



SUSTAINABLE DEVELOPMENT GOALS REPORT 2022



UNY AT A GLANCE

Founded in 1964, Universitas Negeri Yogyakarta (UNY), formerly the Yogyakarta Institute of Teacher Education and Educational Sciences, is a public university in Yogyakarta, Indonesia. The main campus of UNY, occupied on the Karangmalang campus, covers 565.284 m² of land and has become one of the leading universities in educational fields. It also has four other campuses in Yogyakarta, including the Mandala Campus, Bantul Campus, Wates Campus, and Gunung Kidul Campus.

This university has over 25,000 students organized by eight faculties and schools, including the Faculty of Education and Psychology; Faculty of Mathematics and Natural Sciences; Faculty of Languages, Arts, and Culture; Faculty of Social Sciences, Law, and Political Sciences; Faculty of Engineering; Faculty of Sports and Health Sciences; Faculty of Economics and Business; Faculty of Vocation; and graduated school. In 2022, there will be 76 undergraduate, 34 master, and 14 doctoral programs. As one of the respectable universities in Indonesia, UNY always leads to focus and improves learning, teaching, and research activities by offering outstanding facilities and services.



Introduction

We recognize the significant responsibility that universities, including Universitas Negeri Yogyakarta, have to actively contribute to the generation and dissemination of knowledge to tackle the obstacles outlined in the 2030 Agenda for Sustainable Development.

With social responsibility as a fundamental objective, UNY, a global leader in education, approaches the SDGs through three interconnected channels: our research, instruction, and community service-based public engagement initiatives.

Sustainable development, on the other hand, is a job that people, businesses, and non-profits in the public, private, and third sectors all need to do. This is true locally, nationally, and worldwide. We've pushed for sustainable growth through the steps in our Future strategic plan, relationships at the regional, national, and global levels, and our promise to be open and honest in writings like this.

Local, national, and international audiences, including those in the public, private, NGO, policy, and education sectors, are the intended readers of this report. We aspire for it to inspire additional concepts, initiatives, collaboration prospects, and partnerships so that collectively, we can effectively address the global Sustainable Development Goals by 2030.

Prof. Dr. Sumaryanto, M.Kes., AIFO.
Rector

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Eliminating poverty through learning, research, and community service

OUR COMMITMENT

UNY has a high commitment in supporting the poverty eradication program. Such high commitment is manifested not only in policy documents but also in variety of programs, from financial aids given to students from low income families, research project seeking for solutions to poverty related problems, community services, and media coverage.

Research

UNY is concerned with the growth of MSMEs as part of the economic drivers in the community. MSMEs can be one of the driving forces in poverty alleviation. Academically, UNY has researched poverty elimination. One research is related to the "Development of people's economy-based MSME management in Pagerharjo Village, Kulonprogo."

The team has also conducted training to develop a free blog-based website to market MSME products, conflict management training, and training on using cassava cutting machines. This series of activities is an effort to ensure that the **research** that has been carried out also has direct implementation that can directly impact poverty alleviation.



University Policy

Scholarships for Students from Low Income Family

UNY hosts 6978 students with scholarships from various sources. Among those financially supported students, 6978 or approximately 100% are students from the low income families. This figure is higher than what recommended by the government that universities, particularly public universities, should provide 20% of all financial assistance for students from low income families.

UNY – DISS and KNB Scholarships

UNY has long provided scholarships for international students from low income countries, with its Universitas Negeri Yogyakarta Distinguish Internasional Student Scholarship (UNY DISS) – formerly YSU DISS.

With the cooperation with the Directorate of Higher Education, UNY is among 15 universities in Indonesia that host students under the Kerjasama Negara Berkembang (KNB) scholarships.

Student Employment Programs

In addition to the scholarship given to students from low income families, UNY also provides selected students with financial aids in the form of student employment program. Students with excellent achievement are recruited to do both academic works, like teaching and research assistant, and administrative works. This program does not only provide students with financial supports, but also equip them with hand-on experiences.

Public Engagement

Smart farm to reduce poverty

UNY have successfully developed a Smart Farm in Boyolali Regency. This Smart Farm is a collaborative effort between UNY and UGM. It comprises 6 modules of technology tools that are integrated with the Internet of Things. These modules can detect soil fertility, provide soil content information, measure wind speed, regulate the flow of water into the fields, and even determine fertilizer dosages while considering the required amount for the crops. Remarkably, one of these modules

is an audio stimulant that is expected to accelerate and enhance the harvest yields.

This Smart Farm is a demonstration of the university's commitment to Indonesian farmers, particularly in Boyolali Regency. Farmers there have faced difficulties in pest control, calculating fertilizer dosages, and managing irrigation. The technology modules greatly assist farmers in remotely monitoring their fields, making their work more efficient and contributing to poverty reduction (<https://ft.uny.ac.id/id/berita/smart-farm-uny-pelopor-pertanian-modern>)





Zero Hunger, United for a Nourished Youth: Cultivating a Hunger-Free UNY Community through Education and Empowerment.

University Policy

In line with achieving SDG 2, Zero Hunger, which aims to end hunger, achieve food security, improve nutrition, and promote sustainable agriculture, the Rector of Universitas Negeri Yogyakarta has established a rule outlined in **Rector Regulation No. 424 of 2000 regarding the Establishment of the Bunda Dharma Women's Union Cafeteria** at Universitas Negeri Yogyakarta. This goal aligns with Indonesia's development priorities related to food security and job creation.

Target:

Universitas Negeri Yogyakarta (UNY) takes steps to address SDG 2, Zero Hunger, with the aim of ending hunger, achieving food security, improving nutrition, and promoting sustainable agriculture on campus. The objectives include enhancing programs that support local food potential, encouraging student activities in food product innovation, and implementing effective impact reduction and management related to campus cafeterias.

Achievement:

(UNY) has undertaken various activities to combat hunger, achieve food security, improve nutrition, and promote sustainable agriculture in both education and product innovation. UNY faculty members have developed a **"SMART FARM"** agricultural technology to support farming in the Boyolali region. This technology leverages the Internet of Things to detect soil fertility, provide soil content information, measure wind speed, control water flow to paddy fields, and determine fertilizer dosages. Additionally, other faculty teams have provided support to **Soun** (vermicelli) producers in Klaten to enhance their capacity and product quality.

Another food development innovation includes the creation of Cassava Noodles that are safe and healthy for diabetics

(<https://uny.ac.id/id/berita/mie-singkong-aman-untuk-penderita-diabetes>). UNY students actively participate in supporting SDG 2 by regularly conducting culinary exhibitions, showcasing their food product innovations (<https://fv.uny.ac.id/id/berita/sarjana-terapan-tata-boga-uny-gelar-pameran-produk-berbasis-pangan-kulon-progo>). Other student works include the production of a sambal (spicy condiment) made from mackerel, which aims to utilize fishery products from the Purworejo region (<https://uny.ac.id/id/berita/sambal-lezat-dari-ikan-tengiri-karya-mahasiswa-uny>).



Smart Farm 6 Modules for better farming



Campaign to use botanical pesticides for food health



Yellow sweet potato **mocaf pie** which is safe for children with special needs

Furthermore, the development of safe yellow sweet potato mocaf pies for special-needs children exemplifies their commitment. Through the KKN program, students also campaign for the use of natural pesticides to improve food safety (<https://uny.ac.id/index.php/id/berita/sehatkan-bahan-makanan-dengan-pestisida-nabati>). In collaboration between faculty and students to strengthen food security and assist fellow citizens, various activities have been carried out. These include providing basic food assistance to orphanages in Bantul (<https://ft.uny.ac.id/id/berita/bakti-sosial-di-pondok-pesantren-yatim-piatu-dhuafa-darul-fatimah-bantul>), offering traditional cake processing training to the Semanu community in Gunung Kidul (<https://ft.uny.ac.id/id/berita/pelatihan-pengolahan-kue-tuk-tingkatkan-perekonomian-warga-semanu-gunungkidul>),



Cassava noodles are safe for diabetes sufferers





Ensure healthy lives and promote well-being for all at all ages

Public Engagement

Red ginger (*Zingiber officinale* var. *Rubrum*) is a rhizome plant that is often found around us and is used as a traditional medicinal plant and kitchen spice. Apart from keeping thoughts and activities positive, maintaining food intake is important, don't forget to emphasize that every family has health supplements that can support the body's productivity. Red ginger can increase the body's immunity, improve the digestive system, relieve muscle and joint pain, treat rheumatism, relieve coughs, prevent asthma, lower cholesterol, and so on. This is related to red ginger boiled water which contains protein, cellulose, essential oils and vitamin C which is able to overcome problems in the digestive system, is anti-inflammatory and increases the body's immunity. The health syrup product from red ginger contains several additional spices that can increase the benefits of the product. Additional spices include cloves (*Syzygium Aromaticum*), cinnamon and lemongrass .
(<https://www.uny.ac.id/id/berita/mahasiswa-kkn-uny-olah-sirup-jahemerah-untuk-jaga-kesehatan>)

Research

HEALTHY FOOD

Many people are trying to have an ideal weight through exercise and diet. Unfortunately, this effort is not always easy because it is challenging to avoid snacking. For this reason, UNY has developed a healthy snack, namely UNYBar. "Available in milk, chocolate, banana, strawberry, vanilla, and grape flavors," said Prof. Siswantoyo. This product is one of the works of the Center of excellence for science and technology and innovation.
(<https://sdgs.uny.ac.id/content/healthy-diet-unybar>).



