2024 UNESCO WATER RESILIENCE CHALLENGE: ROAD TO BALI

AQUAGUARDIAN

PROJECT SHARING WORKSHOP

PROGRESS REPORT

APRIL 19 2024

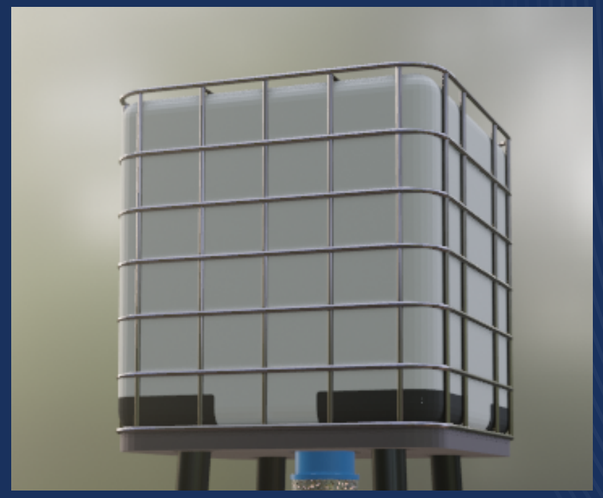
Dry season in the Philippines results to insufficient water production capacity of the Irawan watershed causes Water supply shortage in Puerto Princesa City, Palawan

Objectives

To design, construct and develop:

01

Storage facility to collect and store water from Irawan's main waterline.

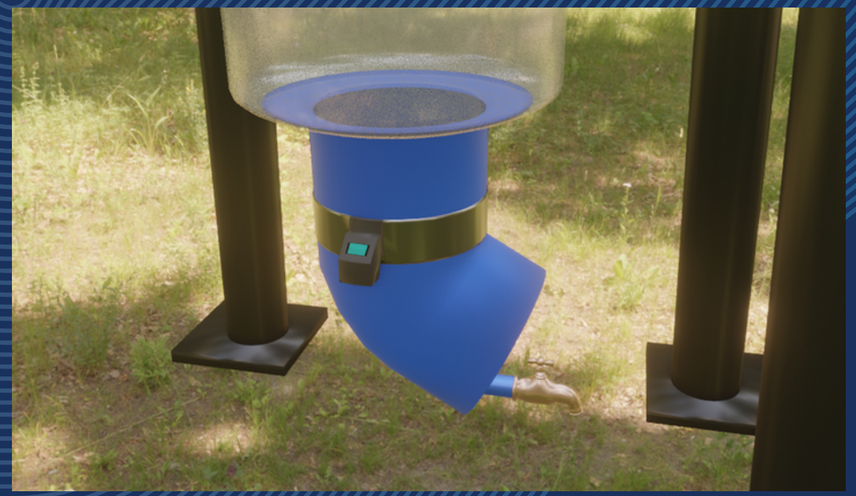


02

Eco-friendly cost-efficient water **filtration system**

03

Real-time monitoring and communication system to detect pH, turbidity, conductivity, and TDS TSS levels.

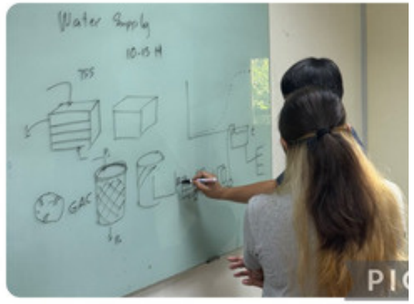


The Local Residents in the coast of Brgy. Irawan Puerto Princesa Palawan Philippines

Potential Secondary Beneficiaries:
Micro, small and medium enterprise establishments (MSMEs)
Small Scale Irrigation Systems and Plant Nurseries

