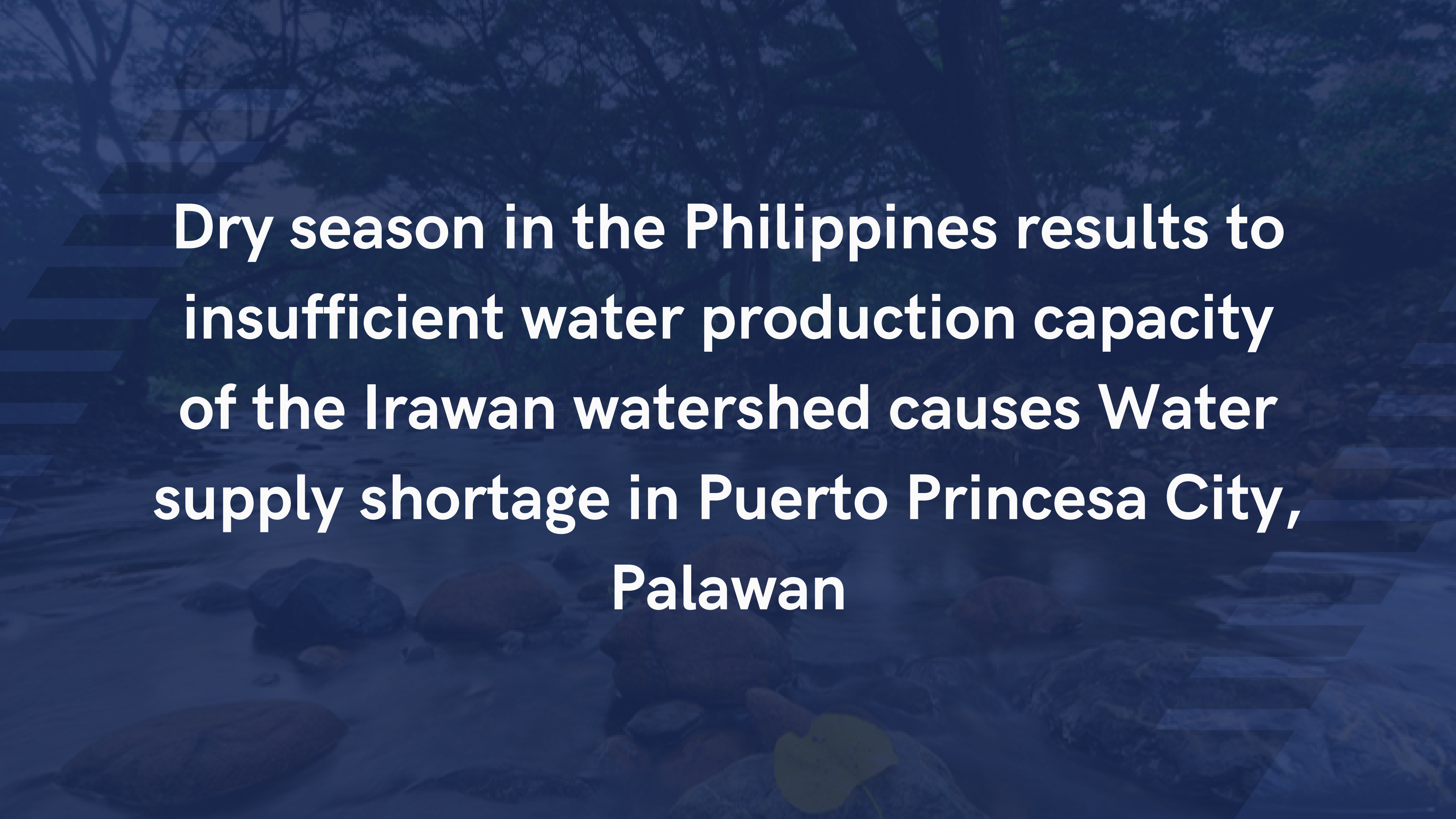




AQUAGUARDIAN PHILIPPINES FINAL PRESENTATION

MAY 03, 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**





VISION STATEMENT

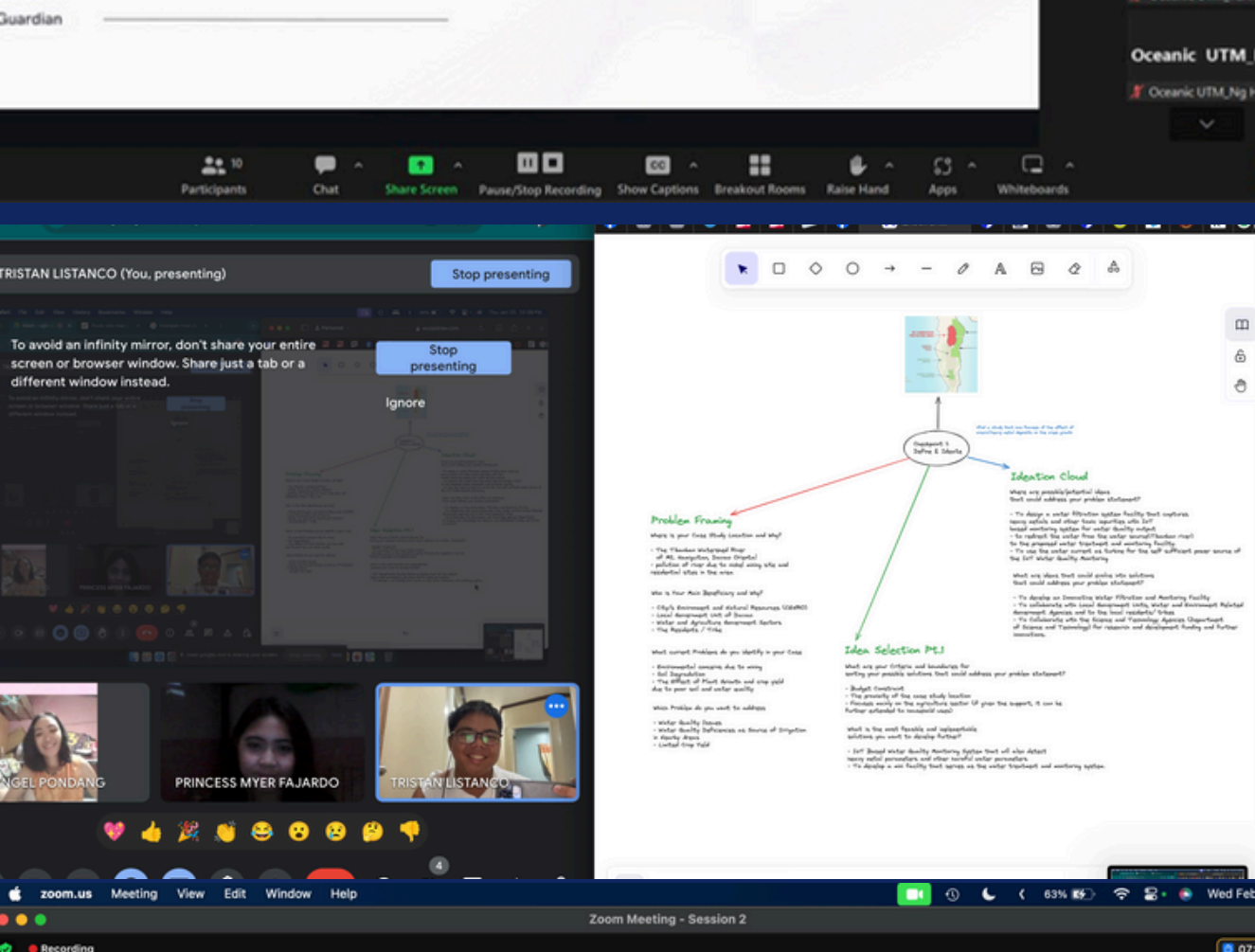
To ensure reliable and clean water supply for residents of Barangay Irawan through innovative integrated systems, fostering community collaboration for a sustainable future.