MEDICINE PRODUCTION FOR DENGUE



Dengue Hemorrhagic Fever (DHF) is commonly found in most tropical and subtropical regions. DHF is caused by the dengue virus, which enters the human bloodstream through the bite of the *Aedes aegypti* mosquito. *Aedes aegypti* life cycle starts from the egg, larva, pupa, and adult mosquito stages. The egg, larva, and pupa stages of mosquitoes are in the water, while as adults, mosquitoes actively fly to find food from human blood, animal blood, or plant extracts. Therefore, the most effective effort to break the chain of transmission of DHF is to eradicate the larvae of the *Aedes aegypti* mosquito. So far, larvae have been exterminated using larvicides such as Dichloro Diphenyl Trichloroethane (DDT), ethyl hexanol, temefos, and various other synthetic compounds in high concentrations that can harm the environment.
(<https://sdgs.uny.ac.id/content/get-rid-dengue-fever-mosquitoes-alpinia-galanga-extract>)



Number of Graduates **8721**

HEALTHY LIFESTYLE

Thank God that today, we can gather for Joint Gymnastics to celebrate the 58th Anniversary of Universitas Negeri Yogyakarta in good health and full of happiness," said the Chairman of the Committee for the 58th Anniversary of UNY, Dr. Nur Hidayanto Pancoro Setyo Putro, on Friday, February 4, 2022, at Taman Olahraga Masyarakat (TOM) (<https://sdgs.uny.ac.id/content/healthy-and-fun-celebration-uny-58th-anniversary>).



condition is a physically fit condition and a spiritual and social condition in society. We need harmony in maintaining a healthy body where four main factors affect the health status of the community. These four factors are determinant factors for the emergence of health problems. The four factors consist of behavioral or lifestyle factors, environmental factors (social, economic, political, cultural), health service factors (type of coverage and quality), and genetic factors. These four factors interact with each other, affecting individual health and public health status. (<https://sdgs.uny.ac.id/content/improving-quality-public-health-realize-healthy-indonesia>)



UNY INAUGURATES SPORTS FACILITIES AND PLAZA UNY WATES CAMPUS

On this occasion, the Head of UNY Wates Campus Management, Dr. Komarudin, S.Pd., M.A said that the GOR, Sports Laboratory, Plaza or Entrepreneurship Laboratory and UNY Stadium were built at a total cost of 62.7 M. With details of the GOR of 19.1 M, Lab. Sports amounted to 3.9 billion, Plaza UNY amounted to 35.1 billion, and the stadium complex amounted to 4.6 billion. The GOR consists of two tennis courts and one basketball court. The Sports Lab consists of 4 floors which are used as a laboratory for the Health Promotion study program and a Traditional Medicine Laboratory. Plaza UNY Wates consists of 4 floors consisting of floors 1 and 2 in the form of a minimarket, MSME stand, student entrepreneurship stand and floors 3-4 are designated for the Plaza UNY Wates hotel. As well as the stadium complex which consists of a soccer field, athletics track, softball field and archery field. "It is hoped that the existing facilities at UNY Wates Campus can make a positive contribution in improving the quality of services to students and the people of Kulon Progo Regency," hoped Komarudin MA. ([UNY Meresmikan Fasilitas Olahraga dan Plaza UNY Kampus Wates | Universitas Negeri Yogyakarta](https://www.uny.ac.id/berita/meresmikan-fasilitas-olahraga-dan-plaza-uny-kampus-wates))



MENTAL HEALTH PROGRAM

The Yogyakarta State University Guidance and Counseling Study Program held a Stadium General with the topic "Developing and Implementing a Comprehensive School-Based Suicide Prevention Program" which was held on August 22 2022 at Abdullah Sigit Hall, UNY Faculty of Education. This activity is intended for Undergraduate, Postgraduate and Doctoral Study Program Students in Guidance and Counseling at FIP UNY and is moderated by Mrs. Yuli Nurmalasari, M.Pd. as a lecturer in the UNY BK study program. Stadium General is collaborating with Ohio State University, United States with speakers who are experts in the topics raised, namely, Prof. Darcy Haag Garnello, Ph.D., LPCC-S as a Director of Suicide Prevention Program, and Associate Professor. Paul Granello, Ph.D. as a Counselor Education.

(<https://fipp.uny.ac.id/id/berita/studium-general-bimbingan-dan-konseling-suicide-prevention>)



Located at the UNY Auditorium, the Student and Alumni Affairs Division of the Faculty of Education, Yogyakarta State University (FIP UNY) Saturday (26/11) held a National Workshop with the theme "The Role of Students in Combining Diversity with Strengthening Nationalist Values and Preventing and Handling Sexual Harassment in the Environment Campus". The workshop was attended by FIP leaders, department heads, student assistants, and student representatives from the HIMA Department, as well as from KMMD FIP UNY.

(<https://fipp.uny.ac.id/id/berita/sarasehan-kebangsaan-peneguhan-besar-duniaisme-pengcepatan-dan-penanganan-pelecehan>)



Education for Sustainable Future

OUR COMMITMENT

As a higher education institution that used to be a teacher training institution, Universitas Negeri Yogyakarta is committed to the establishment of quality education for everyone at all levels of schooling and education. Universitas Negeri Yogyakarta has 136 study programs and 87.5% of these study programs produce graduates for teaching qualification ranging from kindergarten to higher education.

Universitas Negeri Yogyakarta also has a study program that focuses on education in non-schooling context. Acknowledging the important of education, Universitas Negeri Yogyakarta also has prominent research centres that focus on improving quality of learning, instruction, and education. The Center for Creativity, Literacy and Lifelong Learning is a center under the Institute for Research and Community Service, Universitas Negeri Yogyakarta which is engaged in the development of educational practices with a focus on developing creativity and literacy supported by lifelong learning practices.



87.5% teaching qualification study program

Include:

- Special Education study program
- Non-formal education study program Yogyakarta
- Educational policy study program
- Educational Management
- Guidance and Counseling

Research

The Garuda UNY team already has many achievements in various competitions at the international level. Garuda EV-22 UNY Won Three Awards at Indonesia International Motor Show (IIMS) 2022 and officially won in the Overall Champion category. In addition, the team won 1st Place in the Urban Gasoline Engine Category for the 2021 Energy Saving Car Contest (KMHE). The 2021 Shell Eco Marathon has become a memorable experience since the team broke the Asia Pacific record.

South Korea, as one of the centers of the automotive industry in Asia, has hosted many car competitions participated by UNY students. For this reason, UNY and the Indonesian Embassy in Seoul held a Forum group discussion (FGD) to open wider opportunities for cooperation in South Korea on Monday, 6 June 2022.

Communication with representatives of the government of the Republic of Indonesia abroad is UNY's effort to accelerate international cooperation opportunities. "We would like to have the support of Attaché for Education, Culture, Research and Technology in South Korea to facilitate partnership with institutions from South Korea," said Prof. Siswantoyo as vice Rector for Planning and Cooperation at UNY.