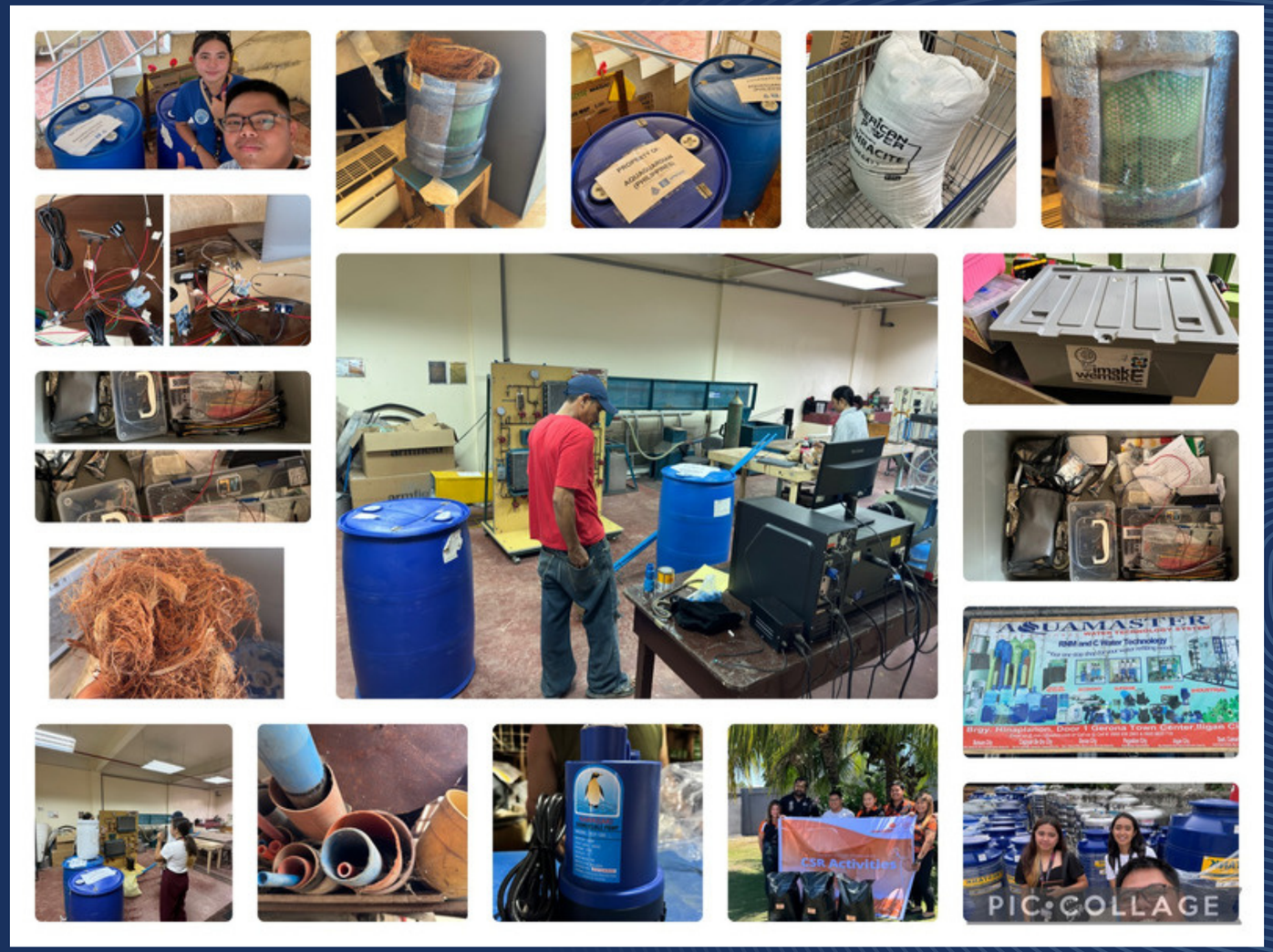
Source: City Government of Puerto Princesa

CONSULTATIONS WITH UNIVERSITY EXPERTS SPECIALIZING IN THEIR RESPECTIVE FIELDS.



The team held consultation sessions with experts from different fields within the university to gather insights for constructing the facility and developing the software system.