AQUAGUARDIAN PHILIPPINES FINAL PRESENTATION

MAY 03, 2024

Develop A Device Consisting Of:
Water Storage
Ceramic Water Filtration System
IoT based Water Quality Monitoring
System



Tristan E. Listanco



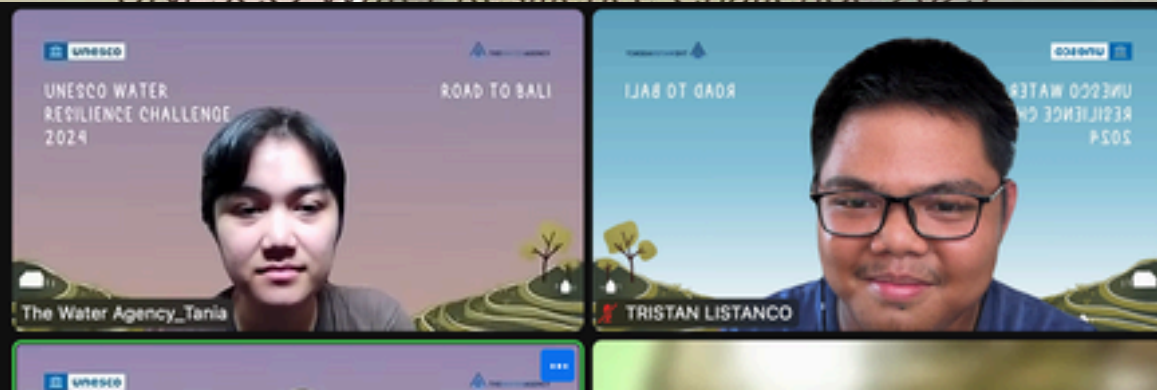
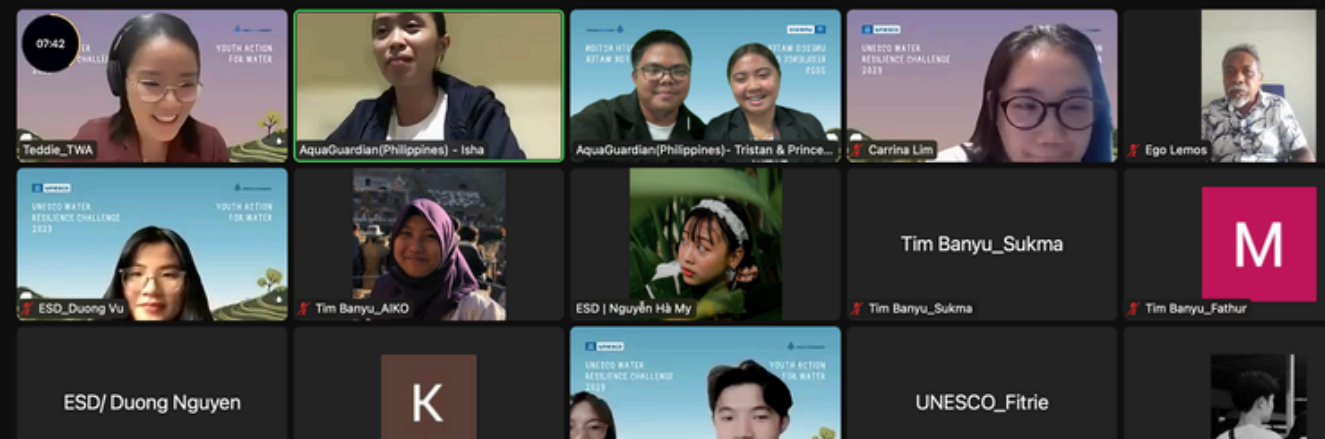
Isha Angel C. Pondang

