UNIVERSITAS DIPONEGORO

2024-2025 SUSTAINABILITY REPORT

undip.official undip Undip TV Official undip.ac.id

UNIVERSITAS DIPONEGORO

Table of Contents

UNIVERSITAS DIPONEGORO

Introduction

Universitas Diponegoro, located in Semarang City, Central Java Province, is well known as Top university in Indonesia aims to be World Class University (WCU) with the vision of Excellent Research University. Founded in 1956, it is initially as a private university, but then earned the status of public university in 1961. Undip has 160 study programs in 11 faculties, 1 postgraduate school, and 1 vocational school. The word "Diponegoro" derived from name of our national hero, Pangeran Diponegoro, whom a patriotic prince stirred up freedom spirit from Dutch colonialism in the early 19th century, which has inspired efforts to establish UNDIP.

Universitas Diponegoro (UNDIP) is a public university in Semarang, Indonesia, which has comprehensive areas of study with a vision of Excellent World Class Research University. Focusing on Coastal Region Eco Development, UNDIP aims to create graduates who contribute to the development of science, technology, arts, culture and education at national and international level. As a World Class Research University, UNDIP focus its research and academics activity toward Coastal Region Eco Development, which means the area that becomes UNDIP research focus is coastal region with environment and ecology development spirit.

Undip has many research centers with various research areas supporting the achievement of Sustainable Development Goals (SDGs). With collaborative research motivation, UNDIP are open to establishing partnerships with both domestic and international universities. In addition, UNDIP also recognized as one of sustainability campus with an active contribution in SDGs achievement.

Universitas Diponegoro is also committed to advancing the Sustainable Development Goals (SDGs), with a focus on setting & infrastructure, energy & climate change, waste, water, transportation, and research & education. Lecturers, students and various campus units have created programs to create a safe, healthy, and sustainable environment for all campus activities.

UNIVERSITAS DIPONEGORO

Vision

"The Excellent Research University"

Mission

- Provide education to produce excellent and competitive graduates.
- Conducts research leading to publications, Intellectual Property Rights (IPR), textbooks, policies, and technologies employed to effectively and efficiently promote cultural and local resources.
- Organizing community services leading to publications, Intellectual Property Rights (IPR), textbooks, policies, and technologies effectively and efficiently promote cultural and local resources.
- Develop professionalism, capability, accountability in the university's governance, and the institution's independence to conduct higher education.

Values

- Universitas Diponegoro commits to internalized the following values to all students, alumni, lectures, and academic staff:
- Honest. It is an attitude that upholds honesty in the heart, speech, and deeds.
- Brave. It is an attitude of steadfast and great confidence in taking risks, dangers, and difficulties; to continue the ideals of unrelenting struggle, both physically, and spiritually.
- Care. It is a willingness to pay attention to solving social and physical problems in the surrounding communities.
- Fair. It is an attitude that treating others proportionally and along with the truth, adhering to the values of justice, reasonable, and responsible

UNIVERSITAS DIPONEGORO

1 Setting and Infrastructure

UNIVERSITAS DIPONEGORO

CAMPUS SITE

AREA PERCENTAGE

The ratio of open space to total area is

91.61%

Forest Vegetation

36.54%

Planted Vegetation

32.35%

Water Absorption

22.77%

Road Area

1.28%

UNIVERSITAS DIPONEGORO

Implementation at Universitas Diponegoro

HEALTH INFRASTRUCTURE

Health infrastructure available system and accessible for public

FACILITIES FOR DISABLE

Facilities exist in all buildings and are fully operated

SECURITY AND SAFETY

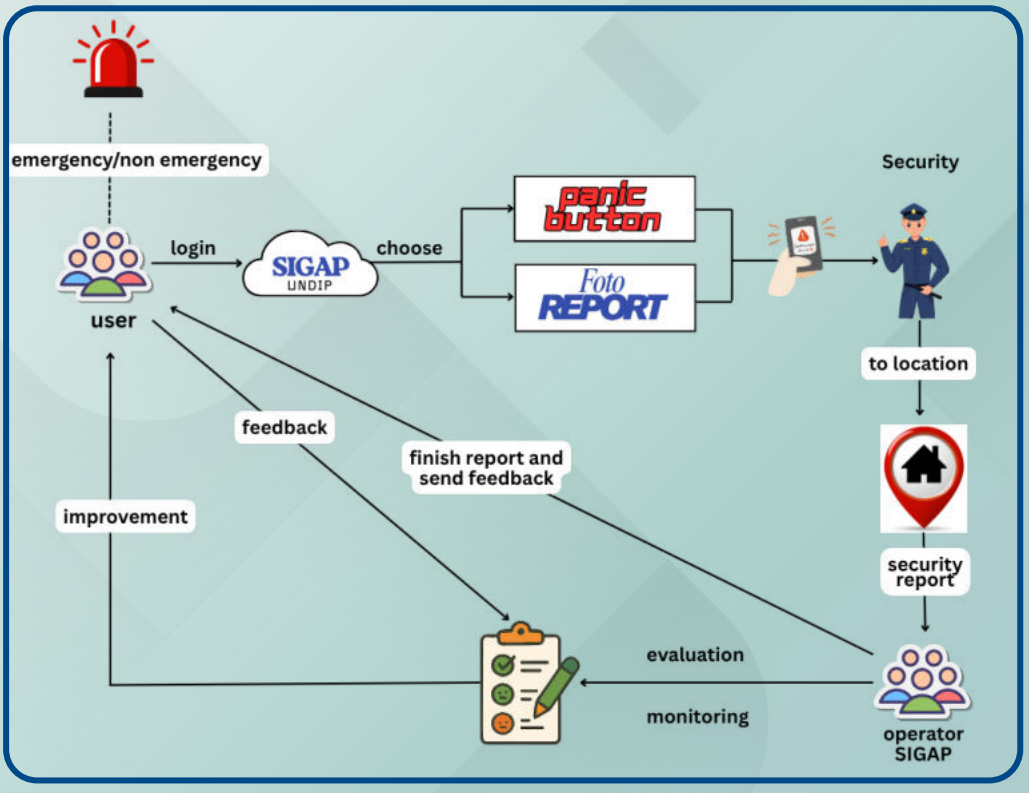
Security infrastructure is available and fully functions and security responding time for accidents, crime, fire, and natural disasters is less than 5 minutes.