MARCH 11 – 15, 2024



PROCUREMENT OF THE MATERIALS

The team conducted the procurement phase when the 70% of the fund was given. The team procured the necessary materials in various physical and online shops in our locality and hired expert people to do the labor in building

MARCH 18 - 29, 2024

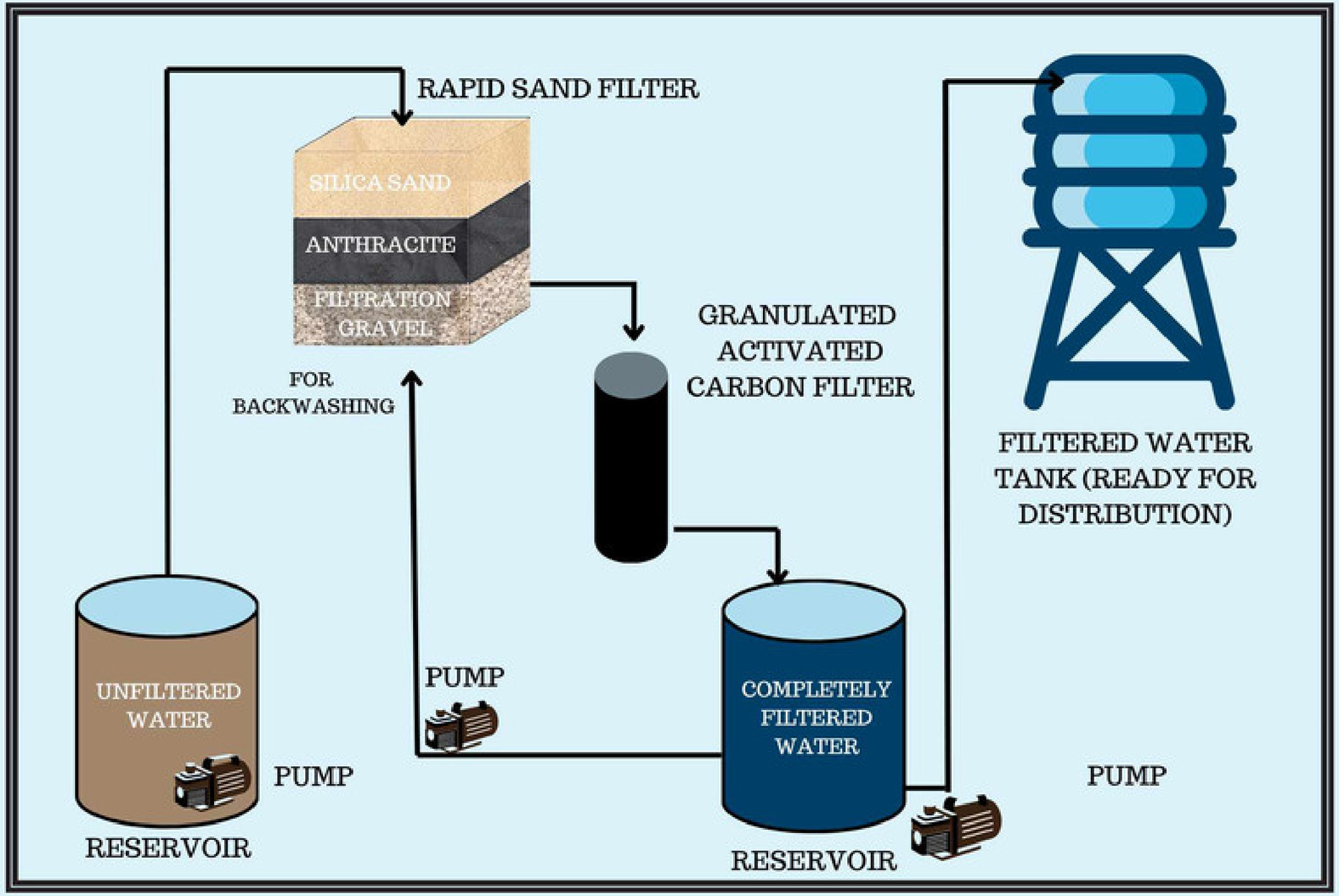
DEVELOPMENT OF THE WATER STORAGE SYSTEM

The team developed the water storage system and conducted several trials to ensure the optimal water flow output. The team also utilized recycled raw materials from existing projects ensuring environmental sustainability in the project