AQUAGUARDIAN Philippines



Princess Myer V. Fajardo

UNESCO Water Resilience Challenge 2023

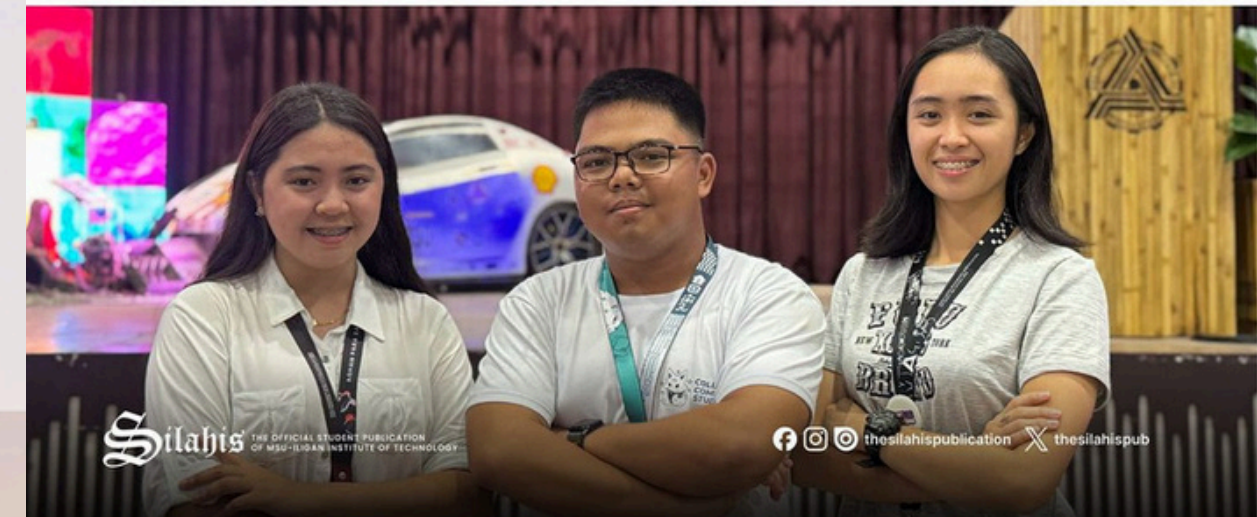


NEWS

IITian freshmen make waves in UNESCO Global Water Challenge

AquaGuardians, a team composed of first-year students Tristan Listanco from the College of Computer Studies (CCS), and Isha Angel Pondang and Princess Myer Fajardo from the College of Engineering (COE), emerged victorious after their final pitching on February 28, 2024 in the esteemed United Nations Educational, Scientific and Cultural Organization (UNESCO) Water Resilience Challenge 2023.

Photo from Tristan Listanco



OBJECTIVES

To design, construct and develop:

01

Storage facility to collect and store water

02

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

03

Real-time monitoring and communication system to detect

- pH (acidic or basic),
- temperature, (hot or cold)
- TDS and TSS (Turbid or Not)

The **local residents** in Brgy. Irawan

- Youth - students and youth council
- Indigenous People (IP) “Tagbanua tribe”
- Barangay Council
- Community members