CONSERVATION PROGRAM

Support the achievement of SDG 2 (Zero Hunger) and SDG 15 (Life on Land), committed to fully implementing ongoing conservation agriculture.

UNIVERSITAS DIPONEGORO

Utilization of Information and Communication Technology (ICT) Setting and Infrastructure



1. PLANNING

Mapping campus areas and infrastructure using drones and ArcGIS to support ICT-based development and integrated security systems

2. IMPLEMENTATION

Development of the SIGAP application as an information and communication technology (ICT)-based system for real-time incident reporting and emergency response

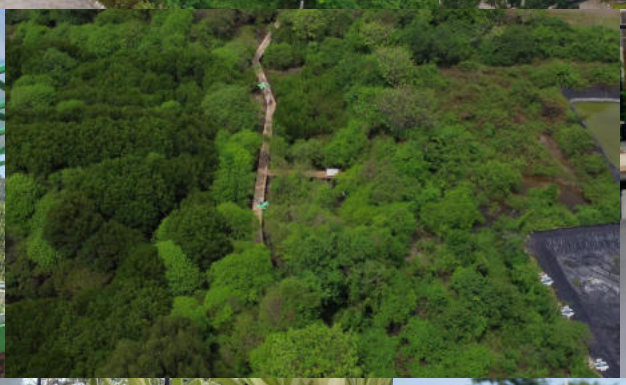
3. MONITORING

Real-time monitoring of incidents through the SIGAP dashboard to track reports, responses, and volunteer activities

4. EVALUATION

User feedback from the SIGAP system evaluated to improve response time, service quality, and overall campus safety


GREENHOUSE WANGIPS




DIFABLE


FIRE
ALARM

UNIVERSITAS DIPONEGORO

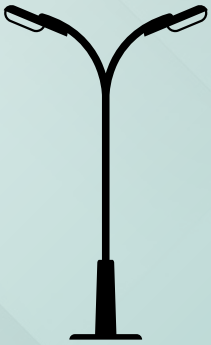
2 Energy and Climate Change (EC)

UNIVERSITAS DIPONEGORO

IMPLEMENTATION

Univesitas Diponegoro has taken significants steps to improve energy efficiency as part of its commitment to achieving Sustainable Development Goal (SDG) number 7 “Affordable and Clean Energy”

ENERGY EFFICIENT APPLIANCES USAGE



80% of street light use energy efficient bulb

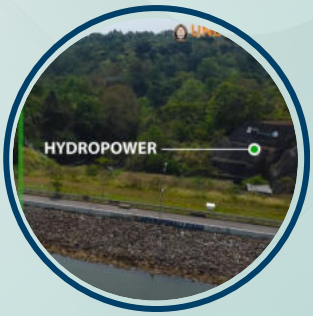
93% of air conditioning units are using inverter AC and use Non-CFC based

89% of the buillding lights use LED lamps

UNIVERSITAS DIPONEGORO

THE TOTAL PRODUCTION OF RENEWABLE ENERGY

Solar Panel
44504.97 kWh



Hydropower
676.60 kWh

TOTAL
46,167 kWh

Wind Power
50.00 kWh

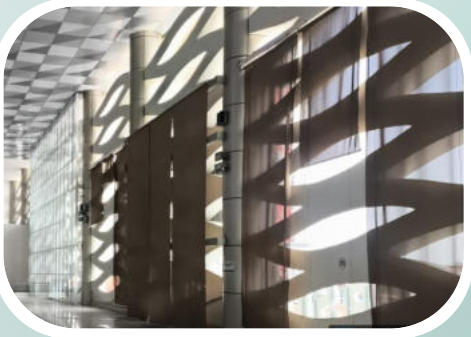
Biogas
519.07 kWh

Biodiesel
300 kWh

Combined Heat Chiller
116.75 kWh

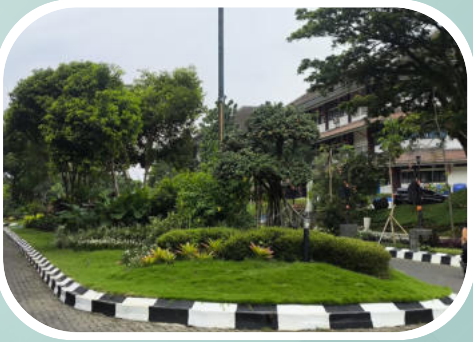
UNIVERSITAS DIPONEGORO

GREEN BUILDING IMPLEMENTATION



Element I
Energy Eficiency Lighting Zoning

Element 2
Indoor Environmental Quality (HVAC)



Element 3
Sustainable Site Planning & Management

Element 4
Materials & Resources
Recycled Content Materials

Element 5
Water Eficiency
Water Harvesting & Recycling

Element 6
Innovation
Green Building Index Facilitator

UNIVERSITAS DIPONEGORO

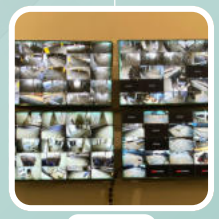
SMART BUILDING IMPLEMENTATION AT THE UNDIP