MARCH 29 - APRIL 6, 2024

WATER FILTRATION SYSTEM FLOW DIAGRAM

AquaGuardian (Philippines)




PIC•COLLAGE

SMALL SCALE SIMULATION TESTING OF THE CUSTOM-MADE WATER FILTRATION SYSTEM

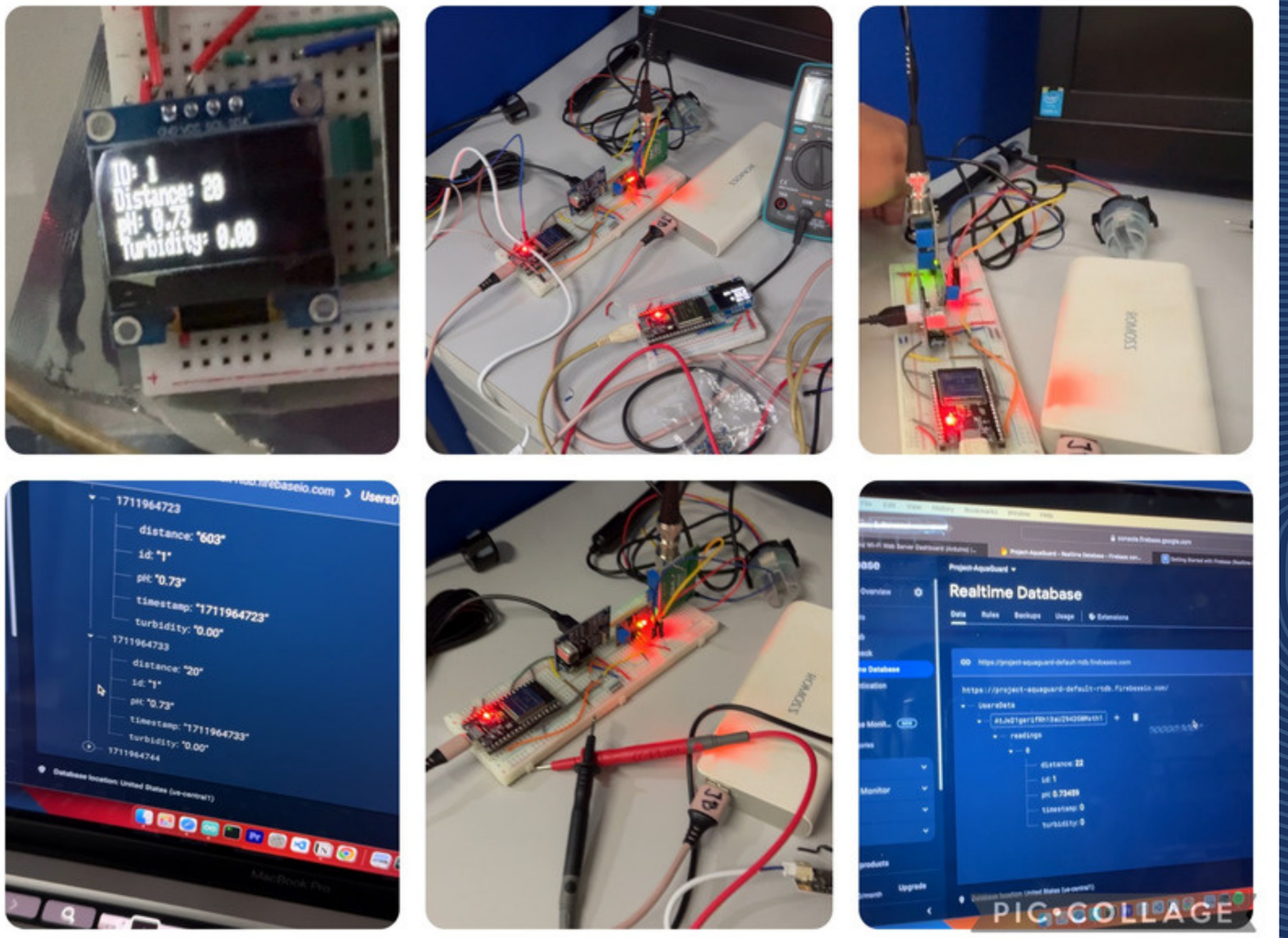
The team developed their own custom made water filtration system and conducted several trials to ensure the optimal water quality output. The team also utilized recycled raw materials ensuring environmental sustainability in the project

MARCH 29 - APRIL 6, 2024

SPONSORSHIP FROM JACOBI CARBONS PHILIPPINES INC.