PVC PIPE

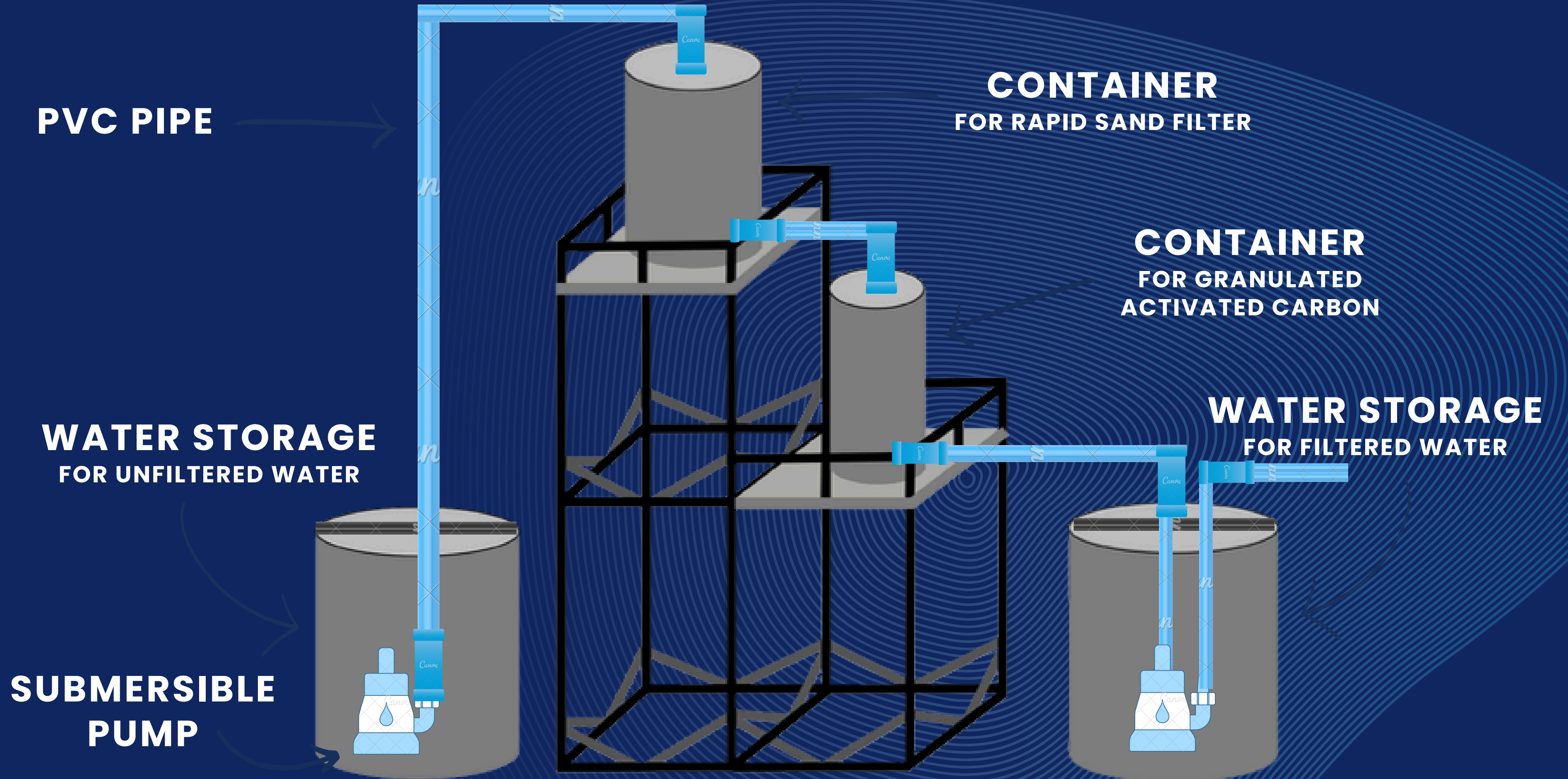
**WATER STORAGE
FOR UNFILTERED WATER**

**SUBMERSIBLE
PUMP**

**CONTAINER
FOR RAPID SAND FILTER**

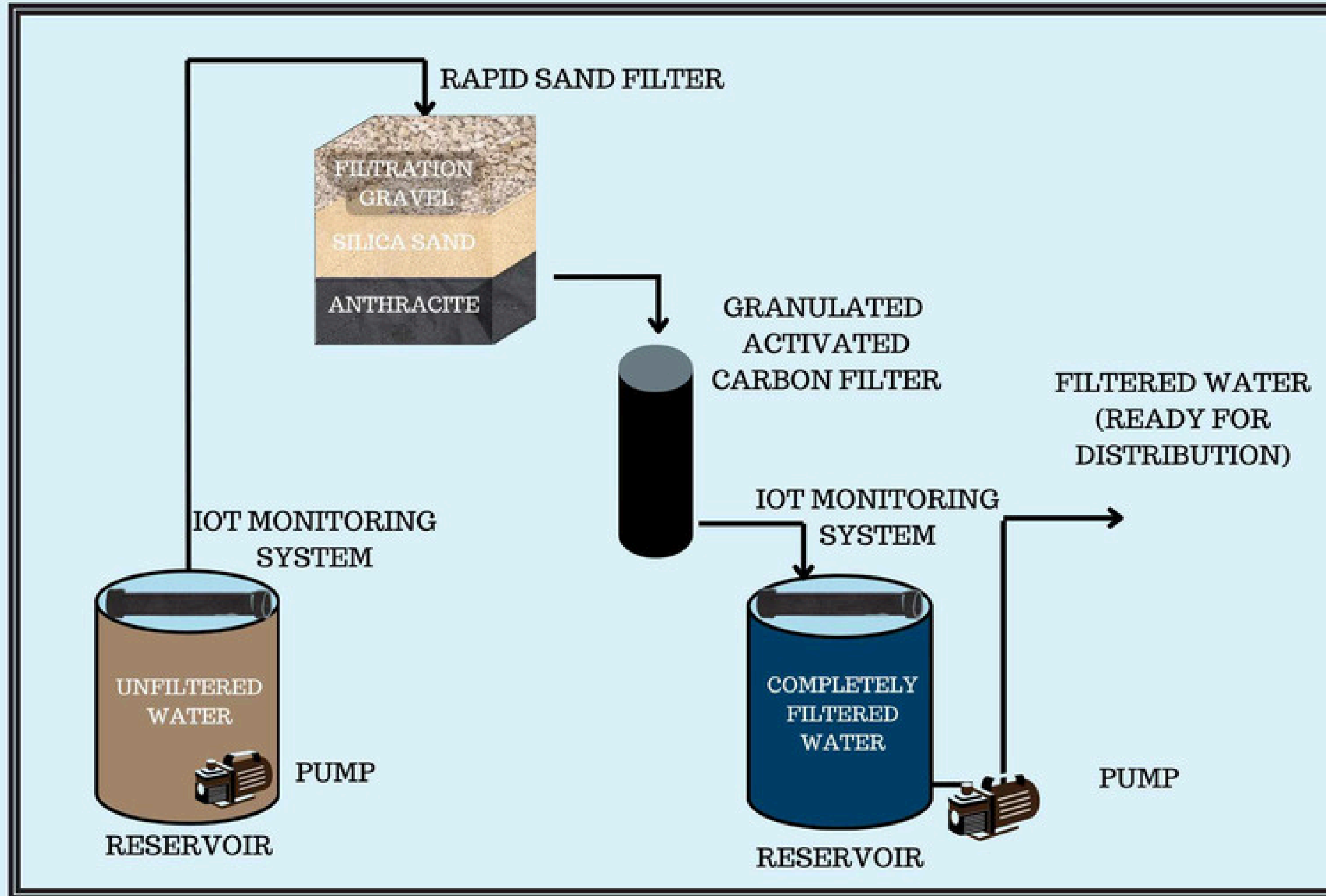
**CONTAINER
FOR GRANULATED
ACTIVATED CARBON**