So far, UNY has developed several electric cars that have competed in various international competitions. This is in line with UNY's commitment to providing a global solution to the problem of climate change through the development of environmentally-friendly electric cars. Hopefully, UNY's academic excellence in developing electric cars can be a model for the development of sustainable Indonesia-South Korea cooperation

Attache for Education, Culture, Research and Technology of the Indonesian Embassy in Seoul, Gogot Suharwoto, Ph.D., appreciates the Garuda UNY Team, which in 2018 won the competition in South Korea. "We hope that we can make joint activities with campuses in Korea. We can learn about electric and hybrid vehicles in the future," said Gogot Suharwoto. The initial process is to find a match in partnership with several campuses in Korea. According to Gogot, campus authority in Korea is absolute, even to the department or study program to the professor. And the fastest path to partnering is professor to professor with Indonesians studying in Korea. Most importantly, all campuses in Korea have funding for scholarships or research, so funding is not a problem. <https://sdgs.uny.ac.id/content/opportunities-international-cooperation-through-development-garuda-uny-electric-car>



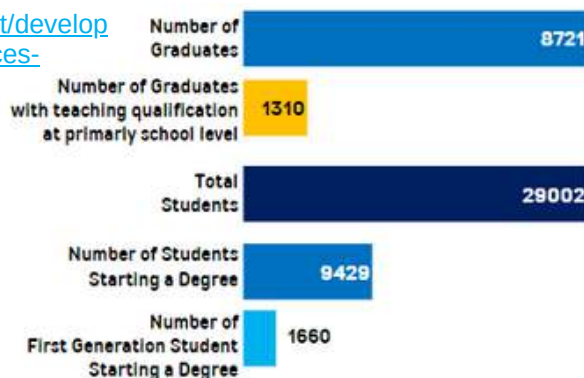
Publications in 2022 in Education area

- More than 1000 researchers across seven faculties in Universitas Negeri
- The Center for Creativity, Literacy and Lifelong Learning
- The Center for Education Innovation and Learning Development

Learning and Student

For people with visual and hearing impairments, the variety of learning and media used differs from ordinary people. The paradigm can be student-centered or with cognitive, affective, psychomotor, visual, auditory, or kinesthetic learning styles. Lecturers and students are the leading presenters in physical and virtual synchronous learning. In contrast, in asynchronous learning, the computer is the main conveyor where class management uses the Learning Management System (LMS) software. This notion was conveyed by a lecturer at the Faculty of Engineering, Dr. Priyanto, at a disabled student-friendly lecture workshop. In his paper entitled 'Accessible Online Teaching,' Priyanto describes the components of asynchronous learning: learning content that meets SCORM (Sharable Content Object Reference Model) standards with the LMS platform and CMS (Content Management System) tools. "For people with visual and hearing impairments, there are differences in the use of multimedia," said Priyanto. For students with visual impairments, the material is conveyed verbally, captured by the ear, and then processed into knowledge with the help of previous knowledge. Whereas for deaf students, the material is obtained through images captured by the eye and then processed into knowledge with the help of prior knowledge. Software is developed and used by humans and supports human-to-human interaction. Thus, human characteristics, behavior, and cooperation are central to practical software development. So that people with disabilities can feel the ease of using the software in receiving learning.

<https://sdgs.uny.ac.id/content/developing-better-learning-experiences-students-disabilities>



Campus Teaching activities are part of the Merdeka Campus program, which provides learning opportunities and self-development outside the classroom. This activity involves university students becoming teachers, and selected students will be placed in elementary schools in need. One of the UNY students who could participate was Aisyatunnisai Tawakal. The physics education student at the Faculty of Mathematics and Natural Sciences UNY was assigned at SDN Danupan Temanggung, Central Java.

At this school, Aisyatunnisai Tawakal tries to apply the literacy and numeracy learning she got during the campus teaching briefing to the theme of entrepreneurship by holding a cooking class for grade 5 students. Aisyatunnisai Tawakal divides her class into five groups according to health protocols, with two groups cook fried rice, two groups cook healthy dishes.; and one group cook noodles.

<https://sdgs.uny.ac.id/content/learning-literacy-and-numeracy-through-cooking>.



Before practicing the cooking class, Aisyatunnisai Tawakal also did not forget to teach students about the nutritional value of the food they will process. According to her, students are also provided with entrepreneurship skills with knowledge of managing money and target business opportunities in the culinary field with this cooking class.

Yogyakarta State University (UNY) stands as a beacon of excellence in education, evident in its recent statistical achievements. With a commendable number of 8,721 graduates, UNY takes pride in shaping individuals who are well-prepared for the challenges of the future. Notably, 1,310 of these graduates have acquired qualifications enabling them to impart knowledge at the primary school level, showcasing the institution's commitment to producing skilled and qualified educators. Currently, UNY hosts a vibrant academic community with 29,002 students actively pursuing their educational goals. Among them, 9,429 students have embarked on their degree journeys, reflecting the university's appeal as an educational hub. Moreover, UNY's dedication to inclusivity is evident in the enrollment of 1,660 first-generation students, underscoring its commitment to providing educational opportunities for all. In essence, UNY's holistic approach to education is reflected in its impressive numbers, reinforcing its position as a key player in shaping the academic landscape.



Protecting Gender Equality in life

Research

There are more than fifty studies conducted by UNY lectures related to gender. Complete data can be seen at www.simppm.uny.ac.id.

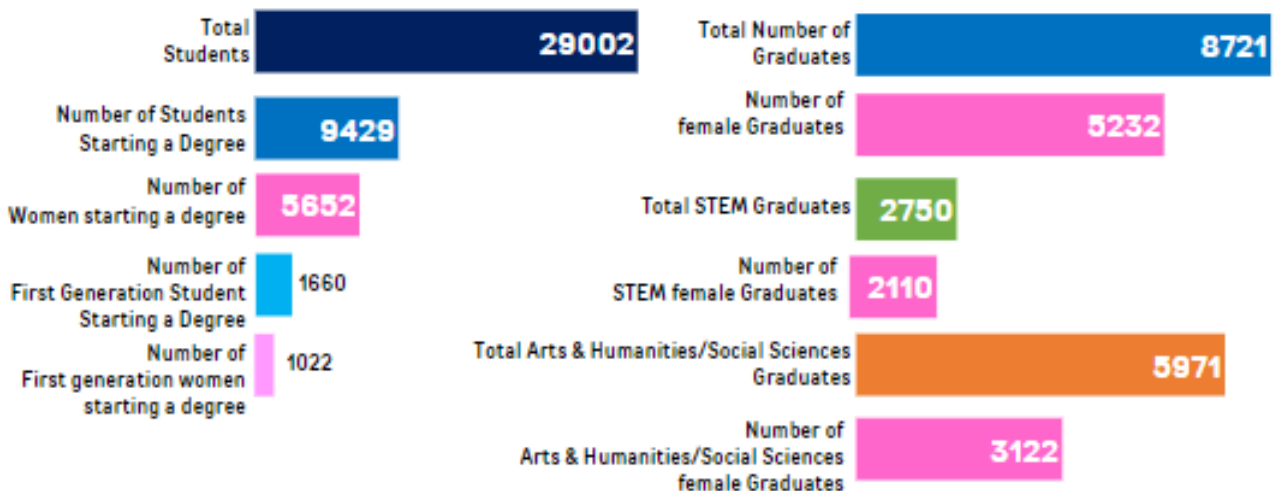
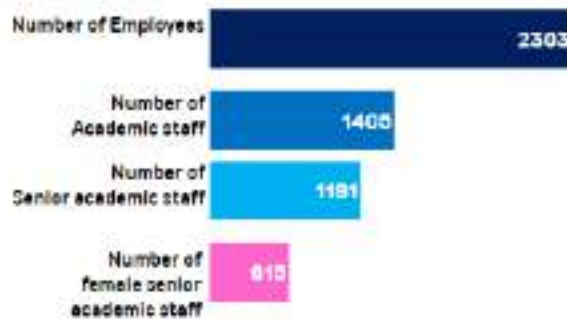


Public Engagement

Universitas Negeri Yogyakarta (UNY) pledged to promote gender equality and eradicate all forms of discrimination based on gender in order to protect human rights, promote economic growth, lessen poverty, and acquire the capacity to successfully govern. Women have a great deal of opportunity to receive a quality education in universities. "Dharma Wanita" is the name of the university's action, participation, and policy programs that address women's issues, admissions, and involvement at UNY.



Regarding preventing and responding to sexual violence on campuses, UNY hosted a webinar. In an effort to stop acts of violence and sexual harassment, this event was organized





Water for Quality of Life

University Policy

- Key points related to UNY's efforts to provide access to clean water and proper sanitation:
- UNY is committed to ensuring access to clean water and proper sanitation for the UNY community and the surrounding society.
- UNY's policy on access to clean water and sanitation is outlined in Rector Regulation No. 16 of 2021 concerning UNY's Green Campus.
- This policy includes a prohibition on disposing of chemicals into water channels to preserve the natural environment.
- UNY has an Environmental Evaluation Document to maintain the quality of water used by the UNY community and the surrounding society.
- UNY strives to comply with Government Regulation No. 82 of 2001 regarding Water Quality Management and Pollution Control, which includes water quality standards.
- UNY also implements a Water Conservation Program as part of its efforts in this regard.

Water Conservation Program:

Most open spaces at UNY are optimized for planting trees in concrete pots, helping sustain water availability.

UNY has 160 biopore infiltration holes, with an 80 cm depth and 4-inch diameter, aimed at increasing water infiltration and reducing runoff, although they haven't eliminated runoff entirely.



