

Leptospirosis environmental control and surveillance in Bukit Wang Eco-Park, Jitra, Kedah

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ABSTRACT

Introduction: Leptospirosis, a potentially fatal disease caused by the bacterium *Leptospira*, is transmitted through direct contact with water or soil contaminated by the urine of infected animals. The disease is commonly linked to high-risk occupations, home environments, and recreational activities. In the Kubang Pasu district, Bukit Wang Eco-Park, a popular recreational spot, has faced challenges with leptospirosis outbreaks due to its high visitor traffic and environmental conditions. Effective control measures for leptospirosis encompass eliminating pathogenic agents, modifying environmental conditions, boosting host immunity and reducing infected host populations. **Objective:** The objective of this project is to develop and implement effective strategies to reduce the risk of leptospirosis and enhance public health protection. This involves collaboration with various agencies, including the Kedah State Forestry Department and the Kubang Pasu District Office. **Materials and Method:** A comprehensive assessment and risk analysis of Bukit Wang Eco-Park has been conducted by collecting and analyzing data from 2022. **Result:** An outbreak of leptospirosis was declared on June 19, 2023, with 7 cases reported (4 confirmed and 3 probable). The affected individuals, predominantly male, exhibited symptoms such as fever, vomiting, and diarrhea. Environmental assessments identified contamination sources in the park's upper areas. Immediate control measures were implemented, including park closure, environmental sampling, health education campaigns, and ongoing surveillance. Water and soil samples from two locations tested positive for pathogenic *Leptospira*. **Conclusion:** The interventions have led to positive changes, reducing the spread of leptospirosis within the eco-park. However, to sustain these improvements, it is crucial to maintain and effectively implement control measures consistently. Long-term preventive strategies will be essential to ensuring the continued safety of park visitors and protecting public health.