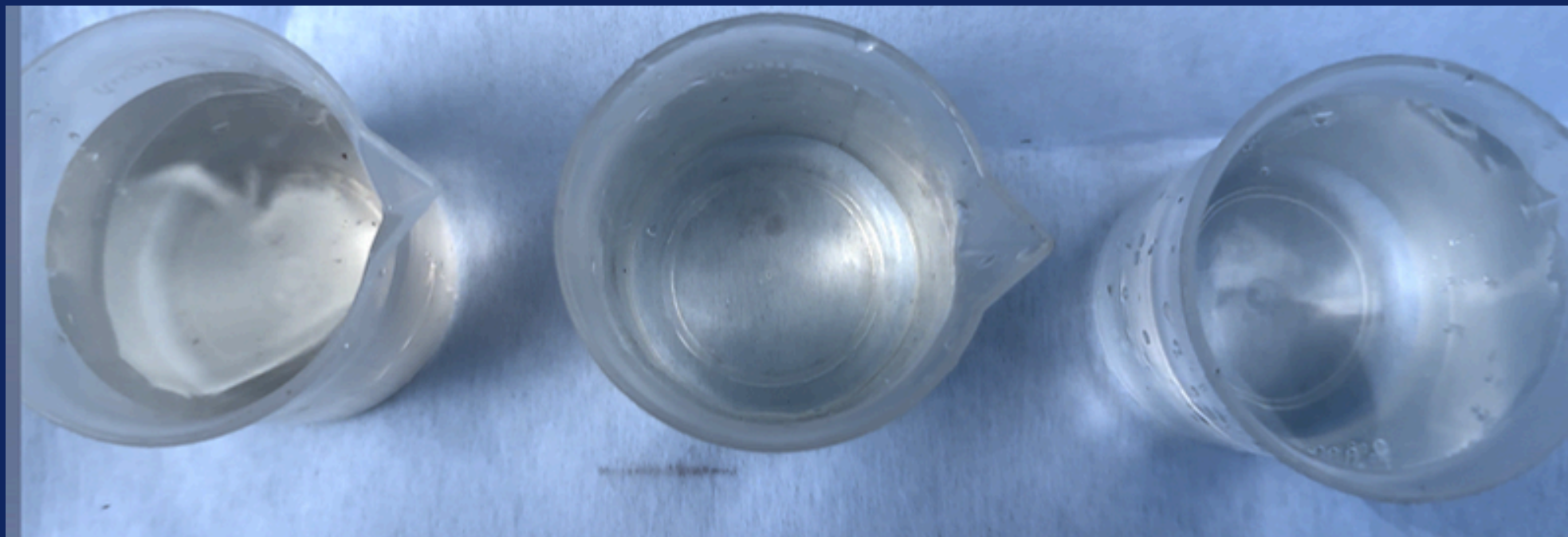
**WATER STORAGE
FOR FILTERED WATER**



WATER FILTRATION SYSTEM FLOW DIAGRAM

