



MAY 02 2023

April 24, 2023

☐ INCOMING ☐ OUTGOING
TIME: _____ DATE NO. _____

MEMORANDUM

FOR : The Regional Executive Director
DENR, MIMAROPA Region

THRU : The ARD for Technical Services
DENR, MIMAROPA Region

FROM : The OIC, PENR Officer
Oriental Mindoro

SUBJECT : **SUBMISSION OF MONTHLY MONITORING REPORT OF
SCIENCE-BASED REAL-TIME WATERSHED MONITORING
INSTRUMENTS FOR THE MONTH OF APRIL 2023**

This refers to the five (5) watershed monitoring instruments installed within the two major watersheds of Oriental Mindoro, the Mag-Asawang Tubig River Watershed and the Bongabong River Watershed.

For this month, this Office accommodated the site monitoring of the Forest Management Bureau (FMB) staffs and the CDD staffs of the Regional Office on April 12-14, 2023 and April 17-20, 2023 respectively.

The Abaton Automated Water Level Station (AWLS) was already recommissioned after the installation of the solar panel and the solar charge controller. The Hydrosphere cloud already reflected the Abaton-AWLS data since 4:00 am of April 16, 2023. The station is closely monitored for any problem may arise.

The MinSU Groundwater Monitoring Station (GWMS) is in good condition. CTD sensor cleaning is scheduled in the next site monitoring.

The DA Automated Weather Station (DA-AWS) has lacking data such as soil moisture, wind speed and direction. Additional observation in this station are as follows:

1. broken leveling bubble of the pyranometer;
2. ZL6 data logger cannot connect with the Zentra Utility App;
3. ZL6 battery voltage is declining even with high intensity of solar radiation and newly replaced battery; and
4. the relative humidity still exceeds 100%.

It is recommended that the DA-AWS station will be relocated away from farm area and have fence.

The Macatoc Automated Weather Station (AWS) is in good condition except for the soil moisture data and the relative humidity still exceeding 100%. The soil moisture sensors need replacement.

The Bongabong Automated Weather Station (AWS) is also in good condition except for the soil moisture data and the placement of the soil moisture sensors. The soil condition of the station is very compact and with presence of several stones causing the recommended insertion of sensor cannot be followed. Lizard eggs are still present in the VP-4 sensor despite of regular cleaning maintenance.

Attached is the photo-documentation and the report of the DMITS personnel.

For information and record.

For the OIC PENRO:


ALMA E. GIBE
Chief, TSD





April 24, 2023

MEMORANDUM

FOR : The Regional Executive Director
DENR, MIMAROPA Region

THRU : The ARD for Technical Services
DENR, MIMAROPA Region

: The OIC, PENR Officer
Oriental Mindoro

FROM : PENR DMITS Personnel

SUBJECT : **SUBMISSION OF MONTHLY MONITORING REPORT OF
SCIENCE-BASED REAL-TIME WATERSHED MONITORING
INSTRUMENTS FOR THE MONTH OF APRIL 2023**

Submitted is the monthly monitoring report of DMITS personnel on the installed watershed monitoring instruments in Mag-Asawang Tubig ang Bongabong watersheds for the month of April 2023.

Personnel from the Forest Management Bureau (FMB) and DENR MIMAROPA Conservation and Development Division conducted a separate site monitoring of the installed watershed monitoring instruments on April 12-14, 2023 and April 17-20, 2023 respectively. They were accompanied and assisted by the DMITS personnel.

The conditions of the five (5) watershed monitoring stations are summarized below:

STATION	Condition	Remarks
Abaton AWLS	<ul style="list-style-type: none">• Good condition and complete data• Newly recommissioned on April 15, 2023• Tidal fluctuation influenced the water level	<ul style="list-style-type: none">• Site relocation upstream is ideal to avoid interference of tidal effect in water level data
MinSU GWMS	<ul style="list-style-type: none">• With complete data• The CTD sensor needs cleaning/servicing• Vicinity is clean	<ul style="list-style-type: none">• Scheduled in the next site monitoring• Cleaned by DMITS personnel
Macatoc-AWS	<ul style="list-style-type: none">• Complete data except for soil moisture• Relative humidity still exceeds 100%	<ul style="list-style-type: none">• Soil sensor replacement is yet to be requested• Needs technical expert on this error

	<ul style="list-style-type: none"> • The vicinity is clean 	<ul style="list-style-type: none"> • Cleaned by school utility
DA-AWS	<ul style="list-style-type: none"> • Soil moisture data are erroneous • Broken pyranometer leveling bubble • No wind data • Broken casing of ECRN-100 rain gauge • Relative humidity still exceeds 100% • Data logger cannot connect to the Zentra Utility Application • Declining battery voltage even at high solar intensity days 	<ul style="list-style-type: none"> • Negative soil moisture in one sensor and the sensor is broken sensor • Damaged anemometer • Still with data in the data logger • Needs technical expert on this error • Tested during FMB visit and CDD visit • Indication of data logger charging fault
Bongabong AWS	<ul style="list-style-type: none"> • Complete data except for soil moisture. • Station needs weeding in next visit • Presence of lizard eggs in VP-4 sensor 	<ul style="list-style-type: none"> • Soil moisture sensors is yet to be requested from the Regional Office • Weeding tools to be included in next monitoring • Cleaned in March monitoring but still present in this month's monitoring

The installation of solar panel and solar charge controller of Abaton Automated Water Level Station (AWLS) was done last April 14, 2023 with the presence of FMB personnel who was also doing site monitoring of the watershed instruments. The data logger was powered on April 15, 2023 at 8:30 am but the Hydrosphere cloud update was on April 16, 2023 at 4:00 am. Data backfill feature of the Hydrosphere cloud was tried but error in the cloud data in the backfill page was observed that the data backfill was terminated and to be consulted to the technical expert from the Regional Office. At present, the Abaton AWLS station has complete data.

