

Hydrogeochemistry Preliminary Study of Groundwater Conservation in Buton Island, Southeast Sulawesi, Indonesia

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Abstract : The research takes place in EP Area, in the Northern part of Buton, Southeast Sulawesi Province, Indonesia. It is one example of karst areas that have good water resources potential. The landscape is in the form of valleys and hills which is good enough for recharge zone and discharge zones of groundwater. However, the geological characteristics of karst dissolution and a complex geological structure are quite influential to the groundwater flow system in the region. The Discharge of groundwater to the surface can be caused by a fracture in the rock, Underground River due to dissolution, and the contact between permeable rocks with impermeable rocks. In the concept of hydrogeology, groundwater is one of the components of the hydrological cycle which is closely linked to the availability of water under the surface, precipitation, infiltration, percolation, evapotranspiration, and surface runoff. Conceptually, the condition of recharge and discharge areas can be identified through a research distribution springs in a region. The understanding of the condition and the nature of the potential catchment area of groundwater flow, mainly from the catchment area to the discharge area, is urgently needed. This research aimed to assess the general geological conditions of the study area, which is expected to provide an overview of groundwater flow events that used by the public as well as industry. Behavioral characteristics of groundwater become an integral part in the search for potential groundwater in the study area. As for the research methods used hydrogeology mapping and laboratory works.

Keywords : Buton Island, groundwater conservation, hydrogeochemistry preliminary, karst

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