The team acquired sponsorship from Jacobi Carbons Philippines Inc, a carbon based facility plant in Northern Mindanao that supplies Granulated Activated Carbon (GAC) that is one of the component of the water filtration system

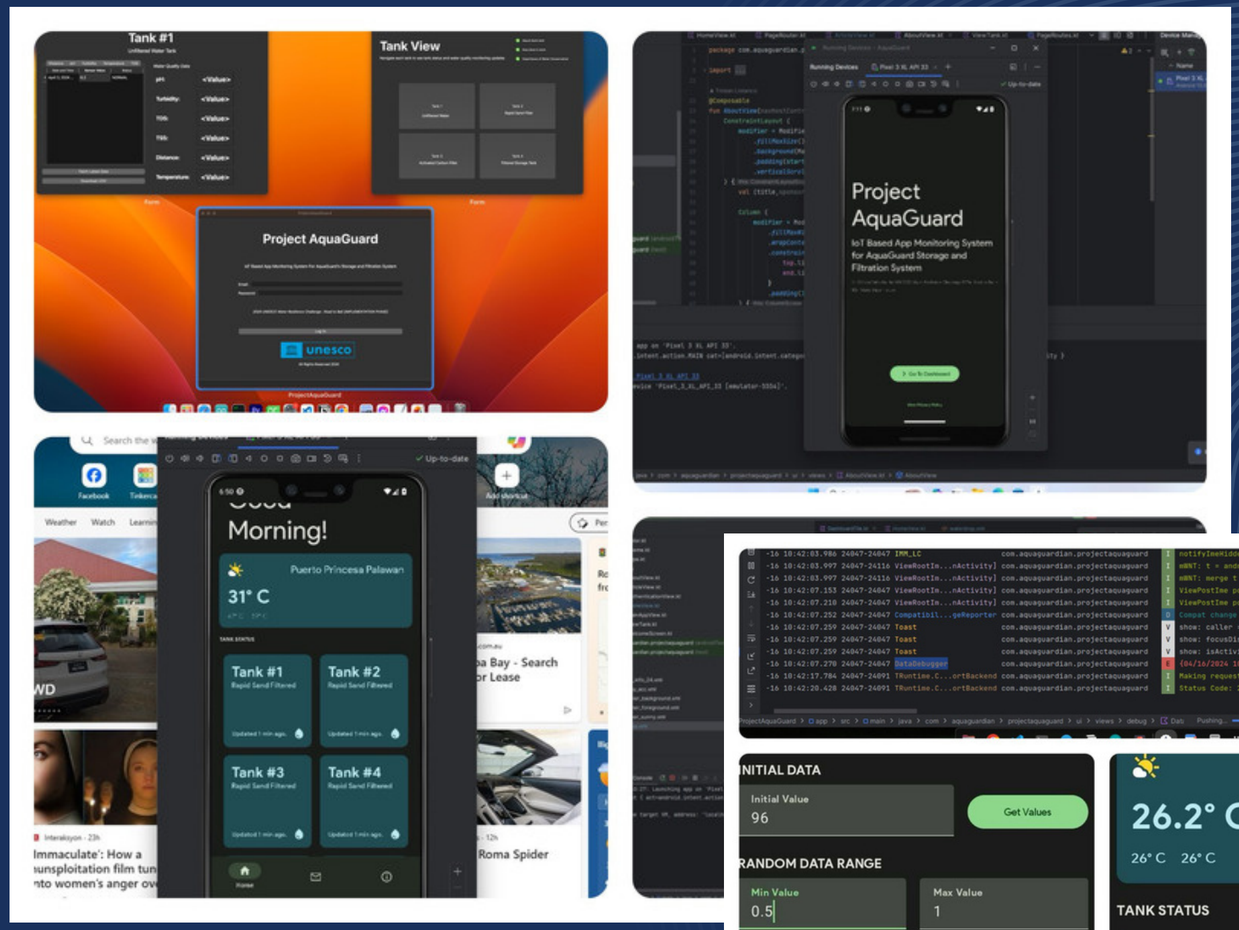
APRIL 16, 2024



DEVELOPMENT OF THE HARDWARE ASPECT OF THE IOT SYSTEM