AquaGuardian (Philippines)





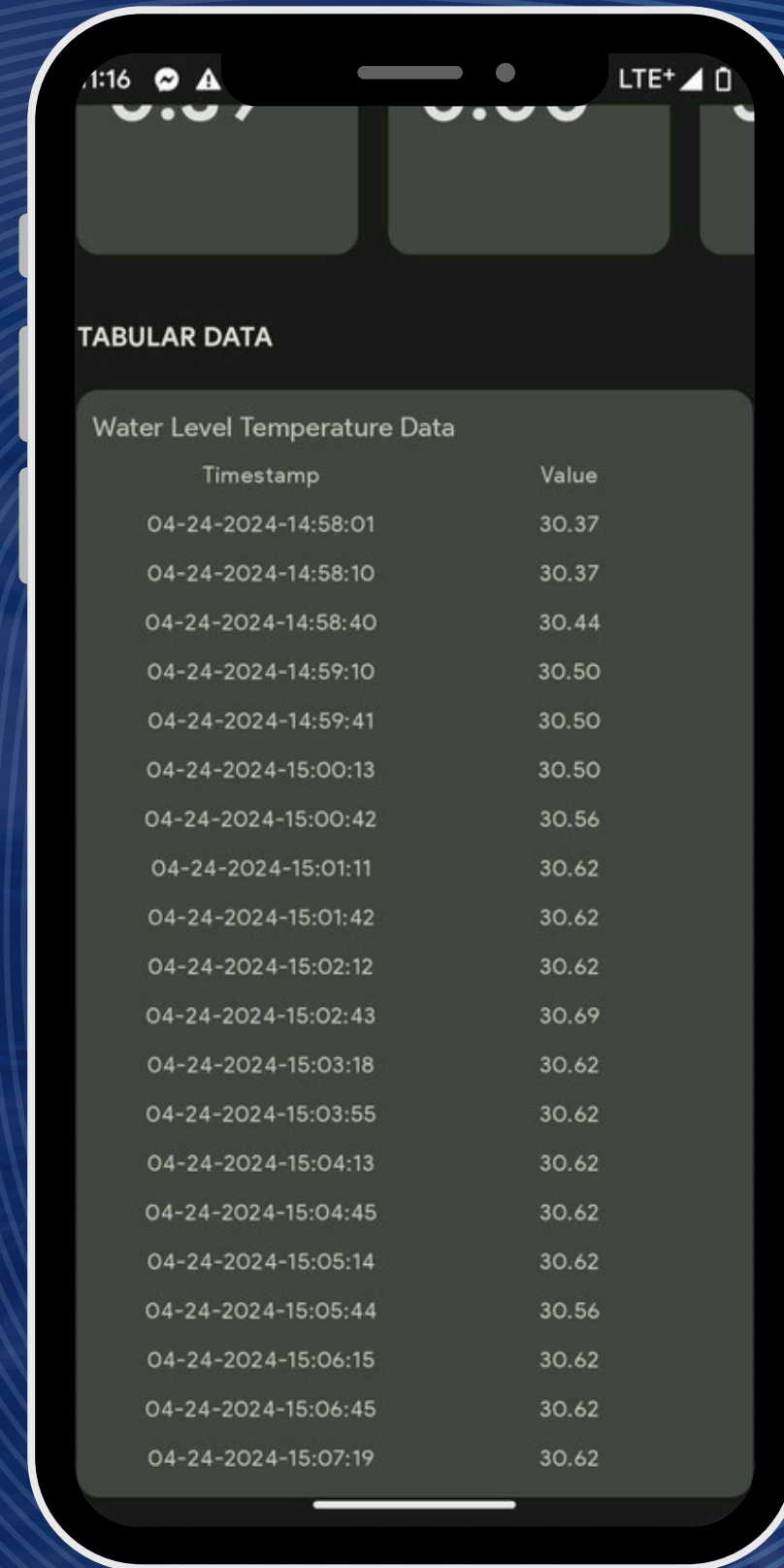
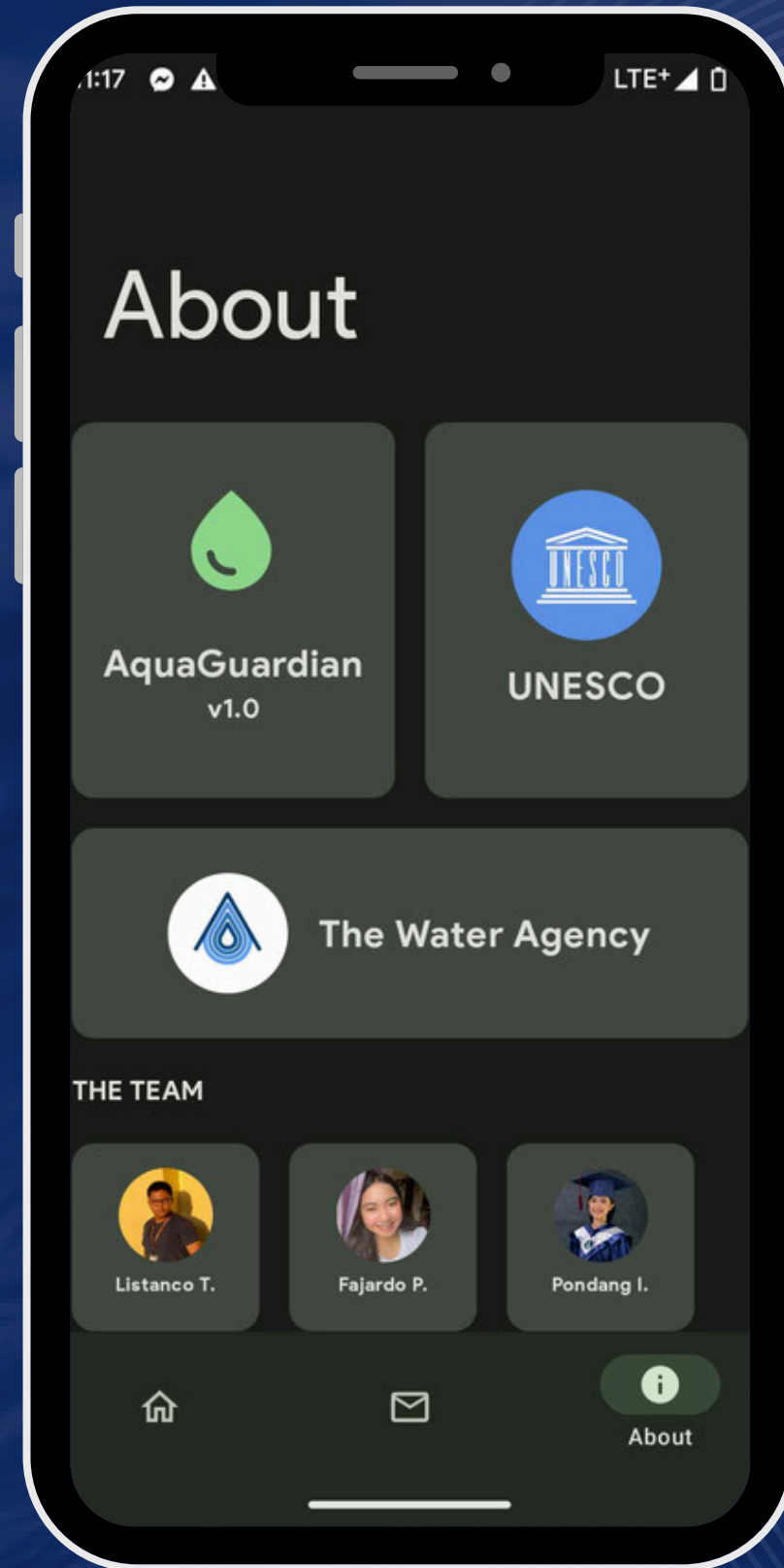
**WATER VISUAL
COMPARISON**