The construction of detention ponds (embungs) at the Health Sport Center UNY serves as reservoirs and runoff areas for surrounding buildings. During dry seasons, they store water, while in rainy seasons, they prevent or reduce local flooding. Embungs also serve as spaces for discussions and sports activities.

UNY has 49 shallow wells and 7 deep bore wells to ensure access to clean water and sanitation for the UNY community. Water from bore wells undergoes a 3-step filtration process, stored in a ground water tank tower, and distributed to all UNY buildings.



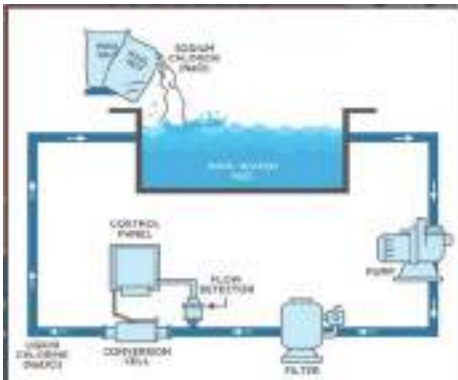
UNY is continually adding Rainwater Infiltration Wells to counteract declining groundwater levels and local flooding threats. Currently, there are 873 units, with a baseline of 611 units in 2019.



UNY's conventional drainage system includes permanent drainage channels connected to an integrated drainage network. Regular maintenance prevents potential waterlogging

Water Recycling Program:

In UNY's hotel business unit, wastewater undergoes treatment before being discharged into the integrated drainage system.



UNY's swimming pool undergoes water replacement every 3-4 years or when the water is no longer suitable for swimming. Pool filtration occurs 1-2 times a week, each lasting 5-6 hours.

Wudhu (ablution) water is utilized to irrigate plants, contributing to the conservation of water resources within the campus environment.

Water Pollution Control:

In 2022, water quality measurements were taken at four locations, including the Faculty of Engineering, the Faculty of Educational Sciences and Psychology, the UNY Auditorium, and Kuningan Village. These measurements covered six physical parameters, nine chemical parameters, and two microbiological parameters. Comparing the results to the 2019 baseline data showed that the water quality met the standards, indicating that UNY's environmental management has successfully addressed the potential groundwater quality degradation. Table 1. Water Quality Test Results for Clean Water Utilization

Public Engagement

UNY actively engages in community service to contribute to the realization of sustainable development goals, particularly in the context of clean water and proper sanitation. An example of this commitment is the application of solar power technology to operate pumps that transport water from local sources in Madurejo, Prambanan, Sleman, Yogyakarta, by a team of UNY faculty members. This water supply is crucial for irrigation in the rice fields, supporting sustainable agriculture (Source: <https://uny.ac.id/index.php/id/berita/dosen-uny-bangun-plts-untuk-bantu-pengairan-persawahan-di-sleman>).



In Andong, Butuh, Purworejo, UNY's student team created a basic water purification system using PVC pipes and natural materials. They utilized filtration techniques with silica sand, aquadine sponge, mangan zeolite, activated carbon, and wire mesh. This setup ensures clean, odorless, and colorless water suitable for bathing and washing, reflecting UNY's commitment to providing clean water and proper sanitation to the community. (Source: <https://ft.uny.ac.id/id/berita/alat-penjernih-air-sederhana-karya-mahasiswa-kkn-uny>).

Water-Efficient Equipment:

The total number of toilets at UNY is 896 units, with 465 units being ecoflush toilets (52%). UNY has a total of 718 water faucets, with 360 units being automatic faucets (50%).



31305

Total population

2560

Water used in university



Ensuring everyone has access to modern, dependable, cheap energy



PUBLIC ENGAGEMENT

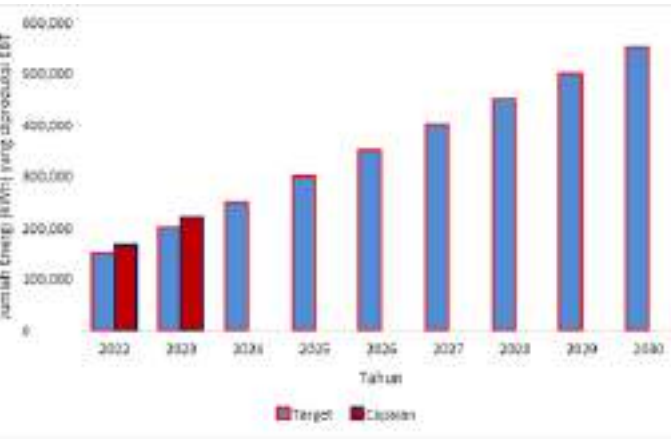
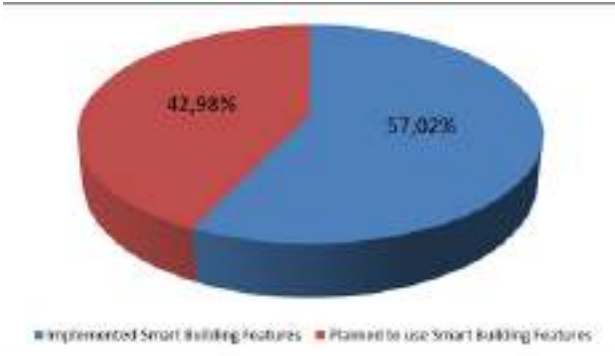
Creating Green Energy for watering rice fields

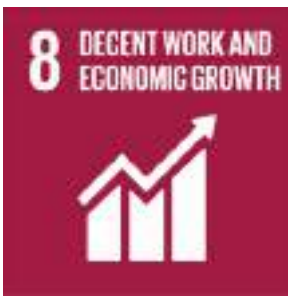
UNY professors work with people from Madurejo Village, Prambanan District, Sleman Regency, and the Special Region of Yogyakarta to build a solar power plant. It is this PLTS that turns on the pump, which brings water from nearby sources. This flow of water is necessary for watering rice fields. It was the teachers' idea to develop this green energy because farmers complained about how much money they were wasting on heating oil.

The building of PLTS has had a significant effect on farmers, especially regarding how they use heating oil. This power plant also shows that UNY is serious about giving people more power, especially when creating green energy. Bring the global partnership for sustainable development back to life and step up the work.

POLICY

Universitas Negeri Yogyakarta (UNY) has undertaken three significant initiatives to address the challenges posed by climate change and energy efficiency. Firstly, UNY has emphasized the importance of building designs that facilitate natural lighting and efficient air circulation. This is achieved by incorporating glass materials into construction and creating corridors with ample natural ventilation. Secondly, UNY has embraced technology to optimize energy consumption systematically. The university has laid the groundwork for the development of smart buildings that utilize computer technology for monitoring and load control, ultimately enhancing building efficiency and functionality. The design of this smart building development is illustrated in Figure 2.3.1. Various smart devices, including smoke sensors, hydrant fire sprinklers, water level sensors, light sensors, current sensors, voltage sensors, and ENERGY STAR Certified Computers (as depicted in Figure 2.3.2), have been integrated into building systems to enhance energy optimization. Integrated space conditioning control is a significant part of this effort, particularly in improving the efficiency of air conditioning. Lastly, UNY is gradually renewing both old equipment used for learning activities and institutional management. These three initiatives signify UNY's dedication to developing smart buildings that enhance the efficiency and productivity of energy use. They also demonstrate UNY's active participation in the Sustainable Development Goals (SDGs) program, as outlined in the [Rector Regulation of Universitas Negeri Yogyakarta No. 20 of 2017](#) and [Rector Regulation of Universitas Negeri Yogyakarta No. 16 of 2021](#).





Improving Career Opportunity

University Policy

Regulation for Discrimination-Free Working Environment

UNY provides decent work and salaries for its staff. Healthy, decent, and fair HR management, on the Rector's Regulation No 16 2018 to support a conducive work atmosphere by taking into account rights and obligations, which regulates all matters related to HR management, from recruitment, performance appraisal, career development, salary, discipline until termination. UNY has strong commitment to carry out good and conducive academic life practices with the issuance of Rector's Regulation No 4 2015 concerning the code of ethics for education personnel and Rector's Regulation No 5 2015 concerning the code of ethics for lecturers.

The regulation states that UNY citizens must maintain a code of ethics for a life of mutual respect and non-discrimination. This provision is also followed by sanctions for violations ranging from warnings to suspension of promotions and ranks. UNY also conducts a gender equity study to avoid discriminatory practices at UNY, which also included in the research plan developed by UNY. In addition, to regulate academic freedom of academic pulpit and scientific autonomy, UNY issued Rector Regulation No 8 2013

Economic Growth

With regard to economic growth, UNY has six integrated studies including the business incubator under directorate of research and community services which has a strong commitment to empower economic growth of the community by providing programmes to optimize the utilization of educated human resources and by mentoring and providing assistant to MSME's through research and community services activities of the lectures.