The DA-AWS station in Alcate, Victoria, Oriental Mindoro is in need of immediate attention for several instruments/sensor is in bad condition. It is suggested that the location of the station be transferred to a well-drained location and away from farm area and fencing shall be installed.

The Macatoc Automated Weather Station (AWS) is in good condition except for the soil moisture data and the relative humidity still exceeding 100%. The soil moisture sensors need replacement while technical expert is necessary to analyze the relative humidity data.

The Bongabong Automated Weather Station (AWS) is also in good condition except for the soil moisture data, presence of weeds in the vicinity and presence of lizard eggs in VP-4 sensor. The soil condition of the station is very compact and with presence of several stones causing the recommended insertion of sensor cannot be followed. Lizard eggs are still present in the VP-4

sensor despite of regular cleaning maintenance. Weeding of the vicinity is scheduled in the next monitoring activity.

Attached are photo-documentation for information and record.


JACKSON A. BELLEN
Database Manager IT Specialist

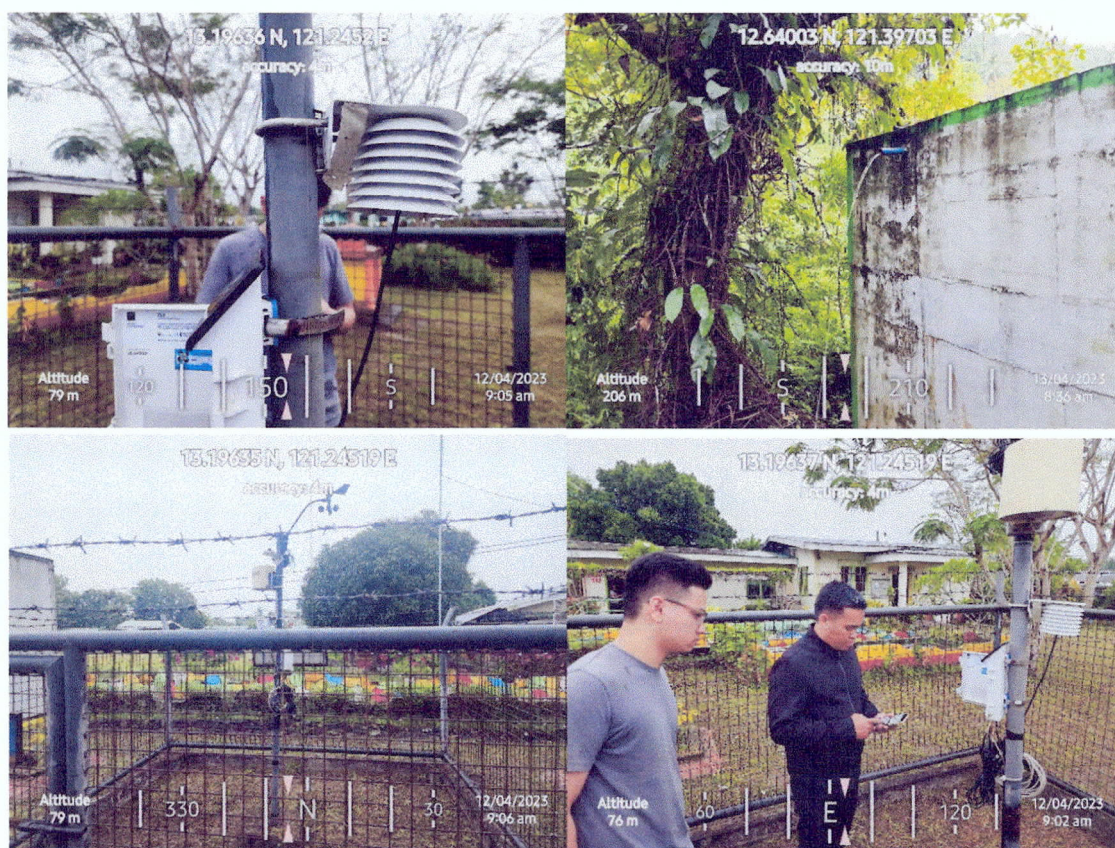


Figure 1. With FMB personnel conducting site monitoring.



Figure 2. Installation of new solar panel and solar charge controller in Abaton AWLS station



Figure 3. The Macatoc-AWS station with CDD personnel



Figure 4. The DA-AWS station visit with RIARC chief and CDD personnel



Figure 5. The MinSU-CTD (GWMS) station

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 DENR Contact No. (043) 288-3017; Tel. Fax 288-3006



Figure 6. The Bongabong AWS station with CDD personnel.