ABSTRACT

The Meteorology, Climatology and Geophysics Agency (BMKG) of Cilacap Regency is an agency that handles weather information, information on air temperature, humidity, air pressure in the Banjarnegara, Purbalingga, Banyumas, Cilacap, Kebumen areas (BARLINGMASCAKEB) In the Banyumas area there are mountains that are still active and still frequented. One of them is Mount Slamet via Bambangan. Mount Slamet via Bambangan needs a weather monitoring tool because many climbers still don't know the weather conditions on Mount Slamet via Bambangan when they are going to climb and there are many accidents due to weather. So the researchers made a weather monitoring tool using an Arduino Uno R3 microcontroller with a weather monitoring method using a DHT11 sensor, rainfall sensor, BMP180, and U-blox Neo-6M GPS. Tests were carried out at 3 locations. With reference to the standardization of the Cilacap BMKG, where rainfall is low with a value of 0-50 mm, moderate rainfall with a value of 51-150 mm, high rainfall with a value of 151-300 mm, very high rainfall with a value of >300 mm, humidity when the weather is normal with a value of 70-95%, bad conditions with a value of 70%. Normal weather temperature is 20-30, bad weather temperature is 3℃. In post 1 Gemirung, humidity is 79%, temperature is 24.76 , rainfall is 918.8 mm, air pressure is 945011 Pa. At post 2 Walang the rainfall is 78%, the temperature is 23.4℃, the rainfall is 222.2 mm, the air pressure is 94029.4 Pa. At post 3 Cemara humidity 78.9%, temperature 25.72℃, rainfall 222.2 mm, air pressure 938591 Pa. Based on the results of tests carried out at 3 post locations, the results obtained are in accordance with the standardization of the Cilacap BMKG.

Keywords: *Arduino Uno, Weather Monitoring, DHT11, BMP180, Rainfall Sensor*