Career Development

UNY has established a Certification and Career Development Center (CDC) as a center for developing the quality of human resources to become a competent and ready-to-use workforce. UNY has collaborated with more than 200 companies for career development programmes, career talks seminar, job fairs, tracer studies and etc. From the available data, CDC-UNY noted that the average waiting period for its graduates before being employed is 5,8 months. Around 82 percent of them is hired according to their scientific discipline.

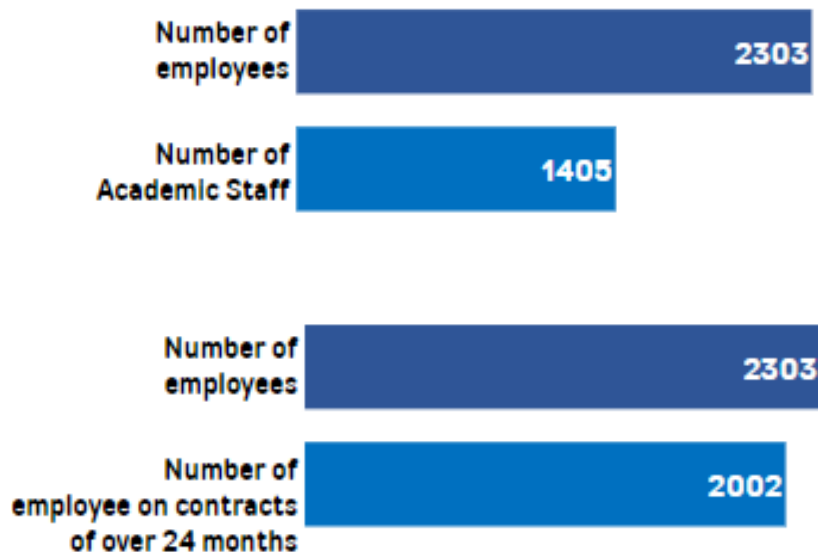
In addition, UNY included a minimum duration of two-month work internships in companies for all non-educational students and schools for educational students as part of its lecture or learning programs. In regard to be part of economic growth and empowerment of the society, UNY requires it students to do student community services (KKN) with minimum duration of 2.5 months



Career Talk



Career Expo





Build strong facilities, push for long-term industrialization, and encourage new ideas.

Research

UNY Innovation Center, Business Incubator and Intellectual Property Rights

The InaRI Expo 2022 research and innovation exhibition carries the Digital, Blue, and Green Economy: Research and Innovation for Food and Energy Sovereignty. Through this theme, collaboration with various parties strengthens the research and innovation ecosystem to realize a digital-based, environmentally friendly economy and utilize Indonesia's natural resources.

The excitement of this expo shows that research and innovation can be strengths for the Indonesian nation. Two hundred thirty-nine participants presented their research and innovation products at this expo. The 239 exhibitor booths were comprised of BUMN representatives, BUMD representatives, Asean-India Startup Festival representatives, G20 country representatives, national private companies, universities, and high- and middle-school-level schools.

As one of the universities participating in the exhibition at booth F14-15 Zonation Green. The Innovation Center, Business Incubator, and LPPM UNY intellectual property brought along product samples that visitors could try, such as Astrobike, SPD speedometer, Indobot Robotic, Wukan, Nano Pastadent, Learning through VR, and Nevair.

Learning and Students

Study Programs

We offer programs in Innovation, Strategy, and Entrepreneurship at the undergraduate level, as well as programs at the master's level in Innovation Management and Entrepreneurship. These programs are available to students at both of our campuses.

In addition to this, we integrate practical, on-the-job training into a wide range of academic degrees in the areas of science, engineering, health, and social science.

Transforming Educational Landscape

They were transforming the Educational Landscape in South Asia After COVID-19 states that the COVID-19 pandemic has had an impact on the world of education. It was further explained that almost all students in the world were affected. Seeing the conditions of the Covid-19 pandemic, many schools and education systems have started to offer distance education. Educators proactively respond and show great support regarding learning changes. The pandemic has encouraged learning innovation.

The new curriculum focuses on developing students' abilities rather than simply focusing on 'template' content and knowledge, allowing for personalization by students, developing their unique learning paths, allowing students to make choices and propose new learning content, and learning about the consequences of their actions, as well as accommodating changes with time and context.

Public Engagement

Significant share Chemical Lab to school

Cesium is conducted on September 3rd, 2022, as the opening of SLK activities, and this series of events contains various kinds of academic information and the readiness of new students.

This activity was carried out starting from the introduction of laboratory equipment, practicum, perspectives and prospects of the chemistry education department, and a glance at the Chemistry Department of FMIPA UNY.

Potassium was held on September 4th, 2022, which contains various kinds of information related to the culture of campus life and non-academic activities in the Chemistry Education Department, FMIPA UNY, such as organizations, committees,



University Policy

Integrity Zone for Procurement of Goods

A clean university in terms of governance and services is one of UNY's goals stated in the 2020-2025 Strategic Plan, namely 'The realization of good, clean and dignified governance and services in the implementation of higher education autonomy based on piety, independence, and intelligence. UNY held a Socialization on Improving Goods/Services Procurement Management.

The Direct Procurement Management Information System, abbreviated as SIMPeL, is a system built to facilitate the direct procurement process electronically and manage a database of direct procurement results in order to produce information that can be used for preparing spending analysis, standard cost analysis, direct procurement implementation reports, and other managerial reports according to applicable needs and regulations.

Activities

Planting a Tree for the Foster Parent System

We perform gymnastics on Fridays and simultaneously release Koi fish and plant trees using a foster-parent system. The foster parents are the Dean, Chair, and Secretary of the FIK Senate, Deputy Dean for Academic Affairs and Cooperation, General Affairs and Finance, Student Affairs, and Alumni.

The trees planted included Duwet Putih with the foster parents of the FIK Dean, Sawo Kecik with the foster parents of the Chair of the FIK Senate, Mundu with the foster parents of the FIK Senate Secretary, Jambu Dersono with the foster parents of the Deputy Dean for Academic Affairs and Cooperation, Black Sapote (a type of sapodilla) with the foster parents of the Deputy Dean for General Affairs and Finance, Kepel with the foster parents of the Deputy Dean for Student Affairs and Alumni.



Planting Trees and Holding Products, FE UNY Celebrates 11th Anniversary

UNY's Faculty of Economics (FE) will enter its eleventh year in 2022. To enliven this commemoration, FE UNY held a ceremony to declare the 11th Anniversary, last Saturday (11/6). This year, the theme for the Anniversary is "Creating Superior, Creative and Innovative Economic and Business Education that is Sustainable". In this launching ceremony, FE UNY held a series of events involving various elements of the extended family at FE UNY. Apart from joint gymnastics events, sports competitions, and Dharma Wanita Perempuan competitions, FE UNY also planted trees in one of the areas in front of the IDB FE UNY Laboratory building. The tree planting was carried out by the Chairman of the FE UNY Senate, Prof. Suyanto, Ph.D., and Dean of FE UNY.

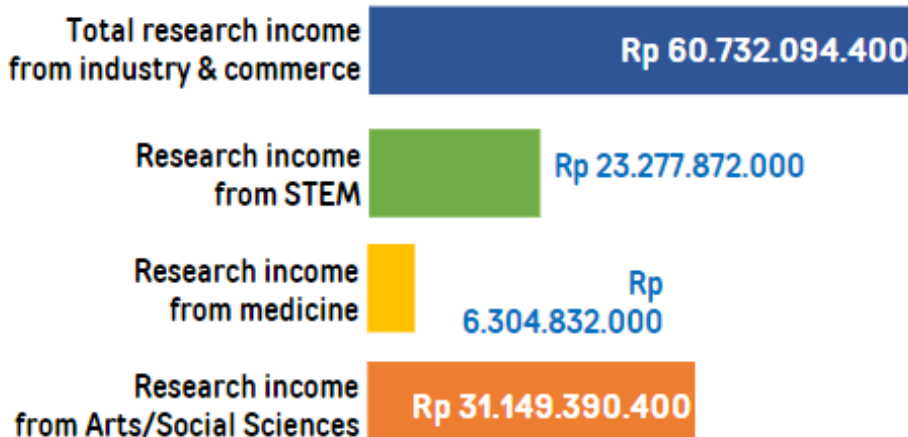
Dean of FE UNY, Dr. Siswanto, M.Pd., said that this tree planting event is expected to be a symbol of the faculty's contribution to all faculty members and also the community with various benefits. "This is also one of the Green Metric points which supports environmental sustainability in this faculty and campus,"

[Tanam Pohon dan Gelar Produk, FE UNY Canangkan Dies ke-11 | Fakultas Ekonomi dan Bisnis](#)



15

Number of University spin-offs





Empowering Lives, Ensuring Equality

University Policy

UNY upholds human dignity and status without discrimination based on religion, ethnic culture, ability, and socio-economic status. UNY's commitment to **anti-discrimination** is outlined in the ethics that must be fulfilled by all lecturers, staff, and students.