The team developed and embedded different water quality parameter sensors and integrated it to the storage drums/tanks

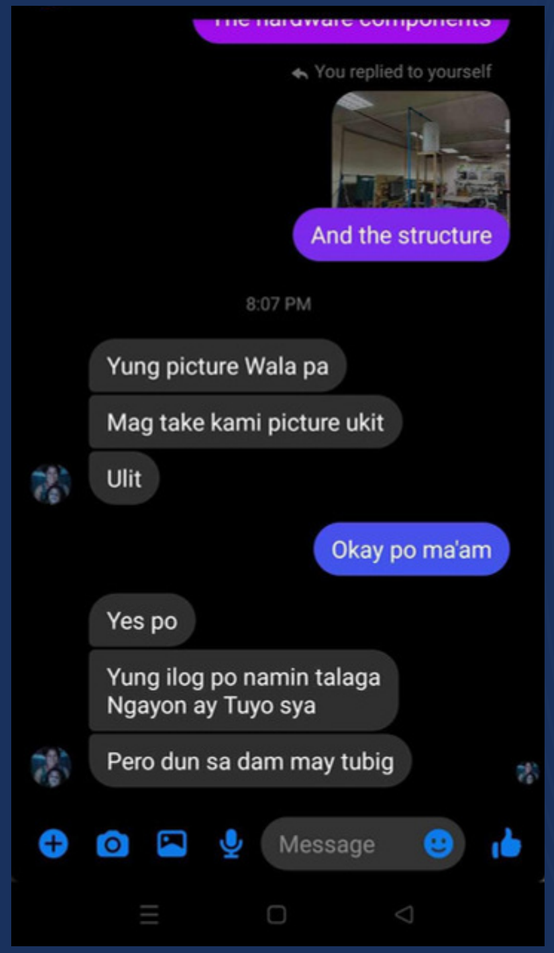
APRIL 10-17, 2024

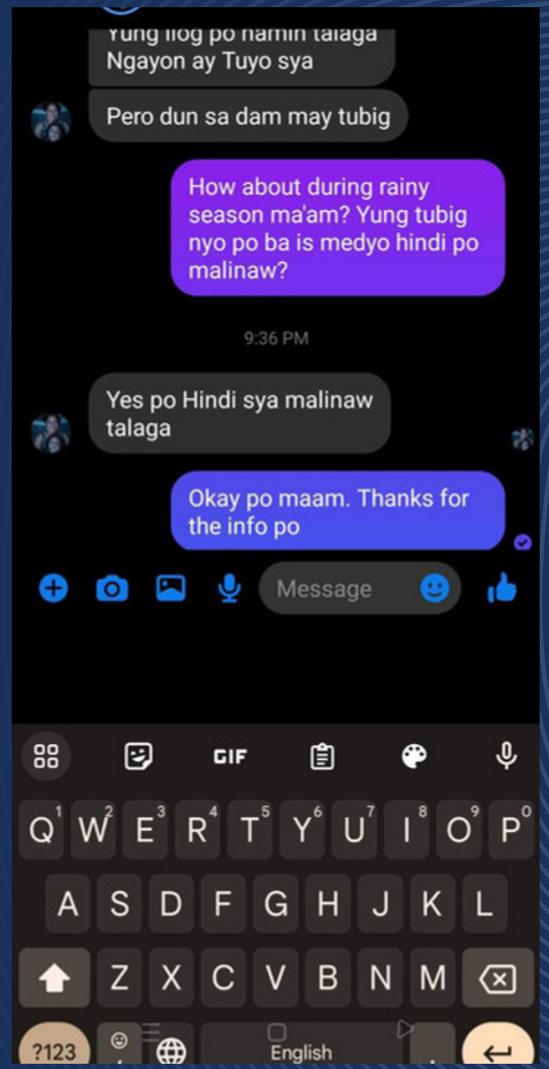


DEVELOPMENT OF THE IOT BASED SOFTWARE MONITORING SYSYEM

The team utilized different wireless sensor technologies and develop a custom made mobile application for the IoT based Monitoring System for data interpretation and Analysis

