

# **THE EFFICIENCY IN EXECUTING THE LAWS AND THEIR ENFORCEMENT REGARDING PIG'S WASTE MANAGEMENT: A CASE STUDY ON THE NIPAH VIRUS OUTBREAK IN NEGERI SEMBILAN**

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## **ABSTRACT**

Nowadays, pork is the most consumed meat by the people all around the world. Due to this fact, there is an increase demand of pork and intensive pigs rearing have to be done in order to meet the consumers need. The usual problem with the intensive pigs rearing is the improper pig's waste management which eventually will lead to other problems such as environmental pollution and affecting the public's health. This research focuses on the laws and their execution regarding pig's waste management and also to figure out the link between pig's waste management and the outbreak of Nipah virus in Negeri Sembilan in 1999. The final outcome from this research is that the laws and their execution regarding pig's waste management are sufficient and there is no connection between pig's waste management and the outbreak of Nipah virus.

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# CHAPTER ONE: INTRODUCTION

## 1.1 Introduction

This chapter lays down an overview on the issue of Nipah virus that has been caused by water pollution due to pig's waste management in Negeri Sembilan. Besides that, there is a brief discussion on the issues and matters regarding the research conducted on the efficiency in executing the laws regarding pig's waste management. It will be viewed from the scope of the study, its limitation, the methods used in conducting this research and its significance.

As we know, water is one of the most essential man's requirements for life. According to Dr. Zulkifli Abdul Rahman from Department of Environment Malaysia, the demand of water will be increased to 60% from 9,543 Millions of Liters per Day (Mld) in 1995 to 15,285 Mld in 2010 and it will be further increased to 113% from to 20,338 in 2020.<sup>1</sup>

Based on the percentage, the maintenance of clean water resources is very important to meet the future needs. For example, if the clean water resources have not been protected the daily life will be affected and the daily routines such as bathing and cooking cannot be done.

In 2006, a total of 1,064 water quality monitoring stations located within 146 river basins were monitored. Out of these 1,064 monitoring stations, 619 (58%) were found to be clean, 359 (34%) slightly polluted and 86 (8%) polluted.<sup>2</sup> Stations located upstream were generally clean, while those downstream were either slightly polluted or polluted. In terms of river basin water quality, 80 river basins (55%) were clean, 59 (40%) slightly polluted and 7 (5%) were polluted.<sup>3</sup>

One of the activities which contributed to this crisis is the improper of wastes management. Improper wastes management might lead to disastrous impact not only to humans but also to the

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<sup>1</sup> Dr. Zulkifli Abdul Rahman, 'Water Quality Management in Malaysia', Handout, 11<sup>th</sup> online available at, <http://www.iges.or.jp/jp/ltp/pdf/fr2.pdf> accessed on 10 January 2009 p.3.

<sup>2</sup> 'River Water Quality Status', online available at <http://www.doe.gov.my/en/content/river-water-quality-status> accessed on 22 January 2009.

<sup>3</sup> Ibid.