Public Engagement

Education Access For Under Representated Group



UNY also provides the widest possible access for people from various groups to be able to receive quality education at UNY. Apart from accepting **ADIK program** students from Papua, West Papua, and other 3T areas (Disadvantaged, Innermost, Outermost).

UNY also collaborates with the Saudi Arabian Embassy to educate students of migrant workers who work in Saudi. In 2022 UNY also established cooperation with Mapi and Asmat Districts in Papua to educate 202 kindergarten and primary teachers to continue their studies in bachelors and master program in Early childhood education, Primary school teacher education, and Educational management.



Apart from accepting foreign students from the Dharmasiswa Kemdikbudristek scholarship program, UNY also has the YSU-DISS (Yogyakarta State University-Distinguished Scholarships) scholarship to be given to foreign students from developing countries. Currently there are 31 International students accessing YSU DISS and 10 students through KNB Program from Thailand, Pakistan, Gambia, Kazakhstan, Kenya, Sudan, Cambodia, Chile, Tanzania, Philippine, Egypt, Colombia, Burundi, Uzbekistan, Turmenishkan, Madagaskar, Yemen, Zimbabwe, Libya.



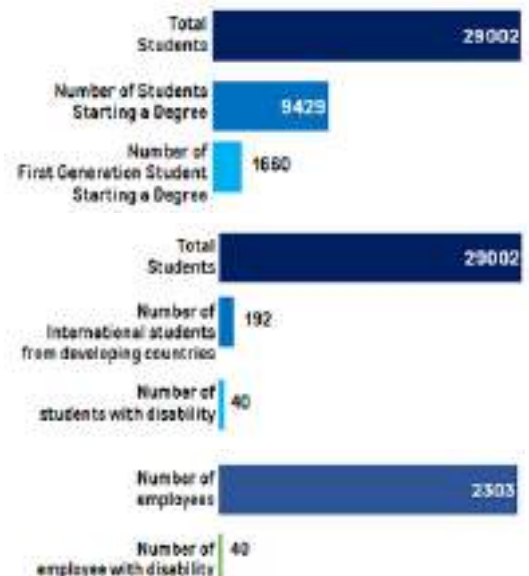
Learning and Students

UNY developed an Accessible Online Teaching platform for students with disabilities with funding from the Ministry of Education and Culture, Research, Technology, and Higher Education. The project focused on asynchronous learning components, such as SCORM-compliant learning content integrated with an LMS platform and CMS tools. Blind students rely on auditory content to process information, while deaf students rely on visual content. The software development considered human interaction, characteristics, behavior, and collaboration to ensure ease of use for people with disabilities accessing learning.



Tuition fees at UNY are very affordable and it is based on parents' income and expenses calculation. There are eight levels of tuition fees scheme. The lowest tuition fees are level 0 to 2. The percentages of UNY students receiving the lowest tuition fees are approximately 23%. Furthermore, all students with disabilities are given access to scholarships from the Ministry of Education and Culture, Research, Technology and Higher Education and other organizations. In 2022 there are 22 students with disabilities in UNY.

UNY is proud to have more than 61.6% female students so that it can contribute to gender equality in education and improving the quality of human resources in general.





Sharing Facilities and Engagement Cultural Event

Public Engagement

Public access to buildings

UNY has provided public access to buildings and/or monuments or natural heritage landscapes of cultural significance. [Taman Olahraga Masyarakat \(TOM\)](#) has a long history as a spot for UNY student practicum for sport subject and early childhood education. This facility is open for public for free except for special event that has commercial value. On several occasion, the mini public stage were used as practicing performance or talk show or public gathering.



Taman Olahraga Masyarakat (TOM) has open space, jogging track, and outdoor sport equipment

UNY has provided public access to buildings and/or monuments or natural heritage landscapes of cultural significance. MPI has [free access policy](#) for researcher and paid ticket policy for general visit.

Public access to libraries

UNY has provided public access to [libraries](#) including books and publications. Full access are given for [UNY Library membership](#) and for those without membership will only has the access for reading on the spot. Alternatively, visitor may also visit <http://jogjalib.com/> to get further information on book collection of libraries in Yogyakarta



UNY Digital Library



Museum Pendidikan Indonesia (MPI)

Public access to museums

UNY has provided public access to buildings and/or monuments or natural heritage landscapes of cultural significance. MPI has [free access policy](#) for researcher and paid ticket policy for general visit.

UNY has preserved local arts through various events. There are 2 ketoprak performance conducted during 2022. UNY also hosted [Festival Dalang Cilik](#) with 30 participants consisting of 15 junior high school age participants and 15 elementary school-age participants.



['Padhepokan Randhu Alas'](#)

performance by UN Y professors



[Ketoprak performance](#) by

lecturers, staff, and students of Faculty of Economic of UNY



One of performance at UNY Festival dalang Cilik 2022

University Expenditure

792465664429

University Expenditure on Arts and Heritage

42.843.662.401

*In Rupiah



Sustainable Responsible Consumption, Zero Emissions, and Renewable Energy Management for a Greener Tomorrow

University Policy & Program

A. Zero Emission Program

1. UNY adheres to **Regulation No. 20 of 2017**, offers four free shuttle buses connecting the main campus in Karangmalang to other campus locations: Wates, Bantul, and Kenari. Each bus has 27 seats, but during peak hours, it carries over 30 passengers. There are four routes: Main to Wates, Wates to Main, Bantul to Kenari and back to the Rectorate, and the Rectorate to Kenari and back to Bantul. Buses run on weekdays with departures at 06:00, 10:00, 14:00, and 16:00.

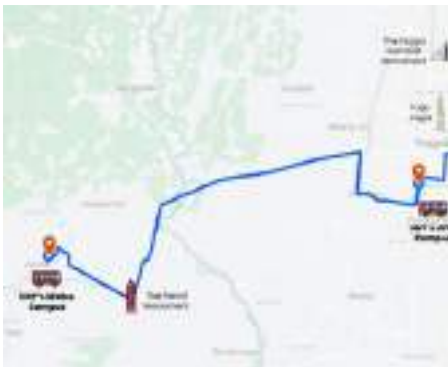


Figure 1. UNY Shuttle Bus Route

1. Electric shuttle Car also available on campus for on-campus mobilization between. UNY has 5 electric shuttles and each shuttle can carry eight passengers. The shuttle connects students and staff between faculties and units in the main campus (Figure 2).



Figure 2. University's Electric shuttle Car

1. Routine checks of vehicles' carbon emissions. This routine is initiated by the Faculty of Engineering and regularly held twice a year (Figure 4). All of university's vehicles are checked on that time.



Figure 3. vehicles' carbon emissions activity

1. Other initiatives in regards to Zero emission policy are developed by business incubator program managed by Research Institute and Community Service that are produce electric bike called "**Astrobike**" (Figure 5). The kit of **Astrobike** is also available to be used as plug and play in any bicycle model. **Astrobike** not only used for on-campus transportation but also for purchase by public (<https://astro-bike-workshop.business.site/>).



