

ABSTRACT

**Relationship of Climate Factors and Flea Index To
Indicate Risk Area For Plague Incidence
In Surorowo Village Pasuruan**

Plague is one of *zoonosa* diseases, particularly in mouse, and it may be infected to the human. Plague is caused by *Yersinia pestis* bacteria (*Pasteurella pestis*) through flea's bite, which is the vector of the plague. The climate change may influence the vector and the existence of *zoonosis* diseases. The effect of high temperature will increase hot environment and drought that decrease food and water. Moreover, high temperature also influences the pattern of plague transmission that is from mouse and flea.

This study aimed to link between the climate factors, such as temperature change, humidity, rainfall, and the duration of sun radiation, and the index of flea as one of the indicators of risk in plague. Furthermore, this study is observational study with secondary data taken from Department of Meteorology, Climatology, and Geophysics (*Badan Metereologi, Klimatologi dan Geofisika*). In addition, the data of climate and data of flea index are obtained from the laboratory of plague in Nongkojajar based on time period by using retrospective method since in January 2009 until December 2013 (for 5 years) and time series method for trend or prediction of flea index mark.

The sunshine duration intermediately strong against the value of flea index, while a factor of moisture and rainfall only factors influencing the value of special flea index and not affect flea index general. And to the factors of temperature it turns out not affect the value of flea index existing in region of Surorowo Village, Relative humidity and sunshine duration intermediately strong against the high value of specifically flea index, then the region of Surorowo Village constitutes a region on the verge of against the onset of occurrences of a disease plague. For future forecasting/trend, it was estimated that flea index will keep decreasing.

Conclusion obtained is the factor climate to moisture and precipitation affect the special flea index and sun shine duration intermediately towards special flea index and general flea index, and that flea index will undergo a downward trend in the future.

Keywords : climate faktors, flea index