

CHAPTER I

INTRODUCTION

1.1. Background

People in the world are deal with water supply issue of imbalance between needed and available water amount. It is due to limited amount of water in the earth. According to Horvat (2008):

“More than 70% of our earth surface is water, but this number does not directly describe that people are abundant of water. Because out of that number, 97.5% is salty water and 2.5% is fresh water, and out of the 2.5%, more than 2% is frozen in polar. Just a little of it which can be used for daily needs.

People in the world use water for farming (70%), industry (22%) and for household needs (8%). Almost all activities need water. For example for producing each one kilogram of cassava it needs 1 m³ of water, every 1 kilogram corn needs 1.400 liter of water.

Because of the limited amount of water, then availability and accomplishment of water become a serious problem, especially when the number of population is increasing day by day. (<http://www.nttzine.com/articles/38-ekonomi-politik/57-krisis-air-bersih-dunia.html>)

According to Regulation of Health Minister No.416/ MEN.KES/ PER/ IX/ about Requirements and Monitoring of Water Quality, water is classified into drinking water, fresh water (clean water), swimming pool water, and public bathing water. These four types of water have different standard of quality.

In general, water needs treatment in one or more ways to be classified into a particular type of water. For each type of water, the treatment will be

different. In communal pipeline water – supply system, water treatment is one of the elements. A communal pipeline water – supply system should be meet the requirements of water quality, quantity, continuity, accessibility and affordability.

Water – supply service can be provided either by public or private institution. In Indonesia, the service is mostly provided and managed by the government. The institution is called Perusahaan Daerah Air Minum (PDAM) whose responsibility is to manage water sources for providing drinking water, conduct any required water treatment, and distribute the water to the customers. PDAM in different area in Indonesia apply different types of water – supply system, but the quality of delivered water should be relatively equal.

City and district of Kupang are areas that face problem of imbalance demand – supply domestic water. Customers of PDAM complain about its water quality, quantity, continuity, and PDAM’s management system. Based on this issue, this research will study the water – supply system in PDAM Kabupaten Kupang (District), by analyzing five aspects or parameters of water – supply in the elements of its system.

1.2. Problem Statement

Water – supply problem in Kupang is like a ball which is kicked hither and thither. There are many complaints by either PDAM customers or PDAM itself. Customers said that in rainy season PDAM water is turbid, but in dry season the distributed water is not sufficient. Customers have to find

other alternatives to fulfill their needs of water. In some areas the water is not distributed continuously for 24 hours per day but scheduled to flow twice or once a week, sometime it's not flow at all in a week.

In distributing water to customers, PDAM uses pipe line network. So far, there is no serious complaint about the water price, but some customers said that they just pay for wind, because no water flows out but the water meter counts.

PDAM state that they has tried to serve their customer better all the time, start with fixing their management up to explaining to public about lack of water because the discharge of PDAM water sources is decreasing in dry season. On the other hand, a number of customers do not really care of rules (law). A number of PDAM pipe network is damaged by unknown people, many villagers tap water illegally and cheat the water meter.

The case leads to financial loss of PDAM. In the long term, no company can survive if it keeps on such condition. The root cause of this problem needs to be identified.

1.3. Research's Objective

Based on the problem statement, the objectives are as follows:

1. Identify the water – supply system that applied by PDAM Kabupaten Kupang both in term of its components (elements) and way of its system working.

2. Identify the fitness of water – supply system that applied by PDAM Kabupaten Kupang to the referred standard of water quality, quantity, continuity, accessibility and affordability.
3. Identify the root problem of water – supply system of PDAM Kabupaten Kupang.
4. Provide recommendations of solution to overcome the problem of PDAM Kabupaten Kupang.

1.4. Research's Scope

Scope of this research is as follow:

1. Water – supply system is of PDAM Kabupaten Kupang
2. Service area of PDAM Kabupaten Kupang is Kupang city.
3. Water – supply system in PDAM Kupang district
4. Five aspects or water – supply parameters are water quality, quantity, continuity, accessibility and affordability.
5. The referred standard of water quality is Regulation of Health Minister No.416/ MEN.KES/ PER/ IX/ about Requirements and Monitoring of Water Quality. While for water – supply system is Regulation of Public Work Minister No. 18/PRT/M/2007 about Implementation of Water supply system development.