Figure 4. University's Production of Electric Bike

B. Renewable energy

UNY prioritizes environmental sustainability through energy-efficient equipment and building design following the National Standard SNI 6389-2011. Five renewable energy sources at UNY are: Solar Power Plant (15 kW), Wind Power Plant (8 kW), Piko Hydro Power Plant (0.15 kW), Biogas Power Plant (0.15 kW), and Microhydro Power Plant (15 kW). UNY students designed a Hydro Coil Turbine for eco-friendly electricity generation, adaptable for sewers and irrigation in rural areas. This portable and efficient turbine converts water's potential energy into kinetic energy, using an Archimedes pump-based coil blade design. The Faculty of Engineering students developed a tool to monitor daily power consumption, accessible via the web, promoting energy conservation. The tool uses an Arduino Uno microcontroller, ACS712 Current Sensor, ZMPT101B AC Voltage Sensor, and more. Link to the Hydro Coil Turbine: [Hydro Coil Turbine] (<https://www.uny.ac.id/id/berita/hydro-coil-turbine-pembangkit-listrik-portabel-karya-mahasiswa-uny>)

Link to the power consumption monitoring tool: [Monitoring Konsumsi Daya Listrik] (<https://www.uny.ac.id/index.php/id/berita/monitoring-konsumsi-daya-listrik-berbasis-lot>)



Figure 5. Solar Power Plant

Public Engagement

GOUNY59 is a cycling sport which is divided into 2 categories, namely Fun Bike and Endurance. The activity was held Sunday, 11/6/23. Fun Bike covers a distance of around 14 km on the route from the UNY Rectorate yard to the UPP II UNY campus on Jl. Bantul, continue to the post at UPP I Campus Jl Kenari Yogyakarta, then continue the journey and finish in the rectorate yard again. Fun Bike was attended by 185 participants. In the Endurance category, 115 participants covered around 100 km. The route taken is UNY Rectorate - Monument - Jalan Bantul - Palbapang - Brosot - Pencil Monument - UNY Wates Campus - Pengasih - Nanggulan Irrigation Channel - Minggir - Kampung Emas Seyegan - Kebon Agung - Jombor - North Ring Road - Jl Kaliurang - Mirota - Dan finished at UNY Rectorate. <https://uny.ac.id/id/berita/gelaran-gouny59-berlangsung-meriah>



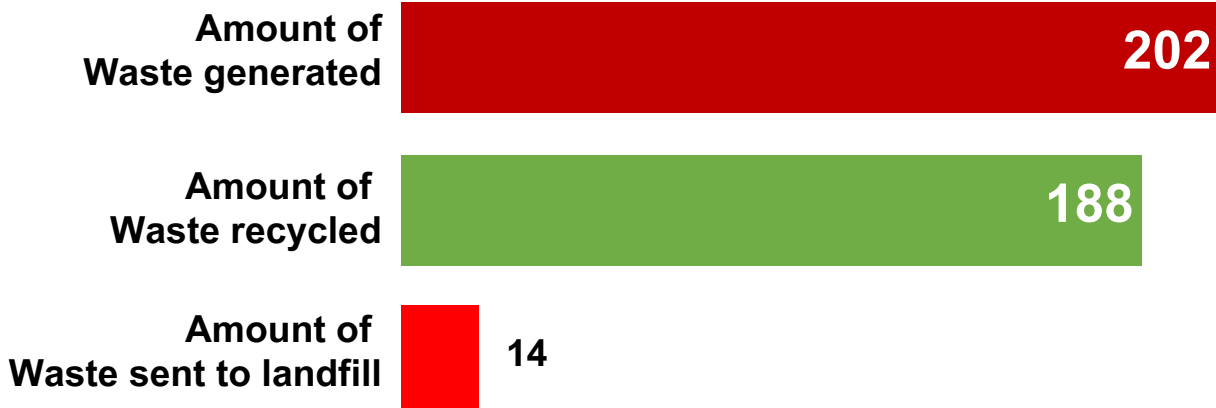
Figure 7. Fun Bike for Reducing emission

C. Waste Management

- UNY adheres to Regulation No. 20 of 2017, with responsibility for Green Campus management resting with the Rector and department heads. They encourage waste sorting, provide bins for organic and inorganic waste in buildings, and focus on the 3 R principles Reduce, Reuse and Recycle.
- UNY processes organic waste, mainly leaves, into compost, with a special unit managing this. They use the compost internally and for community service projects. Around 170-210 kg of organic waste, mainly leaves, are processed daily, with some faculties having their processing units. UNY also raises maggots using organic food waste for trading within the academic community.
- Inorganic waste management is integrated into relevant courses, like crafting and arts programs. UNY promotes innovative waste management and uses composters in the canteen to reduce waste.



Figure 8. 3 R (Reduce, Reuse and Recycle) Process of Waste





Encouraging Green Campus Program

Research

(UNY) has been actively involved in addressing climate change through various avenues such as education, research, product innovation, and support programs. UNY conducts annual tree-planting and open space initiatives as mandatory university activities. Experts are invited to speak at **international seminars** and public lectures focusing on climate change and its mitigation strategies

Research efforts yielding products to support climate change prevention, like the development of the Garuda electric car, are also a significant part of UNY's endeavors (<https://sdgs.uny.ac.id/content/opportunities-international-cooperation-through-development-garuda-uni-electric-car>). South Korea, as a major automotive industry hub in Asia, has hosted numerous automotive competitions attended by UNY students. To foster wider collaboration, UNY and the Indonesian Embassy in Seoul organized a Forum Group Discussion (FGD) on Monday, June 6, 2022. UNY collaborates with various partners, including the Sleman Environment Agency (DLH), government officials like the Head of Bappeda, the District Government, department heads, teachers, and professionals (<https://fishipol.uny.ac.id/en/node/2152>). Collaboration also extends to the community, such as in **Margoagung** Seyegan Village, Sleman Regency (), and to **students involved in research**.

Within UNY, units like the Research and Community Service Institute are actively involved in disaster-related activities. The Disaster Mitigation and Climate Change Center at UNY, established according to the regulations outlined in Rector Regulation **No. 15 of 2022**, plays a strategic role in disaster management

(<https://sigapi.uny.ac.id/en>) (<http://sdgs.uny.ac.id/content/teaching-middle-disaster-being>) (<http://sdgs.uny.ac.id/content/center-environmental-culture-and-mitigation-lppm-uny-participates-development-tourist>).

UNY also organizes collective activities, such as mass tree planting at various locations (<https://sdgs.uny.ac.id/content/celebrating-58th-uny-anniversary-tree-planting>) and promotes eco-friendly health-conscious activities like cycling (<https://sdgs.uny.ac.id/content/promotion-healthy-and-eco-friendly-lifestyle-through-fun-bikes>).

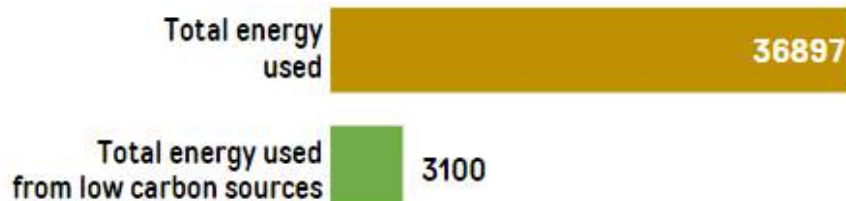
Furthermore, UNY has implemented concrete measures to reduce energy consumption on campus. These include replacing conventional lighting with LED, switching from conventional AC units to AC converters, installing remote control systems in new buildings, resulting in a total energy reduction of **20844.9 gigajoules** in 2021. Additionally, UNY encourages non-fuel transportation on campus and has developed a prototype electric car as a reference for future electric vehicle use on campus.

Policy

UNY Rector's Regulation **No. 20 of 2017** concerning the Green Campus of Yogyakarta State University is a basic foundation for Yogyakarta State University to create clean air and a beautiful campus environment.

Targets:

Yogyakarta State University (UNY) is taking quick action to overcome climate change and its impact on the campus environment by incorporating target-related programs into education, research, increasing awareness by the academic community as well as community and institutional capacity related to adaptation, impact reduction and management. effective regarding the campus' commitment to existing climate change.





Sustain the oceans, seas, and marine supplies for long-term growth.

RESEARCH

Protect Turtles, Save Sea Waters

On November 4th, 2022, the Students Association of Engineering Faculty held a nature care activity at Trisik Beach to recognize and preserve turtles. This activity aims to deal with the problem of waste, which can damage the cleanliness and beauty of the beach environment. In this activity, there was also outreach about turtle conservation.

The Trisik Beach turtle conservation has been established since 2004 and is the only turtle conservation in Kulon Progo and the first in D.I. Yogyakarta. The Trisik Beach turtle conservation manager said that turtles have a role in protecting the environment because they are a sign that the waters are still safe, pollution-free, and rich in fish species. The type of turtle that is bred is the Olive Ridley turtle.

Several things threaten the existence of turtles on Trisik Beach, namely human activities, predatory animals, high waves and abrasion, tourism activities, shrimp pond activities, and rubbish.



Freshwater Fish Cultivation Using Ocula

So far, the majority of fish cultivation in Indonesia still uses traditional methods, where these methods have several weaknesses, including dependence on the cultivator's abilities, if the cultivator does not have adequate skills the possibility of crop failure will increase, besides that traditional cultivation methods will be very dependent on conditions. weather and environment. Apart from that, water quality is also a determining factor in success in cultivating freshwater fish. A group of UNY students discovered product development for freshwater fish cultivation pond management tools integrated with the Internet of Things (IoT) which are more robust and efficient. This tool functions to streamline the automatic management of freshwater fish cultivation, called Ocula. "Ocula has two main functions, namely pond water management and automatic fish food management.