Solar Panel LED

Shielding Adjustment

Fire-fighting

HVAC System



CCTV

Thermal comfort

Energy Monitoring

Water

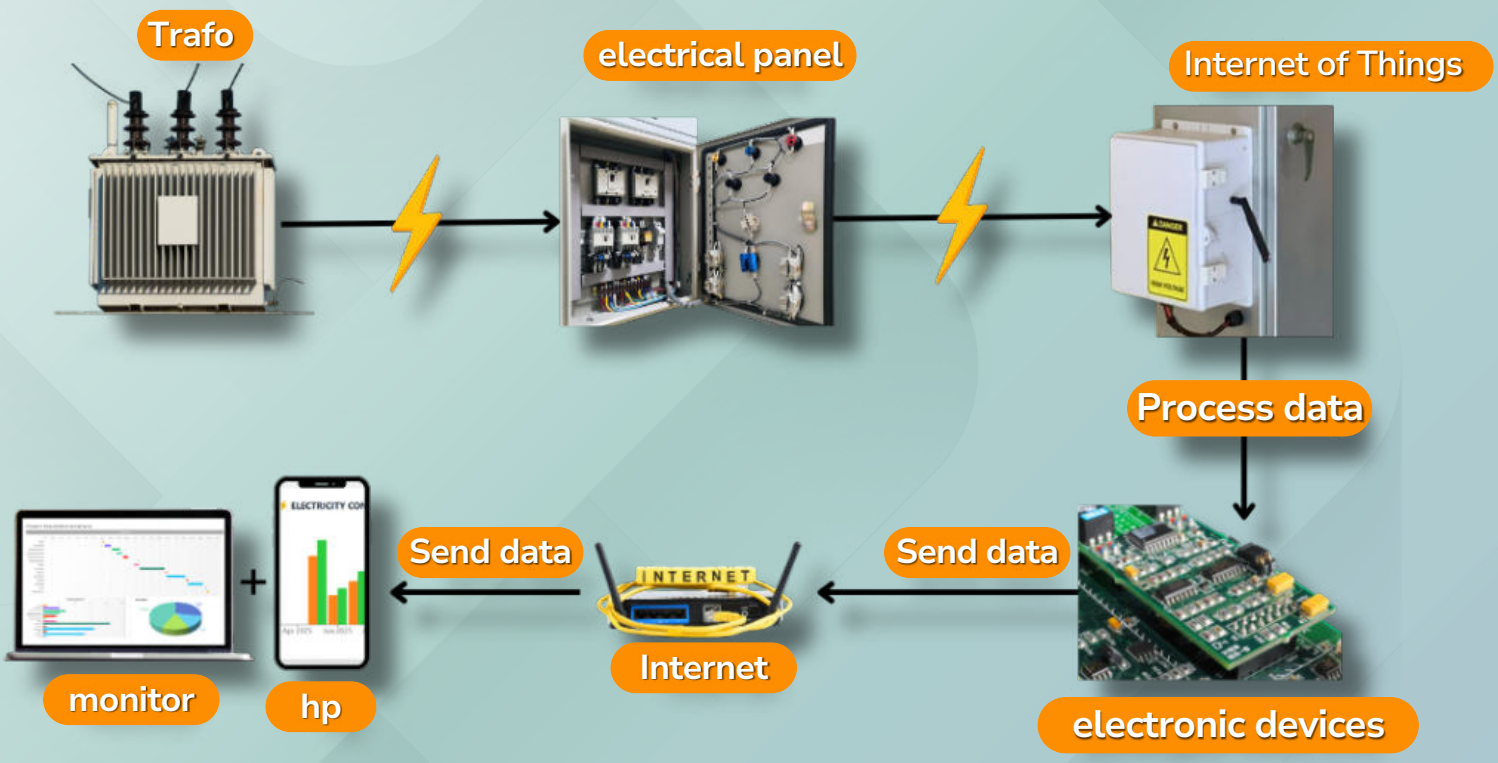
The total area of Campus Smart Building

946,673.80 m^2

UNIVERSITAS DIPONEGORO

UTILIZATION OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) ENERGY AND CLIMATE CHANGE

System Flow



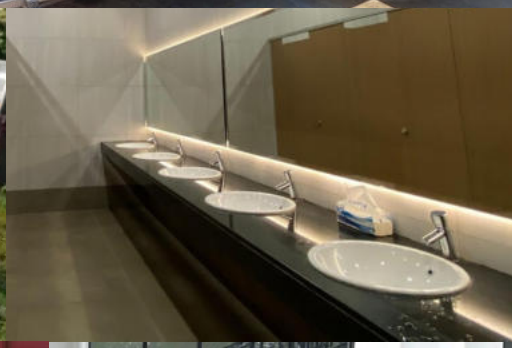
This diagram shows an IoT-based energy system where electricity from a transformer is monitored and transmitted online in real time for efficient and sustainable energy use.


HALTE UNDIP
GPS Map Camera


HELIOS


AUTOMATIC SENSOR LIGHTING


INSTALASI MINIPLANT BIODIESEL
SEKOLAH VOKASI




ROENERG
DIPOFUEL
PYROENERGY


INOVASI UNDIP
Implementasi Teknologi
Gelembung Nano-Mikro
Plasma Ozon untuk Pengolahan
Air Limbah Industri

UNIVERSITAS
DIPONEGORO

3 Waste

UNIVERSITAS DIPONEGORO

Universitas Diponegoro is committed to the development of sustainable waste management practices and the principles of reduce, reuse and recycle.

REDUCE, REUSE & RECYCLING PROGRAM

Integrated Waste Treatment Plant (IWTP)

Dipo Waste Bank

Seberling (Ecobrick & Eco-enzyme)

Undip Circular Campus Studio

Pit Compost & Compost Bag

100% of the waste generated at Diponegoro University was recycled

Reduce The Use of Plastic & Paper Program

- Double-sided printing policy program
- Paperless policy through Microsoft clouds & office
- Tumbler usage advice and free water supply
- Plastic bag ban in campus

UNIVERSITAS DIPONEGORO

Organic Waste Treatment

100% Treated Organic Waste

All organic waste is processed in Integrated Wasted Treatment Plant (IWTP), Pit Composting & Compost bag, and Biochar producing.

