MANAGEMENT PLAN OF GEOTHERMAL WATER AS BATHING ATTRACTION IN DESA MURUNG B, KECAMATAN HANTAKAN, KABUPATEN HULU SUNGAI TENGAH, PROVINSI KALIMANTAN SELATAN

By:

Sri Wahyuni
114170072

ABSTRACT

The hot springs in Murung B Village, Hanntak District, Hulu Sungai Tengah Regency, South Kalimantan are geothermal manifestations in the study area. Utilization of hot water that is not managed is the focus of research in the area. The aim of the research was to study the quality (physical and chemical properties) and quantity (discharge) of springs, the potential of geothermal water as a tourist attraction according to hot spring management standards, and the strategy for managing hot springs as a bathing tourism object.

Surveys and mapping, laboratory tests, and evaluation are the methods used in this study. pH, Silica, Calcium, Magnesium, Sodium, Potassium, Lithium, Alkalinity, Sulfate, Chloride, Fluoride, Boron, Sulfide, TDS, DHL and DO are the parameters tested in the laboratory to assess fluid quality. The evaluation method used is to determine the potential of geothermal water and its characteristics. Utilization of the Cl-SO_4-HCO_3 triangle diagram for the purpose of evaluating the characteristics of geothermal water using the water geochemical analysis method (Giggenbach, 1988). Predicting reservoir temperature with a SiO_2 Geothermometer (Quartz no steam loss, and Chalcedony) and a Na/K Geothermometer (Fournier, 1979), as well as knowing the quantity (discharge) of spring water and its quality (physical and chemical properties) in accordance with the Quality Standards for Public Baths as outlined in Regulation Number 32 of 2017.

The Cl-SO_4-HCO_3 triangle diagram is used as the basis for evaluating (Giggenbach, 1988), the evaluation of the study of the characteristics of geothermal water shows that the hot springs in the study area have a sulfate type in the outflow zone. Evaluation of the potential of hot water based on the quality of its physical properties, which includes temperature 41.1 ^oC, color and tasteless, TDS 439 mg/L, and discharge rate of hot springs 0.0375 liter/second. The immature water zone has a fluid balance. Geothermal baths are guidelines for managing the use of geothermal springs. The Ministry of Tourism of the Republic of Indonesia has amended Regulation Number 27 of 2015.

Keywords: *Geothermal; Geothermal Manifestations; Hot Springs; Geothermometer;*

Potential;