



Energy and Climate Change

Greenhouse Gas Emission Reduction Program



SALINAN

**PERATURAN REKTOR
UNIVERSITAS PADJADJARAN**
NOMOR 13 TAHUN 2022
TENTANG
**BANGUNAN GEDUNG HIJAU
DI LINGKUNGAN UNIVERSITAS PADJADJARAN**
DENGAN RAHMAT TUHAN YANG MAHA ESA
REKTOR UNIVERSITAS PADJADJARAN,



SALINAN

**PERATURAN REKTOR
UNIVERSITAS PADJADJARAN**
NOMOR 3 TAHUN 2022
TENTANG
**PENGELOLAAN KAMPUS RAMAH LINGKUNGAN
UNIVERSITAS PADJADJARAN**



KEMENTERIAN PENDIDIKAN TINGGI, SAINS,
DAN TEKNOLOGI
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CIRCULAR LETTER
1111/UN6.4.2/TU.00/2025

**REGARDING
RESOURCE CONSERVATION
WITHIN UNIVERSITAS PADJADJARAN**

To:

1. Chairperson of the Board of Trustees
2. Chairpersons of the Academic Senate
3. Vice Rectors
4. Deans of Faculties/Schools
5. Heads of Units
6. Directors
7. Heads of Offices
8. Heads of Centers

at Universitas Padjadjaran

In reference to Government Regulation Number 33 of 2023 on Energy Conservation and Presidential Instruction Number 1 of 2025 on Expenditure Efficiency in the Implementation of the State Budget and Regional Budget for Fiscal Year 2025, we wish to share the following energy conservation measures to support budget efficiency policies:

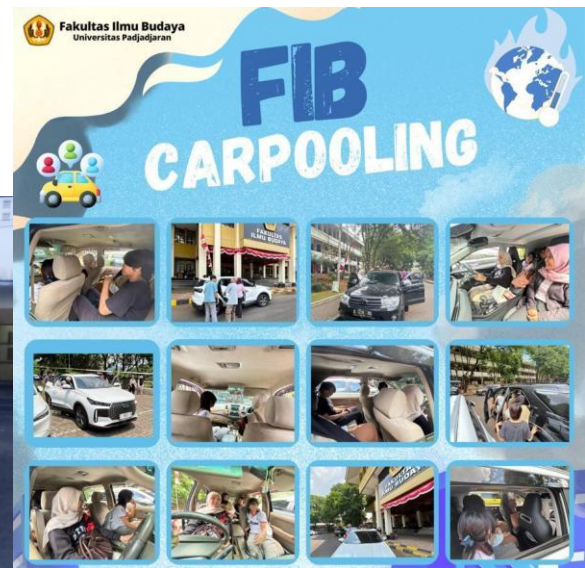
A. Electricity Efficiency

1. Buildings with two or more elevators must ensure that the elevators operate only during working hours, Monday to Thursday from 07:30 to 16:00 WIB, and on Friday

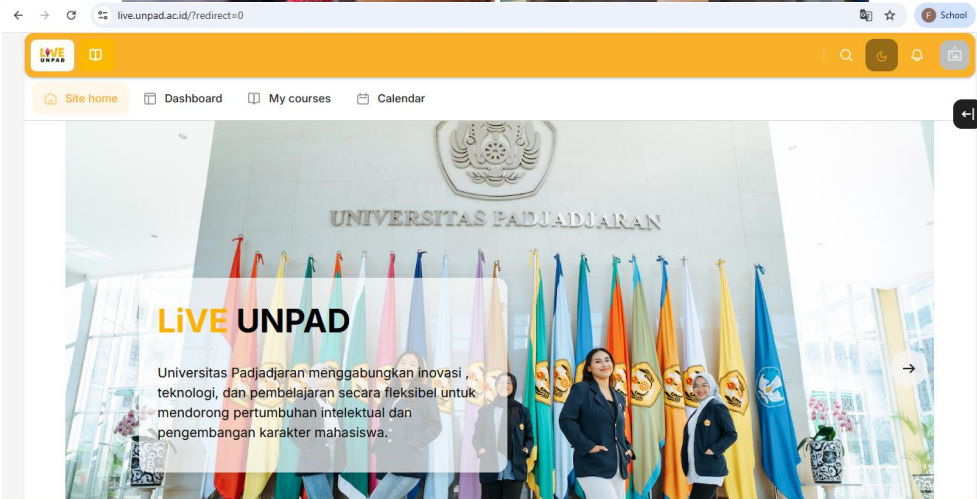
Rector's Regulations of the Universitas Padjadjaran and Circular Letters related to greenhouse gas reduction and energy conservation.



Revegetation and Eco-Enzyme Pouring Program.



Zero Emission Program (campus shuttle, campus bike community, cycling behavior, electric car, pedestrian pathways, central parking, Beam e-scooters, Zero Emission Shuttle, Carpooling).





Paper and Plastic Reduction Program (E-office, Unpad EdEx, campaign, Cikahuripan, LiVe UNPAD, Unpad LUHUNG) and Renewable Energy (PV, biogas, wind power, hydropower).



Applying energy-efficient appliances (shifting to LED, LCD TV, inverter AC, water clogger, IoT system).

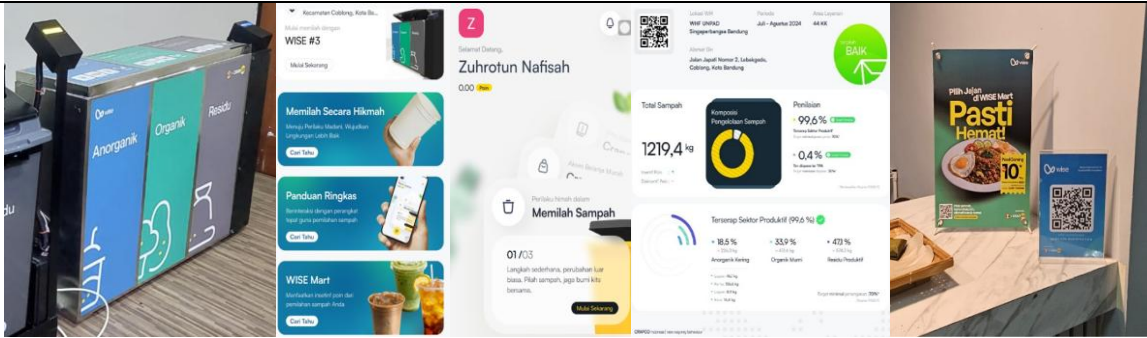


Passive cooling



Light efficiency during day and night

Green Building.





Universitas Padjadjaran
Unpad Inaugurates Waste Processing ...



Waste management (WISE bin, WISE-tainability, Reverse Vending Machine, Waste Processing Facilities upgrades, Sewage Disposal).



Centralized parking. Parking areas utilization for PV installations or other facilities (Amphitheater/park/etc).



Carbon stock study.

| | | |
|---|-------------------------------------|---|
| | | |
| <p>Action plan to control climate change.</p> | <p>Hybrid learning certificate.</p> | <p>Distance learning study program.</p> |

Description:

1. Rector's Regulations and Circular Letters related to Greenhouse Gas Reduction and Energy Conservation

- Rector's Regulation of Universitas Padjadjaran No. 13 of 2022 about Green Buildings within Universitas Padjadjaran
- Rector's Regulation of Universitas Padjadjaran No. 3 of 2022 about Environmentally Friendly Campus Management
- Circular Letter No. 111/UN6.4.2/TU.00/2025 Regarding Resource Conservation Within Universitas Padjadjaran

2. Revegetation and Eco-Enzyme Pouring Program

This program reflects Unpad's commitment to environmental conservation and sustainable green campus development. Supported by PT. Heksa Garda Utama, which donated 200 seedlings, students from the Environmental Department of BEM Kema Unpad (Unpad's Student Executive Board), Unpad Hejo Community, also participated actively. Around 40–50 trees, including durian and avocado, were planted to establish a productive green zone. Additionally, eco-enzyme, a natural solution from fermented organic waste, was poured into the Ecoriparian area to enhance water quality and ecosystem health. This initiative promotes sustainable organic waste management and strengthens Unpad's commitment to maintaining environmental balance on campus.

3. Zero Emission Program on Transportation

- Campus shuttle.
- Campus bike community.
- Cycling behavior.
- Electric cars.
- Pedestrian pathways.
- Central parking.



- Beam e-scooters.
- Campus Zero Emission Vehicle (ZEV) Shuttle.
- Faculty's carpooling.

4. Paper and Plastic Reduction Program

- E-office: Since 2011, Unpad has used SIAT (Integrated Academic Information System), a digital academic and research management application, significantly reducing administrative paper use.
- Unpad EdEx: A platform offering various online executive learning programs, from Universitas Padjadjaran's certified courses and industry-specific programs to synchronous and asynchronous learning, which is designed to support career development and professional empowerment.
- Campaigns.
- Cikahuripan Drinking Fountain: Provide free, clean drinking water across faculties to discourage bottled water purchases.
- LiVe UNPAD: Learning Management System.
- Unpad Luhung is a degree and non-degree learning platform designed to prepare the next generation with world-class knowledge and skills.
- SAUNPAD mobile application: An integrated application for all academics (students, lecturers, educational staff) to access campus services digitally from one application.

5. Renewable Energy

- PV.
- Biogas.
- Wind power.
- Hydropower.

6. Energy-Efficient Appliances

- Shifting to LED.
- LCD TV.
- Inverter AC.
- Water clogger.
- IoT system.

7. Green Building

Applying green building concepts, such as natural ventilation, full natural daylighting, monitoring energy for every building, using efficient energy appliances, etc., is listed in the Rector's Regulation of the Universitas Padjadjaran No. 13 of 2022.

8. Waste management

- WISE bin: Smart bin with real-time feedback for waste disposal performance.
- WISE-tainability: Collaborative waste monitoring and reduction campaign.
- Reverse Vending Machine: Plasticpay Program (with BCA and BSI) reverse vending machines on campus (since September 2024) allow students to exchange plastic bottles for tumbler points or Flazz credit.
- Waste Processing Facilities Upgrades: Organic waste treatment at Universitas Padjadjaran involves managing waste such as leaves, branches, food leftovers, fruits, paper, cardboard, and animal manure. The collected waste is transported by waste trucks to the TPS3R Ciparanje and Sukawening Waste Handling Facilities. Various processing methods are applied, including the use of maggot and kasgot from black soldier fly larvae to produce animal feed and organic fertilizer, composting to generate nutrient-rich compost for landscaping and agricultural purposes, and pyrolysis for biochar production, contributing to sustainable waste management and carbon reduction efforts. The total volume of



organic waste produced this year is 527.28 tons, and 98.11% was treated. The total volume of organic waste produced this year is 527.28 tons, with 98.11% of it successfully treated

- Inorganic waste treatment at Universitas Padjadjaran covers soft and hard plastics, paper, duplex, styrofoam, glass, and metal scraps. The collected waste is transported to the TPS3R Ciparanje and Sukawening Waste Handling Facilities for further processing. Treatment methods include pressing and selling plastic waste for plastic pellet production and sending residual waste to a Refuse-Derived Fuel (RDF) plant through a partnership with Crapco. These initiatives support Unpad's commitment to sustainable waste management and resource circularity. The total volume of organic waste produced this year is 362.12 tons, with 96.20% of it successfully treated
- Toxic waste treatment at Universitas Padjadjaran is conducted through a structured and monitored process. Hazardous waste is first segregated and stored based on its hazard level, then collected by the K3L team and transported to the TPS B3 Ciparanje facility. All toxic waste must be recorded using an online application launched in June 2023 (<https://pelayanan.pk3l.unpad.ac.id/>), which enhances monitoring efficiency, minimizes paperwork, and ensures regulatory compliance. Furthermore, Unpad collaborates with authorized third-party companies to guarantee proper final treatment and environmentally safe disposal of hazardous materials. The total volume of organic waste produced this year is approximately 5.1 tons, with more than 85% of it successfully treated
- Sewage Disposal: It covers both domestic and laboratory wastewater. Domestic wastewater originates from offices, dormitories, and various campus activities, while laboratory wastewater comes from academic and research activities. Domestic wastewater is collected through septic tanks and processed using a biofilter system, with treated water absorbed into the soil. Septic sludge is pumped out every 3–6 months as part of routine maintenance. Laboratory wastewater undergoes pH neutralization before being sent to the campus Wastewater Treatment Plants (WWTPs). Unpad operates six WWTP facilities across campus, including at the Pharmacy, Fisheries, Arboretum, Central Laboratory, and Ecoriparian sites, each handling 5–20 m³/day of wastewater primarily through sedimentation. Final treatment is centralized at the Ecoriparian Leuwi Padjadjaran WWTP, inaugurated in 2024, which applies five treatment stages: sedimentation, filtration with charcoal and zeolite, biological treatment using local microorganisms and bio-cord (aerobic), monitoring pond, and reservoir. Treated water is then directed to the Check Dam Arboretum, which is utilized for irrigation, recreation, flood control, and ecological conservation, ensuring environmental integration and sustainable water management.

9. Centralized parking

Other parking areas are converted into alternative facilities such as PV installations, amphitheaters, gardens, etc.

10. Carbon Stock Study

The carbon stock study collected biomass data from tree stands within the Universitas Padjadjaran Jatinangor campus. This study generates data that can be used to calculate the campus's carbon sequestration capacity.

11. Action Plan to Control Climate

The Circular Letter No. 2208/UN6.WR4/TU.00/2023 concerning the Action Plan to Control Climate Change at Universitas Padjadjaran.

12. Certificate of Hybrid Learning

The Certificate is based on Rector's Regulation of Universitas Padjadjaran No. 8 of 2023 on the Implementation of Education at Universitas Padjadjaran, Article 17, Points 4 and 5.

13. Distance Learning Study Program



Implemented by various study programs at Universitas Padjadjaran, offering project-based programs.

14. Eco-enzym

150 L of eco-enzym liquid was poured into Ecoriparian to prevent water pollution and greenhouse gases.

Additional evidence links (i.e., videos, images, or other files that are not included in this file):

- <https://share.google/wpkCQRI6ddmfNR1Wb>
- <https://ppid.unpad.ac.id/dokumen/pengelolaan-kampus-ramah-lingkungan-universitas-padjadjaran/>
- <https://www.unpadedex.com/>
- <https://siat.unpad.ac.id/index.php/login>
- <https://live.unpad.ac.id/>
- <https://luhung.unpad.ac.id/>
- <https://pk3l.unpad.ac.id/program-bangunan-pintar/>
- <https://iot.stg.unpad.ac.id/>
- <https://ppid.unpad.ac.id/wp-content/uploads/2023/07/Peraturan-Rektor-No.-8-tahun-2023-tentang-Penyelenggaraan-Pendidikan-di-Unpad.pdf>
- <https://pasca.unpad.ac.id/program-magister-hybrid-project-based-learning/>