UNIVERSITAS DIPONEGORO

INORGANIC WASTE

100%

is recycled through a process that include sorting & reprocessing, and they've introduced a program like the Seberling program to engage students & promote sustainable practices, while residues are processed using a plastic pyrolysis machine to produce gasoline fuel and wax for paving blocks.

100%

TOXIC WASTE HANDLING

Universitas Diponegoro collaborates with a certified third party to handle toxic waste. Prior to being sent to a third party, the toxic waste is segregated, securely packaged, and transferred with care.

UNIVERSITAS DIPONEGORO

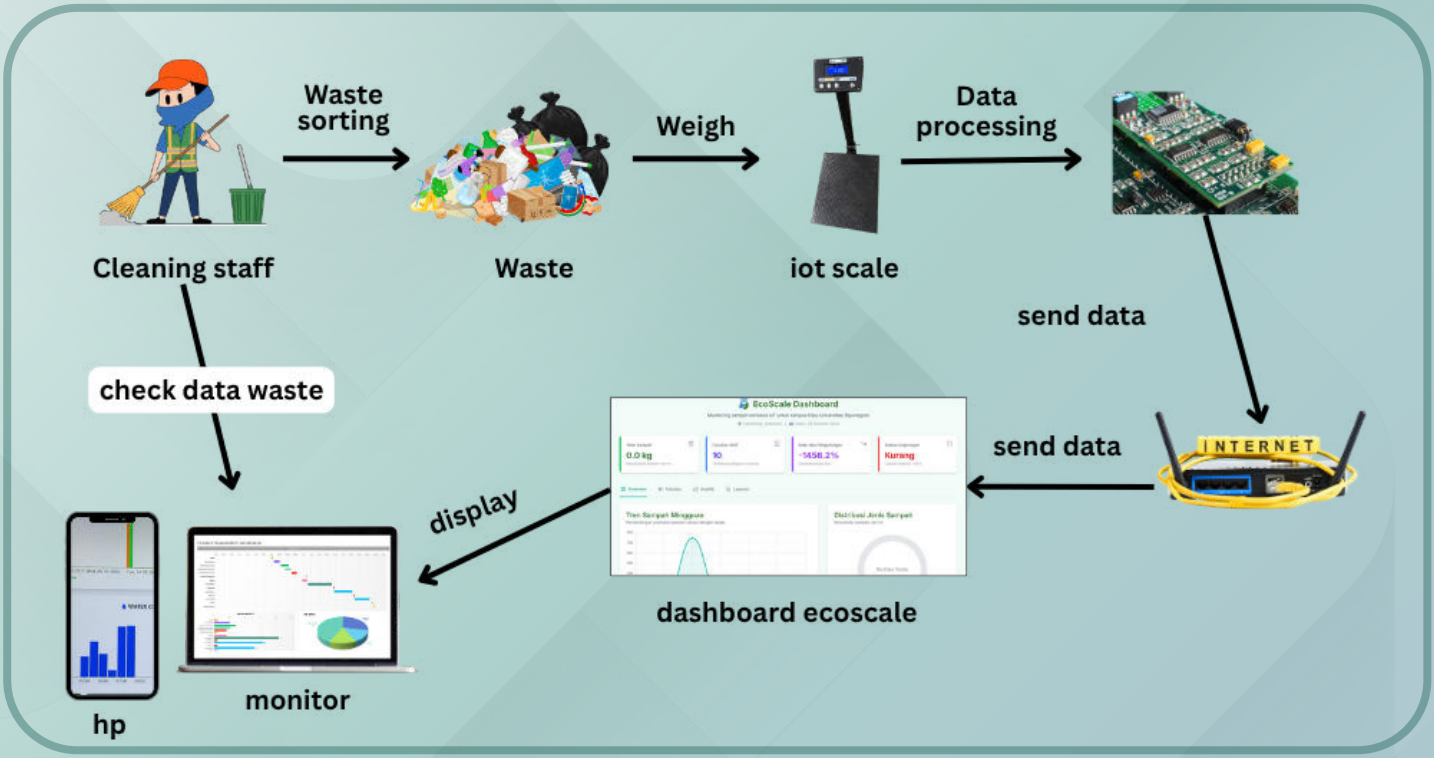
TERTIARY TREATMENT & SEWAGE DISPOSAL

Universitas Diponegoro utilizes Tertiary Treatment for sewage recycling, enhancing water quality and promoting sustainability. Campus units and Diponegoro National Hospital contribute to wastewater quality maintenance. Treated water serves fish ponds, drainage, and decorative plants, setting examples for water conservation.

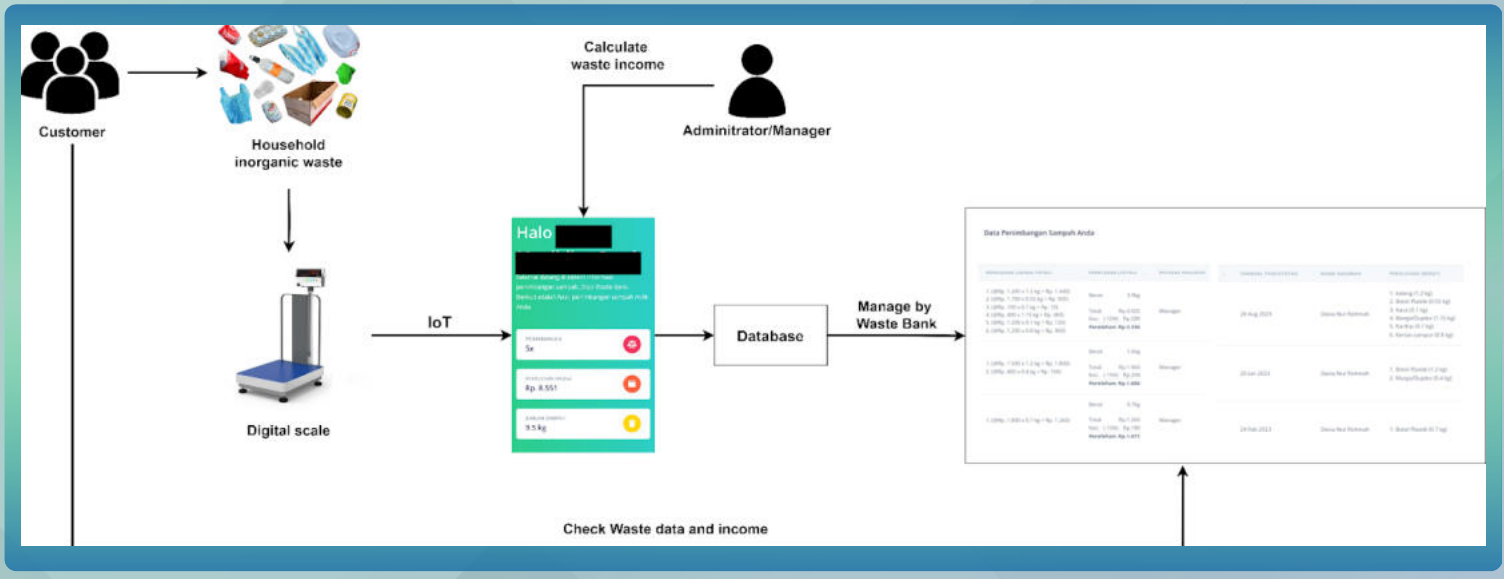
UNIVERSITAS DIPONEGORO

Utilization of Information and Communication Technology (ICT) Waste Management

System Flow IOT Ecoscale :



System Flow IOT Dipo Waste Bank (DWB):



On Friday, October 17, 2025, Diponegoro University officially launched the "UNDIP Zero Waste" movement at the Integrated Waste Treatment Plant (IWTP) / TPST

UNIVERSITAS DIPONEGORO

4 Water

UNIVERSITAS DIPONEGORO

Universitas Diponegoro Improve Water Quality & Sanitation Services

Aligned with SDGs 6: Clean Water & Sanitation

WATER CONSERVATION PROGRAM

Rainwater Harvesting

Infiltration Well

Pond

Reservoir

Biopores

98.56%

Water Conservation Initiatives Implemented

Arboretum

WATER RECYCLING PROGRAM IMPLEMENTATION

Wastewater Treatment Installation

Wastewater Recycling Rate

80.63%

Activities

Recycling Pump

Garden Sprinkler

UNIVERSITAS DIPONEGORO

WATER EFFICIENT APPLIANCES USAGE

Automatic Sensor Water Tap

81.21%

Reduction in water use through smart water-saving devices

Smart Flushing Toilet

Garden Sprinkler

Urinal Flushing

Water Efficient Use Campaign

CONSUMPTION OF TREATED WATER

Reverse Osmosis

91.01%

of Water Supply from Treated Sources including drinking water, wastewater, and desalination systems

Desalination Water

WATER POLLUTION CONTROL

Wastewater Treatment System

Septic Tank

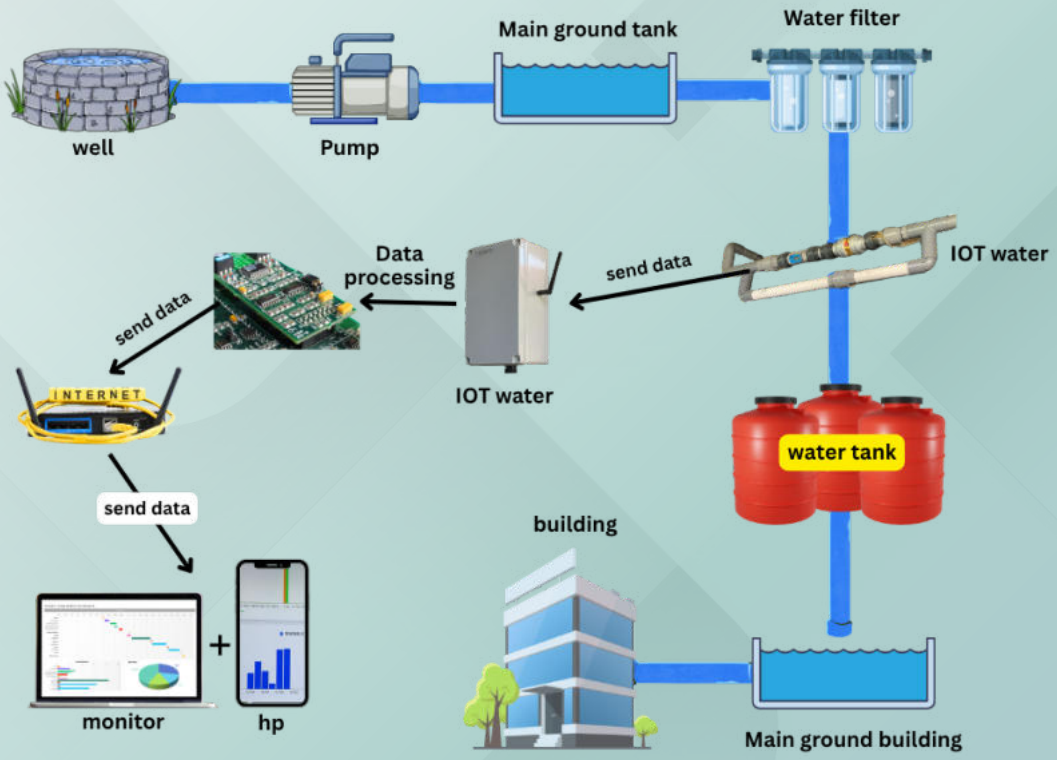
Beach Clean-Up

Water Sampling Program

Diponegoro University prevents water pollution through regular water quality audits and the use of wastewater treatment plants (IPAL) and septic tanks

UNIVERSITAS DIPONEGORO

UTILIZATION OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) WATER



PLANNING

Water masterplan using drones and ArcGIS to map water sources

IMPLEMENTATION

IoT-based water monitoring device installed in main well systems to record real-time usage and support water efficiency

MONITORING

Real-time dashboard monitors hourly clean water usage for optimized consumption

EVALUATION

Rain Water Harvesting (RWH) mapping to ensure future water sustainability across campus


UNIVERSITAS DIPONEGORO


UNIVERSITAS DIPONEGORO


WATER STATION

UNIVERSITAS
DIPONEGORO

5 Transportation

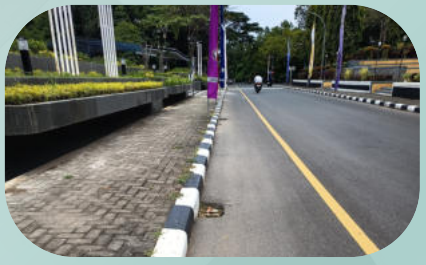
UNIVERSITAS DIPONEGORO

PEDESTRIAN PATH

4524 m

Total length of pedestrian walkway

Universitas Diponegoro providing comfortable, safe pedestrian paths, and equipped with disability features. Also equipped with speed bumps and solar panel lights to improve pedestrian safety.


ZERO EMISSION VEHICLES (ZEV)

233
units electric motorcycle

1349
free bicycle to rent

The ratio of Zero Emission Vehicles (ZEVs) to total campus population is **0.025**


The total number of vehicles (car and motorcycles) divided by total campus population is

0.0418

UNIVERSITAS DIPONEGORO

Universitas Diponegoro is committed to reducing carbon emissions by reducing private vehicles. Measures taken include a

- car-free zones,
- providing shuttle inside the campus,
- high parking charges,
- free bicycles for les for regular students, etc.

Trans Semarang

High Parking Charge

1349 Unit Rent-Free Bicycle

Program Designed to Decrease the Parking Area on Campus by making a

- multipurposes parking area,
- build Gedung Parkir Bersama,
- provide electric buggy cars for free,
- free bicycle rent,
- shuttle bus service in cooperation with Trans Semarang,
- car free-zone parking,
- and one-way road policy in some roads.

Ratio of total main campus area used as a parking lot **0.95%**

PARKING LOT

UNIVERSITAS DIPONEGORO

SHUTTLE SERVICE

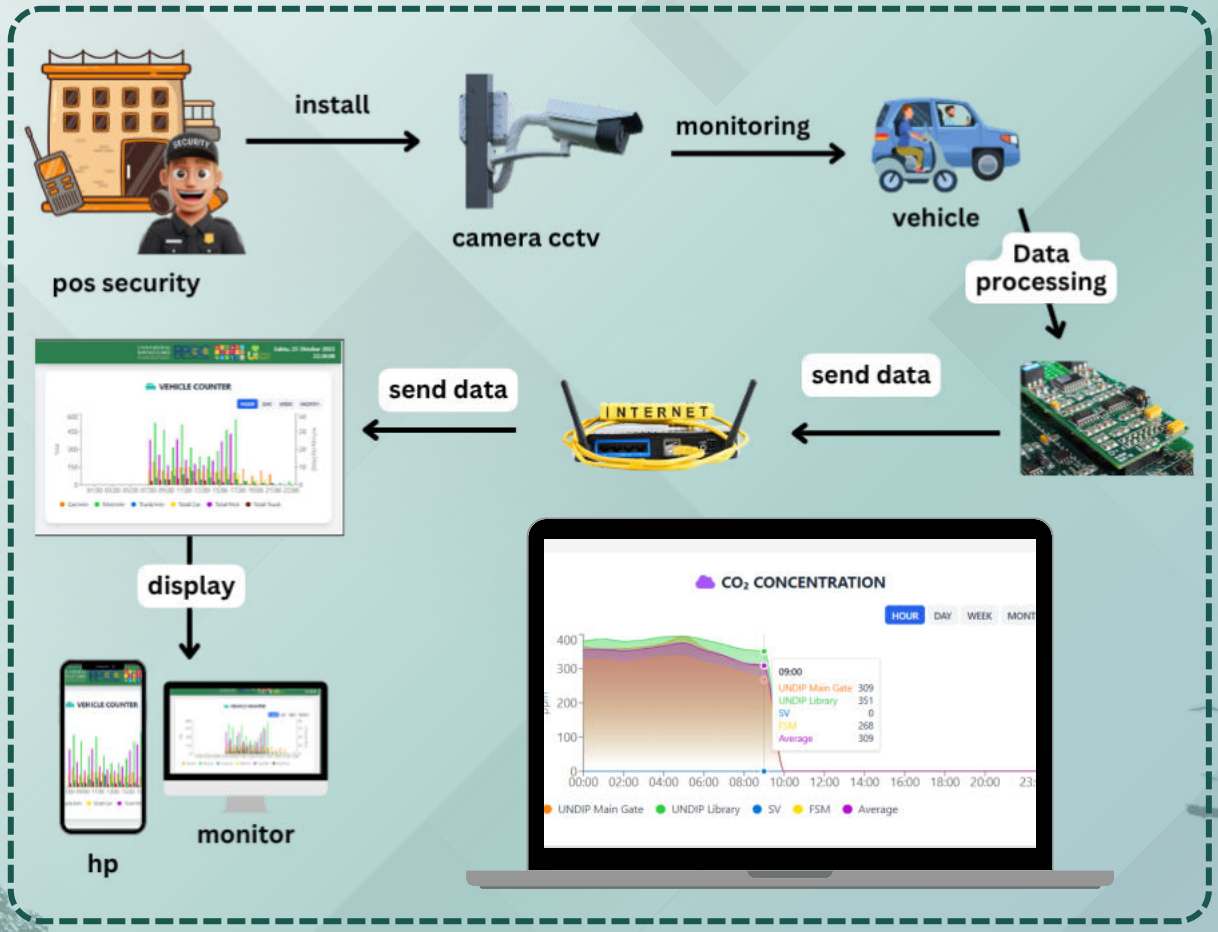
10 Units

Electric Buggies Car

Each electric buggy can carry 22 passengers. There are 4 electric buggies operating every day, free of charge. Eight of them use electric power and two use solar panels.

UNIVERSITAS DIPONEGORO

UTILIZATION OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) OF TRANSPORTATION



PLANNING

To achieve a Green and Sustainable Campus, UNDIP Tembalang must implement eco-friendly transportation policies.

IMPLEMENTATION

The implementation of the IoT system has been designed according to the flowchart. Each vehicle entering the campus is monitored at the main gate.

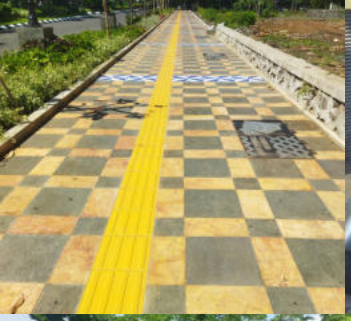
MONITORING

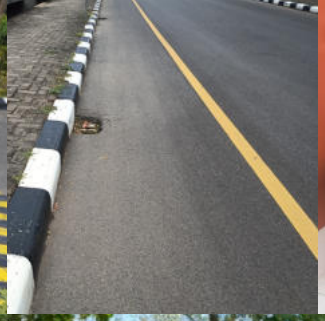
The UNDIP Green Monitoring system aims to expand eco-friendly transportation options like buggies and BRT.

EVALUATION

Several polivy recomendation:

- Increase number of buggies
- Ride-sharing program
- Rewards public transportation user
- “one day per week” policy




DILARANG PARKIR


UNIVERSITAS DIPO


Pit'Kuy
PIT KAMPUS UNDIP

UNDIP 6


STOP
BUS KAMPUS
UNDIP
HALTE
LAB TERPADU
JADWAL


UNIVERSITAS DIPONEGORO
UNDIP


HALTE UNDIP

UNIVERSITAS DIPONEGORO

6 Research & Education

UNIVERSITAS DIPONEGORO

Courses

The total number of courses offered in Universitas Diponegoro is **9,848** and **9,722** of them are related to sustainability

98.72%

Research Funds

The total research funds is **$5,141,246** with **$5,117,351** is dedicated to Sustainability Research

99.54%

Organization

Have **33** sustainability organizations on campus
and
288 Event related to sustainability by Student Organization for 3 Years

Published **5881** Publication related to sustainability for the past 3 years

Held **341** International Event related to sustainability

502 Community service activities related to sustainability

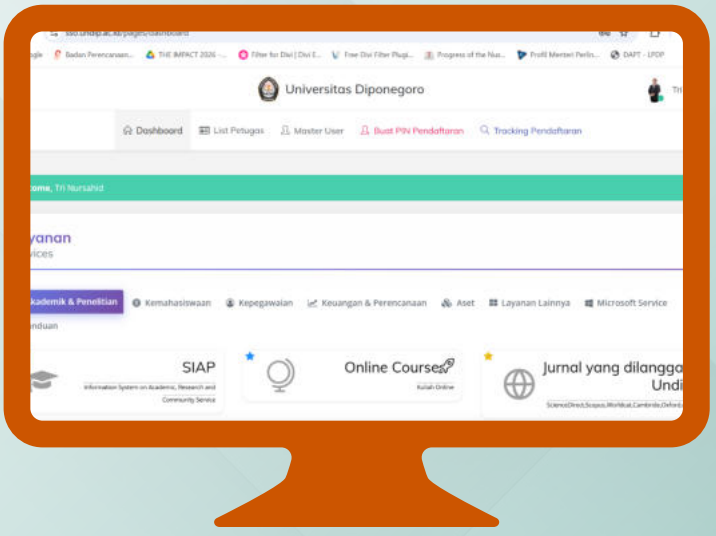
Has **45** start up related to sustainability

Sustainability Research & Education

Held **35** cultural event related to sustainability

UNIVERSITAS DIPONEGORO

Utilization of Information and Communication Technology (ICT) of Education



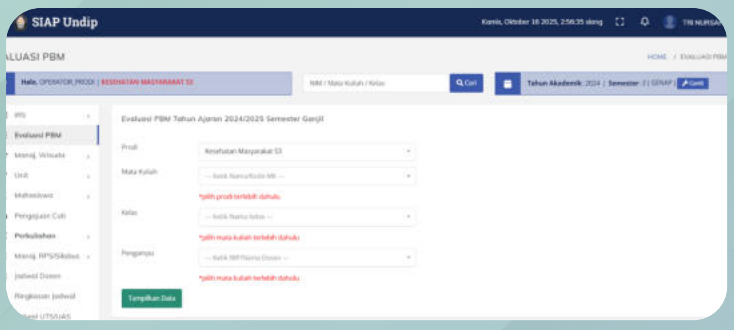
Single Sign-On (SSO) system

an integrated platform designed to connect all members of the UNDIP academic community

SIAP (Academic, Research, and Community Service Information System)

commonly used as a learning platform that includes various features such as lectures, midterm and final exam schedules, course outlines (RPS), grades, academic advising, final examinations, and payment history.

