**DATA COMPARISONS BETWEEN MANNED AND AWS AT RUBENGERA SITE**

**INTRODUCTION**

This report contains a details comparison between the data taken from automatic weather stations and manned stations. The compared data extends from 1, June,2025 to 15, September 2025.

1. **Daily Rainfall**

* AWS recorded 234.1 mm while manned station recorded 266.9 mm.
* It is observed that most of the days the recordings from AWS are smaller than that from manned and the difference arise during high rainfall day, the maximum difference was 7.8 mm/ per day occurs on 19/06/2025 AWS recorded 1.1 mm while manned recorded 7.9mm between 19/06/2025 16:50:00 - 19/06/2025 17:20:00 did not reports.

1. **Maximum temperature**

* Maximum temperature from both station seems to be in harmony all time with correlation coefficient of 0.9311.
* AWS recoded average maximum temperature of 25.40C while Manned recorded 26.10C.
* The difference between was up to 2.940C.

1. **Minimum temperature**

* Maximum temperature from both station seems to be in harmony all time with correlation coefficient of 0.9636.
* AWS recoded average minimum temperature of 13.30C while Manned recorded 14.30C.
* The maximum difference observed is 1.70C. ON 2906

1. **Maximum relative humidity**
2. **Minimum relative humidity**

* Minimum relative humidity from both station seems to be in harmony all time with correlation coefficient of 0.9616.

1. **Daily Air Pressure**

Daily Air pressure at RUBENGERA AWS is ranging between 846 hpa and 841.9 hpa which is the normal range of pressure at that location.

1. **Wind speed and direction**

The wind speeds and directions before (January 2025 up to installation date) and after the upgrade, the records show that the wind have change the dominant direction from NE and SW to NE and SE.

 