APRIL 10-17, 2024

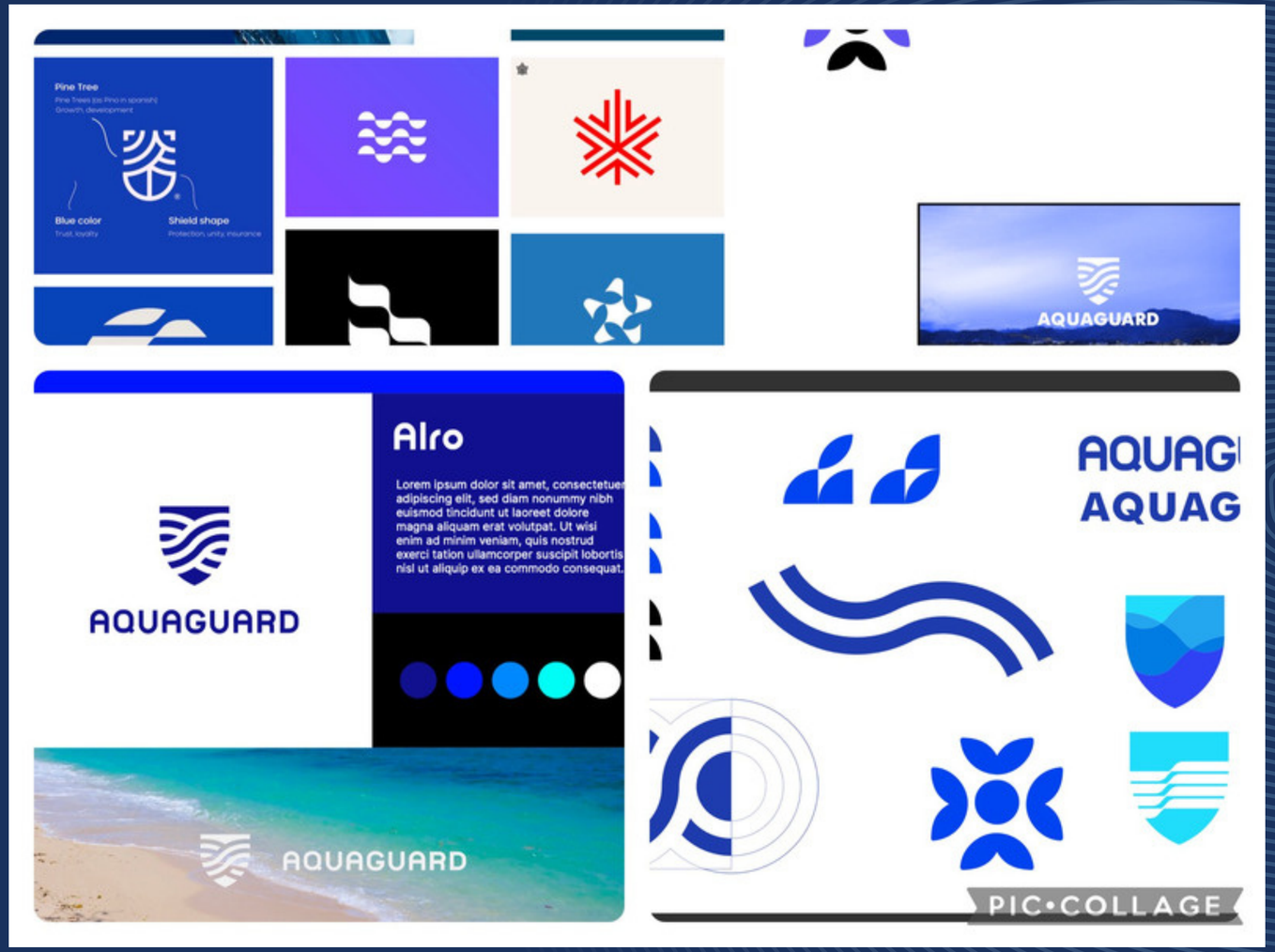




COMMUNICATION WITH THE MAIN BENEFICIARY AND PROCESSING OF LOCAL PERMITS TO CONDUCT THE ACTIVITY

The team contacted the local officials of the target site, and conducted meetings for the overall breifing and complaince of necessary legal papers to conduct the capacity building actvitiy on April 27, 2024

APRIL 10-17, 2024



OFFICAL PROJECT LOGO AND PROJECT BRANDING

The Official Project Branding and logo of the AquaGuardian Philippines

April 16, 2024

SOCIAL MEDIA BRANDING AND LAUNCHING OF THE AQUAGUARDIAN – PH SOCIAL MEDIA PAGES

The team LAUNCHED their social media page in Facebook for social engagements and Actvities

APRIL 18, 2024

2024 UNESCO WATER RESILIENCE CHALLENGE: ROAD TO BALI

AQUAGUARDIAN

PROGRAM MATRIX

APRIL 27-28, 2024

DAY 1 - APRIL 27, 2024

The first day of the program includes the **introduction of the team**, **three training sessions**, and **open discussion**. The audience consists of **20 participants minimum** and **40 participants maximum,** ages **18 to 55 years old**.

7:00 AM - 8:30 AM: Preparation

9:00 AM: Program Proper

1. Prayer
2. Singing of National Anthem
3. Opening Remarks

9:10 AM - 9:30 AM: Introduction of the team

9:30 AM - 10:00: Session 1 - Discussion of the Device Structure

10:00 AM - 10:10 AM: Open Discussion, Question & Answer Portion

10:10 AM - 10:20 AM: Break Time

10:20 AM - 10:50 AM: Session 2, Discussion of the Filter

10:50 AM - 11:00 AM: Open Discussion, Question & Answer Portion

11:00 AM - 11:30 AM: Session 2, Discussion of the IOT Monitoring System

11:30 AM - 11:40 AM: Open Discussion, Question & Answer Portion

11:40 AM - 11:50 AM: Photo Ops and Gathering of Feedbacks

11:50 AM - 12:00 PM: Closing Remarks

DAY 2 - APRIL 28, 2024

The second day of the program includes the **hands-on operation of the water facility and IOT system**, and **open discussion**. The audience consists of **20 participants minimum** and **40 participants maximum,** ages **18 to 55 years old**.

7:00 AM - 8:30 AM: Preparation

9:00 AM: Program Proper

1. Prayer

9:05 AM - 9:10 AM: Recall of previous discussion

9:10 AM - 9:40 AM: Hands-on operation of the water facility

9:40 AM - 9:50 AM Open Discussion, Question & Answer Portion

9:50 AM - 10:00 AM: Break Time

10:00 AM - 10:30 AM: Hands-on operation of the IOT system

10:30 AM - 10:40 AM: Open Discussion, Question & Answer Portion

10:40 AM - 11:00 AM: Photo Ops and Gathering of Feedbacks

11:00 AM - 11:10 PM: Closing Remarks

FOR THE NEXT TWO WEEKS....

- Optimization and Minor Revision of the Pilot Scale Project
- Finishing of Legal Documents Processing for the Activity
- Water Quality Testing
- Preparation for the Implementation Project

RISK ASSESSMENT / POTENTIAL RISK

- Potential dehydration and exhaustion due to extreme heat
- Travel delays of the Aircraft to and from Puerto Princesa Palawan
- Unexpected weather phenomenons
- The facility unable to be carried in the aircraft

SUSTAINABLE, IMPACTFUL, COMMUNITY- CENTERED

AQUAGUARDIAN

PHILIPPINES