IOT BASED WATER MONITORING SYSTEM



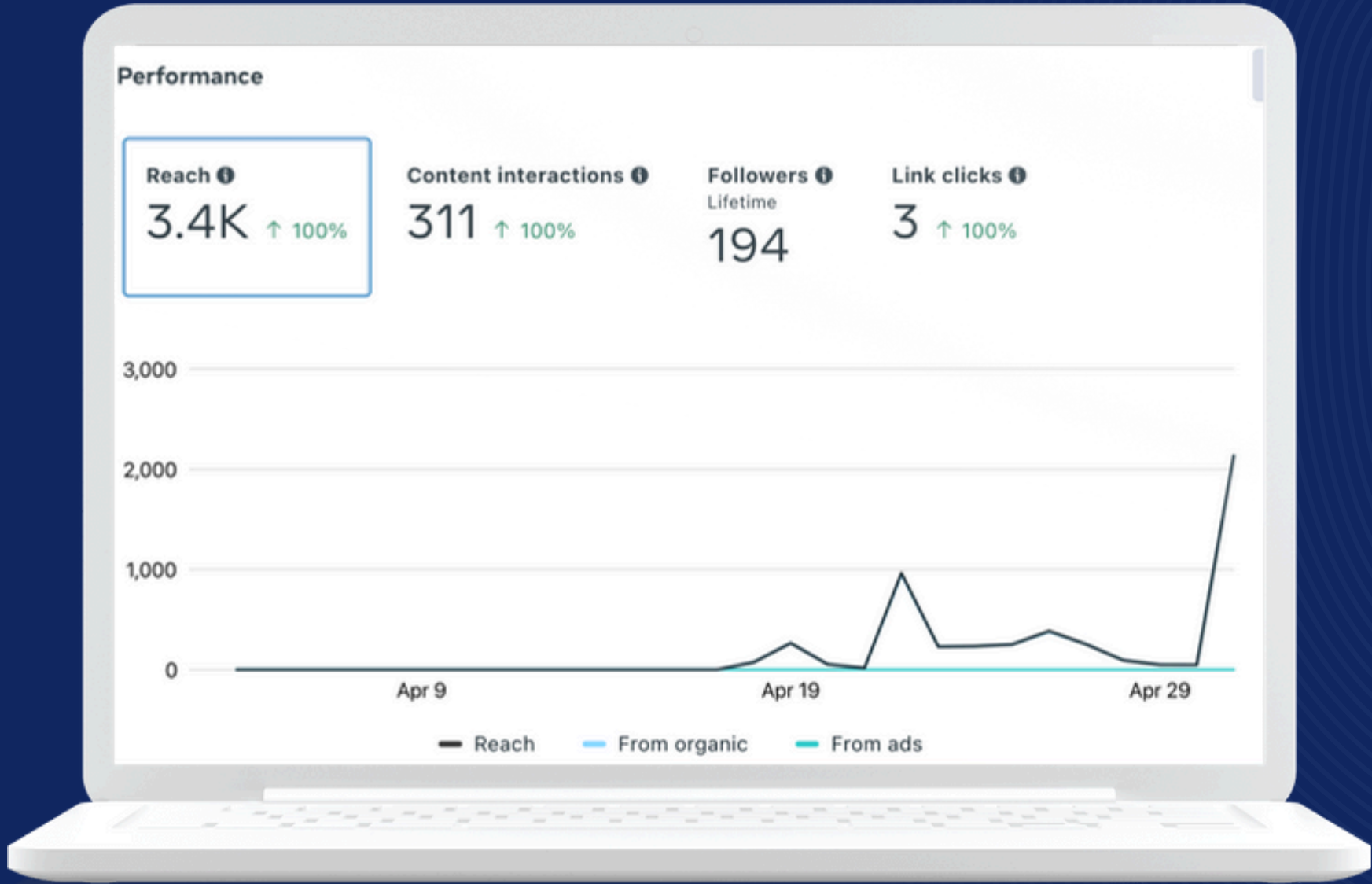
WATER MONITORING MOBILE APP



WATER MONITORING MOBILE APP

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

The Active Social Media (Facebook
Page) aims for updates of the project



unesco



BENEFITS AND IMPACT

UNITED NATION'S SUSTAINABLE DEVELOPMENT GOAL



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



- Sustainable Consumption and Production
- Environmental Awareness
- Community Engagement
- Sustainable Behaviors

6 CLEAN WATER AND SANITATION

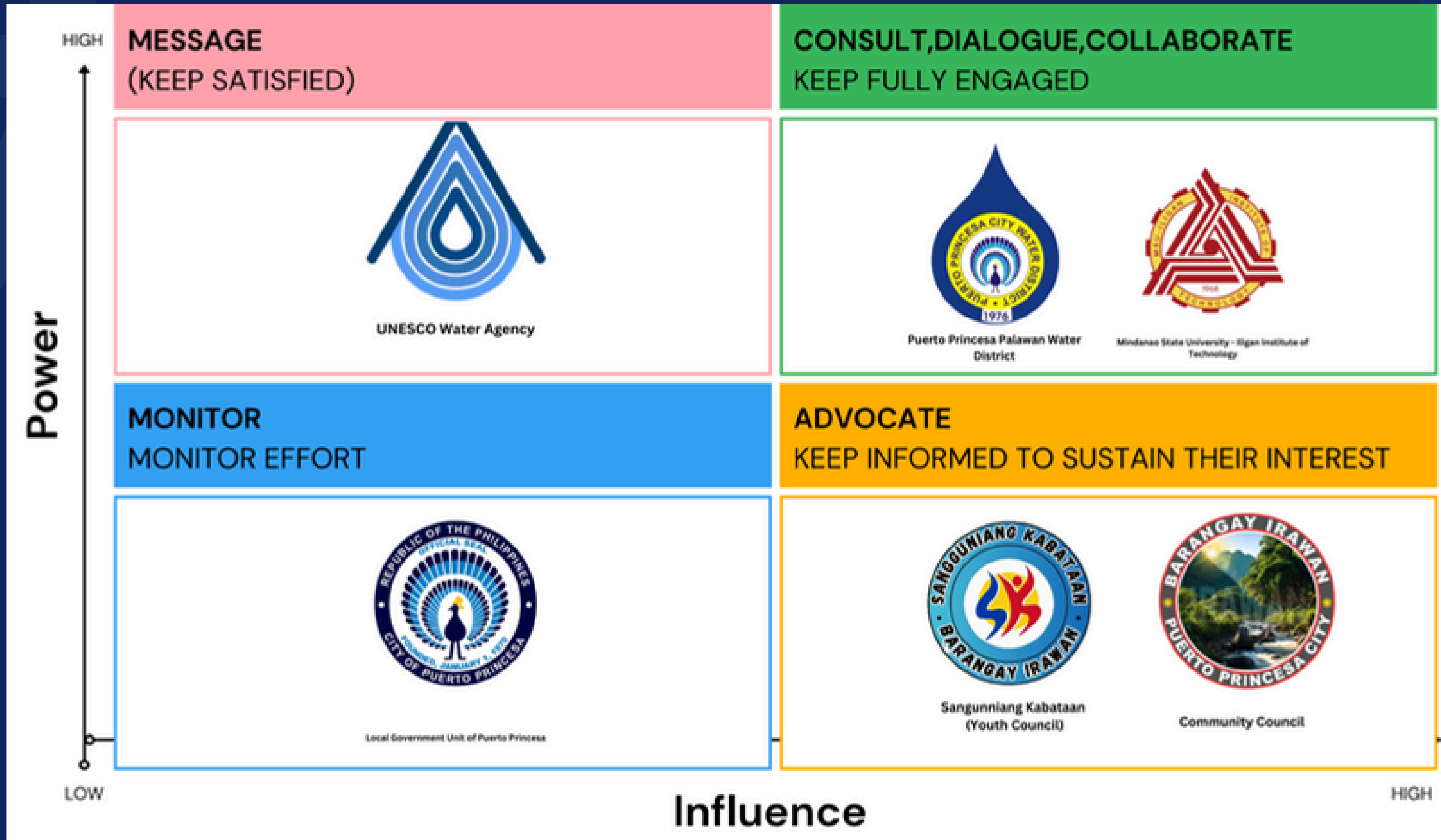


- Reliable Water Supply
- Water Scarcity Mitigations
- Water Quality Improvement
- Water Problem Mitigation

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



- Promotion of sustainable Industrialization
- Adaption of Clean Technologies
- Sustainable Infrastructures
- Sustainable Behaviors



