# Study on Foraminifera as an Environmental Indicator

## Laporan Penelitian

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### 1.0. Introduction

Foraminifera is a single cell organism (Albani, 1979; Huber, 1993; http://www.inform.umd.edu:8080/Caesarea/foram.htm), that widely inhabit the marine environment (Albani, 1979; Huber, 1993; http://www.ucmp.berkeley.edu/foram/foramlh.htm.; http://www.inform.umd.edu:8080/Caesarea/foram.htm). Although it is only a single cell organism, foraminifera are very important to both zoologist and paleontologist (Albani, 1979).

Foraminifera are important to zoologist, because previous studies shows that these organism can be successfully used to indicate and to further detect several environmental condition or environmental stress (Albani, 1979). This fact was supported by Williams (1975), which stated that foraminifera are highly sensitive to changes in the environment, and that their distribution will detect the condition of that certain environment. The environmental changes can be brought by two things:

#### a) Natural causes

Environmental changes that was caused by nature, for example changes in sea level, storms, channel migration, siltation, and hurricanes (Williams, 1995)

#### b) Anthropogenic cause

Environmental changes which was caused by human impact, for example land use, dam construction, river diversion, wetland reclamation, and also pollution (Williams, 1995)

Foraminifera are also important for paleontologist as their guide in paleogeographical reconstruction (Albani, 1979). Foraminifera are also used by pale intologist to determine past environmental condition, since different species are found at different environment (http://www.ucmp.berkeley.edu/foram/foramlh.htm). Other reason on why foraminifera are important for paleontologist are because: