2010 (a case study in the City and County BanjarbaruBanjar) Thesis, Surabaya, UniversitasAirlangga
- [5]. Mardiana, Sri Wahyu., (2012). Evaluation of Employee Performance In Jambi Port Health Office Sanitation Inspection In Port Health Office Class III Thesis Jambi, Yogyakarta, GadjahMada University
- [6]. Notoatmodjo, Soekidjo., (2010). Health Promotion Theory and Applications, revised edition. Jakarta. PT.Rineka Reserved.

- [7]. Nazir, Moh., (2009). Methods of Research, Seventh Edition, Jakarta. Ghalia Indonesia.
- [8]. Rossi, Peter H., Freeman, Howard E, Lipsey, Mark W., (2004), Evaluation, A Systematic Approach. sixth edition, Sage Publications, Inc.
- [9]. Rudiansyah., (2013). Planning & Evaluation. FKM Health Administration Studies Program Airlangga. <http://kuliahrudiansyah.blogspot.com> . posted October 4, 2013
- [10]. Sugiyono., (2011). Qualitative and Quantitative Research Methods R & D. Bandung. Alfabeta
- [11]. Supriyanto S, Damayanti NA (2007). Planning and Evaluation. Surabaya. Airlangga University Press
- [12]. Soegijanto, Soegeng (2012). Dengue Fever, Surabaya. Airlangga University Press
- [13]. Sarumpaet, Masrip. (2007). Historical Health Quarantine, <http://sejarahkkp.blogspot.com> .
- [14]. Posted [August 21, 2007](#)
- [15]. WHO. (1997). Dengue haemorrhagic fever: diagnosis, treatment, prevention and control. 2nd ed. Geneva.
- [16]. WHO and MOH. (2003). Disease Prevention and Control [of Dengue Fever](#) and Dengue Hemorrhagic Fever. MOH. Jakarta.
- [17]. WHO. (2007). International Health Regulations (2005), DG-PL Translation MOH, Jakarta
- [18]. Yudhastuti, Ririh (2011). Vectors and Rodent Control. Surabaya. Cheap Reader