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

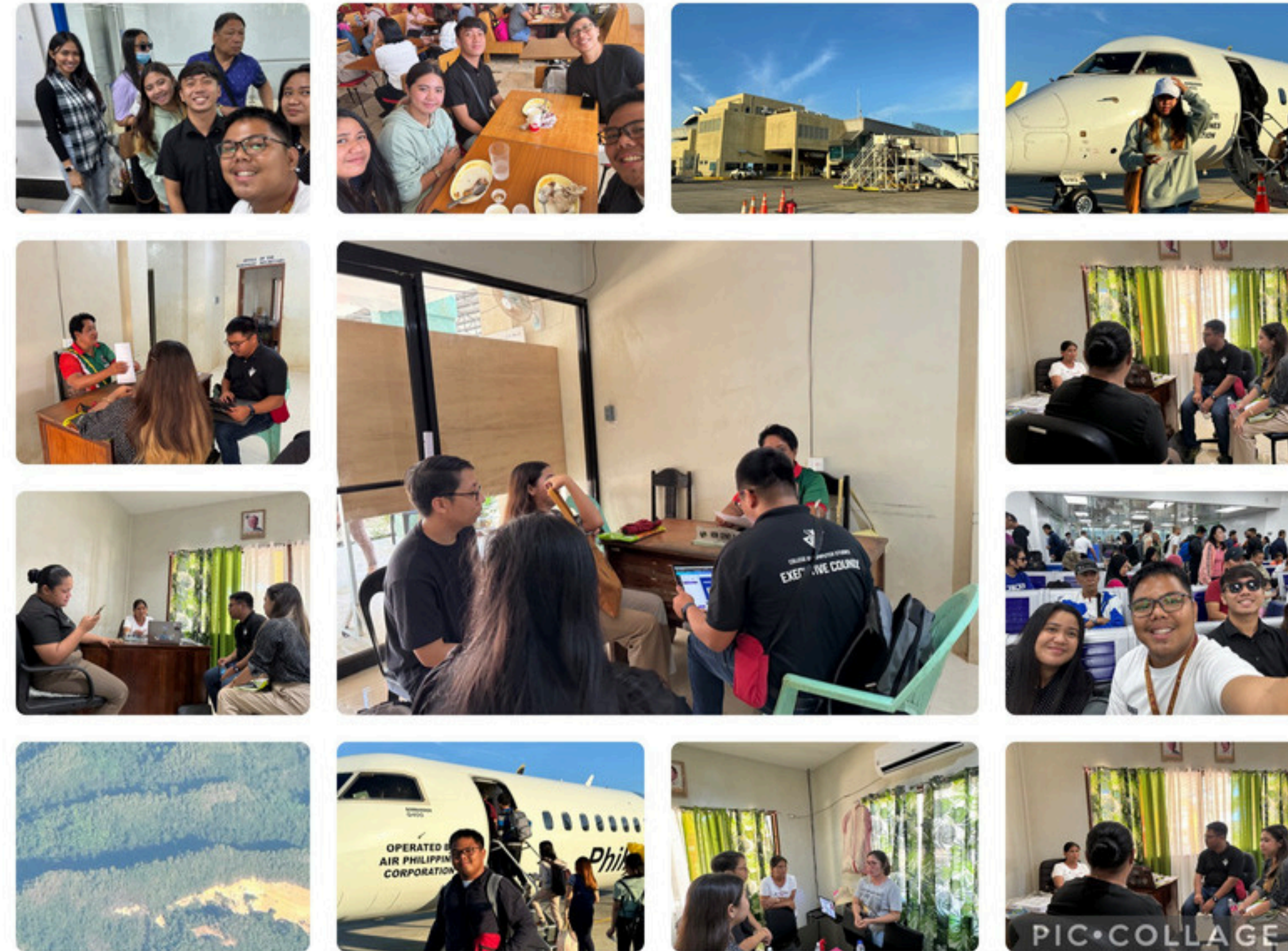




SPONSORSHIP FROM JACOBI CARBONS PHILIPPINES INC.

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



THE PROJECT IMPLEMENTATION

The team departed last April 25, 2024 at Mactan-Cebu International Airport bound to Puerto Princesa International Airport, arrived and met the Baranggay and SK Officials of Brgy. Irawan Puerto Princesa

APRIL 25, 2024

COMMUNITY ENGAGEMENT AND WATER SUSTAINABILITY AWARENESS

The team conducted community engagement and water sustainability awareness to the youth and the Barangay Council of Brgy. Irawan Puerto Princesa Palawan, tackling issues on water problems and water sustainability by introducing our solution

APRIL 26, 2024



SITE VISIT AT THE CAMPO UNO, IRAWAN WATERSHED

The team conducted the site visit activity at the top of the water shed at “Campo Uno” of the Irawan Watershed accompanied and supervised by the City -Environmental and Natural Resources, Puerto Princesa Palawan

APRIL 27, 2024





AUGMENTATION OF THE EXISTING WATER FILTRATION SYSTEM

The team conducted the augmentation of the water filtration system activity at at Purok Pagbabago, Sitio Iratag Brgy. Irawan accompanied by the SK Council of Irawan.

APRIL 28, 2024

PIC•COLLAGE



Republic of the Philippines
City Government of Puerto Princesa
CITY ENVIRONMENT AND NATURAL RESOURCES OFFICE
3rd Floor Puerto Princesa City Hall, Bgy. Sta. Monica
Puerto Princesa City, Philippines 5300
Tel. No. (048) 717 – 8041



30 April 2024

AQUAGUARDIAN PHILIPPINES
Iligan City, Lanao Del Norte
Philippines

LETTER OF COMMENDATION

To the Aquardian Philippines:

Environmental greetings!

Being part of Palawan Biosphere Reserve, the City Government of Puerto Princesa through this Office would like to express our heartfelt gratitude for choosing Purok Pagbabago, Sitio Iratag, Barangay Irawan, this City for letting the community feel and inspire that there is hope in clean water and sanitation. The community is located within the boundary and buffer zone of Palawan Flora, Fauna, and Watershed Reserve which was established under Presidential Proclamation Nos. 2221 in 1982 and 2465 in 1985.

Truly, the "Water Filtration System" which you brought to the said community is not just a simple project but an eye-opener and inspiration that science and technology can greatly uplift the social condition of humanities.

Therefore, we commend your invaluable talents and efforts in extending your expertise in our community.

Kudos and mabuhay to your team!

Thank you!

Truly yours,

Atty. CARLO B. GOMEZ
CG Department Head II
City Environment and Natural Resources Officer



OFFICIAL ENDORSEMENT OF PUERTO PRINCESA LGU-CITY ENVIRONMENT AND NATURAL RESOURCES

The team presented their solution at the Puerto Princesa City Palawan to the LGU-CENRO and granted official endorsement for future collaborations.

APRIL 29, 2024

| SUSTAINABLE, IMPACTFUL, COMMUNITY- CENTERED

AQUAGUARDIAN

PHILIPPINES

Tubig para karon, Tubig para sa bukas, Water for the future