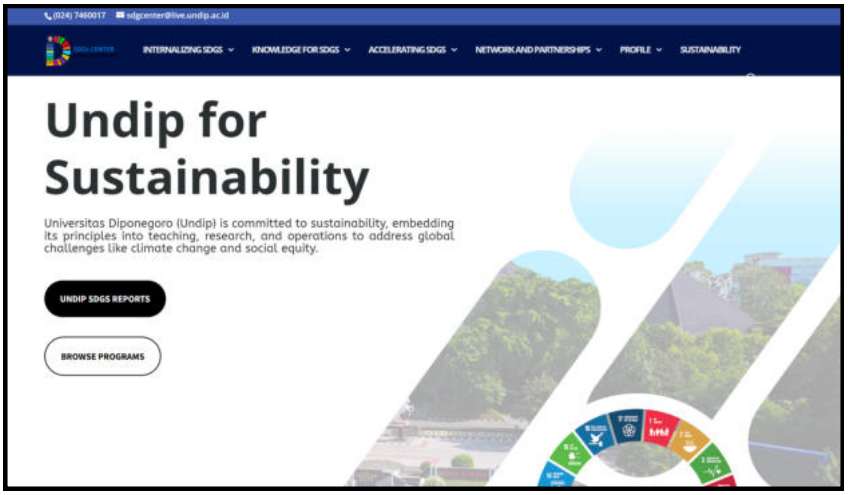
Evaluation

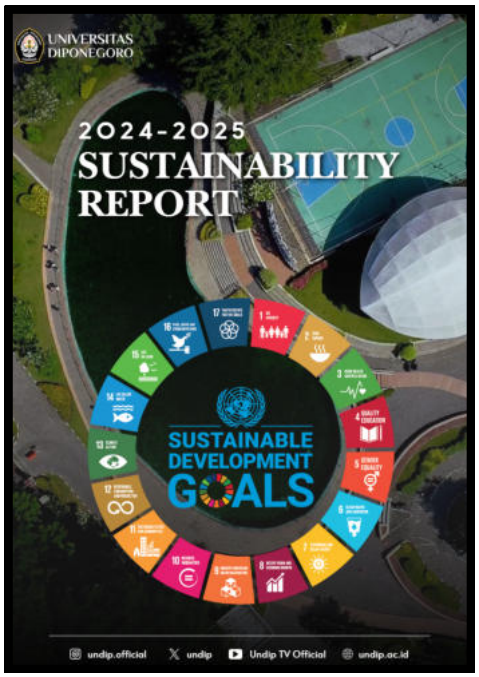


The results of this evaluation serve as a foundation for improvement in the upcoming semester to ensure student satisfaction and maintain the quality of learning. All assessment results are used as a basis for preparing the next semester's academic activities.

UNIVERSITAS DIPONEGORO

sustainability.undip.ac.id






EPIC
EMPATHY IN ACTION
EPIC


DIKTISAINTEK BERDAMPAK
SUSTAINABLE DEVELOPMENT GOALS
SUMMER course program
The 7th Summer Course Program 2025
Culture-Based Public Health
"Public Health through The Lens of Traditional Culture and Local Wisdom"


PAGELARAN KETOPRAK DALAM RANGKA
DIES NATALIS KE-68 UNIVERSITAS DIPONEGORO
Banjaran Diponegoro
GARENG ALI BAJAJ BAJURI
GUEST STARS
29 OKTOBER 2025
19.00 WIB
GRATIS
GEDUNG PROF. SOEDARTO S.H.
KAMPUS UNDIP

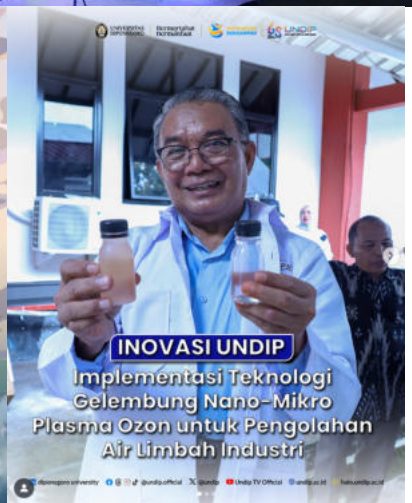

REKTOR
UNIVERSITAS DIPONEGORO


Penutupan & Penganugerahan
PILMAPRES 2025
Pemilihan Mahasiswa Berprestasi Nasional
UNIVERSITAS DIPONEGORO
SEMARANG


Himpunan Mahasiswa Oseanografi 2025 | Kabinet Lestari Adikarya
NASIONALISME
GESIT 2025
undiphimaose
Ekstrakurikuler Pengabdian Masyarakat


Optimalisasi Peran Warga Kampus dalam Kesiapsiagaan Bencana Gempa Bumi dan Kebakaran
15 MEI 2025


ECOYOUTH ACTION
Workshop Sabun Eco-enzyme
Workshop Eco-print
Workshop sabun minyak jelantah
Location
Date
Contact Person


INOVASI UNDIP
Implementasi Teknologi Gelembung Nano-Mikro Plasma Ozon untuk Pengolahan Air Limbah Industri

UNIVERSITAS DIPONEGORO

For The Earth, For The Future

We are always committed in implementing sustainability

Universitas Diponegoro is dedicated to consistently advancing sustainability efforts. With leadership, inclusivity, and innovation as its foundational pillars, Universitas Diponegoro aims to establish itself as a foremost green campus, both within the country and on an international scale.

www.undip.ac.id
www.sustainablitiy.undip.ac.id