PUBLIC ENGAGEMENT

Water Purifier

UNY students collaborated with Andong Village, Purworejo, to construct a simple **water purification** device from natural materials readily available nearby. The people of Andong Village were concerned about the quality of the existing groundwater and took the initiative to make a simple water purification device.

The solids in the filtering medium separate the solid particles in the water. This process gets rid of the substances that are suspended in the water by passing them through porous media. In water treatment techniques, filtration is a technique that is applied with the help of filter media such as sand.

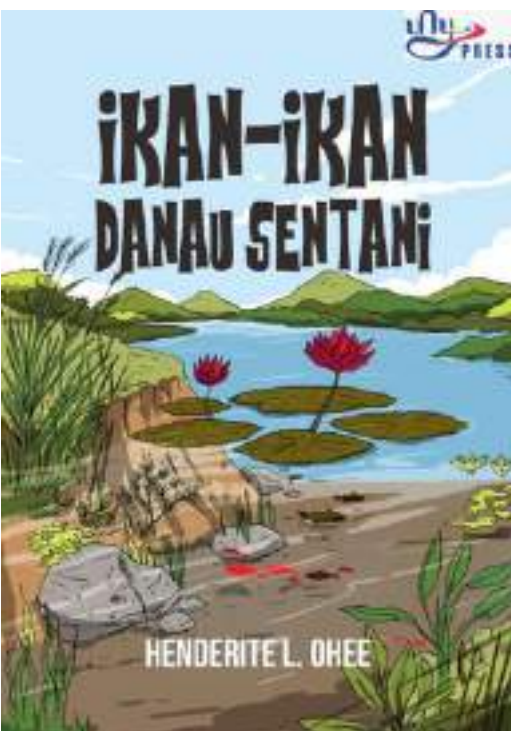
Commemorates World Oceans Day 2022

The Executive Student Association commemorates World Oceans Day 2022 with the theme "Revitalization: collective action for the ocean" or "Revitalization: collective action for the ocean". With this warning, it is hoped that the world community can better protect the sea and provide empathy for the fate of the ocean in the years to come. The celebration aims to respect, protect and preserve the world's oceans.



We Publish Sentani lake fish

UNY Press Publish book intitle "Ikan-ikan danau Sentani", or in English "Sentani Lake fish". This book learns about biology and conservation by reading book. The results of reading this book can inspire, motivate, and remind readers to love and care for His natural creation. We hope that with this children's storybook about fish from Lake Sentani, Papuan children, especially Sentani children, will love the natural resources bestowed by the Creator, which are part of the invaluable biodiversity of the Land of Papua.



University Policy

UNY has regulation to improve water conservation.

UNY has made several improvements and must continue to make them so that it becomes a relaxed and comfortable campus for studying. One of the strategies carried out is to improve the implementation of water conservation programs, for example, by creating artificial lakes. This program plays a crucial role in maintaining a balanced aquatic ecosystem.



Automatic Turtle Nest Tool

Turtles can migrate long distances throughout the Indian Ocean, Pacific Ocean, and Southeast Asia. The existence of sea turtles has long been threatened, both by nature and human activities that endanger their populations directly or indirectly.

This animal is sensitive to light, noise, dirty environments, and crowds, often disturbing turtles laying their eggs. Damage to coastal habitats, deaths due to interactions with fishing activities, inadequate management of conservation techniques, and uncontrolled hunting for turtles and their eggs are factors causing the decline in turtle populations caused by human activities. Threats from nature include climate change, disease, and the threat of predatory animals.

UNY has made several improvements and must continue to make them so that it becomes a relaxed and comfortable campus for studying. One of the strategies carried out is to improve the implementation of water conservation programs, for example, by creating artificial lakes. This program plays a crucial role in maintaining a balanced aquatic ecosystem.

Fishing product

Mangrove crabs (*Scylla serrata*) are an example of a fishing product that could be grown on a farm. Mangrove crabs like to live in salty water where there are lots of mangrove trees. Mud crabs are very popular because they taste great and are healthy, just like other shellfish like shrimp, which are also in high demand in local and international markets.

The Minister of Maritime Affairs and Fisheries has said that mangrove crabs are a type of fish (shellfish) that cannot be caught or spread while spawning or when they are too small to be caught. It is necessary to have mud crab farming technology to improve output without disturbing the population by catching them in the wild.

Crab balls have been used in farming, but they have yet to be done well. They tested crab ball technology in the Mangrove Forest on Baros Beach in the Baros Hamlet, Tirtohanggo, Kretek, and the Ministry of villages, development of disadvantaged regions, and transmigration (PDTT) of the Republic of Indonesia. The university is Yogyakarta State University, and the center is called Pusdaing.



Protect, manage, and restore natural ecosystems and halt biodiversity loss

RESEARCH

Hemp Fiber as a Bulletproof Material

Our university develops materials for high-performance ballistic armor applications. The test results show that one of the bulletproof panels can stop bullets with a certain penetration depth.

The bulletproof panel is arranged using at least two layers, namely the first strike layer and the back layer. The First Strike Layer functions to hold and destroy the bullet's tip, while the back layer panel functions to absorb the bullet's kinetic energy.

When a shot hits bullet panels made of fiber, the energy absorption has a significant impact on controlling the bullet so that it does not penetrate. The primary function of fiber is to absorb a large amount of bullet energy to withstand the bullet when it penetrates the panel.

Coconut Fiber as Wall Paint

UNY Students researched coconut fiber as a filler and adhesive for wall paint because the essential components of coconut fiber consist of cellulose, hemicellulose, and lignin. Cellulose can be used as a matrix material in zeolite composites.

This research is to increase the value of coconut fiber waste, which so far has not been optimized for use, and to make it an environmentally friendly paint product. Coconut fiber contains fiber and pitch, which connects one fiber to another. "Coconut fiber consists of 75% fiber and 25% cork.

The potential for using coconut fiber as a biosorbent to remove heavy metals from water is relatively high because coconut fiber contains lignin and cellulose.

Birds' observation

Our focus is on study specializes in learning about birds. The action is to observe birds, examine ornithology, conduct bird conservation campaigns, and engage in environmental education through bird observation activities in nature. This group is a biology student interested in bird animals to establish a group that can accommodate their hobbies. Bird data collection is an observation that includes analyzing the type, number, and distribution of birds carried out at several points in all areas of the Karangmalang UNY Campus.

UNIVERSITY POLICY

UNY Committed to Green Campus

UNY has committed to a sustainable green campus by implementing the University [Rector Regulation No. 20](#) in 2017, and than strengthened by the [Rector Regulation No. 16](#) in 2021. UNY has ensured that various waste is sorted accordingly. This sorting process ensures that each type of waste or garbage can be managed optimally. By adopting sustainable practices in UNY's operations, such as sustainable land management, waste reduction, and energy efficiency,

UNY is in the effort to address SDG 15, "Life on Land," at the setting in which involves a multidisciplinary approach that encompasses education, research, community engagement, and sustainable practices. Universities play a crucial role in preparing the next generation to tackle the challenges associated with land conservation, biodiversity protection, and sustainable land use.

UNY's Sustainable Goal

The main goal of UNY's Sustainable Development Goal is to protect, restore, and promote the responsible use of terrestrial ecosystems. This includes putting in place sustainable forest management practices, stopping desertification, slowing down and stopping land degradation, and stopping the loss of biodiversity. This statement underscores the significance of conserving terrestrial biodiversity, encompassing flora, fauna, and ecological systems.



LEARNING AND STUDENTS

Study Programmes

The University College for Interdisciplinary Learning Environmental Science is accessible to all undergraduate students by implementing the Merdeka Curriculum. In addition to their regular coursework, students can engage in the Environmental study group, which provides an introduction to environmental consulting, conservation, and natural site management. Undergraduate students pursuing a degree in Environmental Management also acquire proficiencies in conducting ecological surveys, managing conservation efforts, and doing environmental audits.



Restore Natural Ecosystem

Tree logging that makes the forest does not function properly. To minimize this impact and commemorate tree planting days that fall on November 28, students majoring in Communication Sciences at the Faculty of Social Sciences Yogyakarta State University held a tree planting event. Tree planting activities are carried out in Dadapayu Village, Semanu District, Gunung Kidul Regency. The event has the theme "Planting a Tree, Picking a Million Goodness" in collaboration with Madawirna UNY, the Protection Forest Control Agency, and the local community. The number of seedlings planted is 2000 tree seedlings. One of the types of trees planted is soursop tree seedlings, sengon, nyamplung, and other tree seedlings.



OUR ACTIVITIES

UNY has the capacity to foster student-led initiatives, clubs, and groups that prioritize environmental conservation, reforestation, and biodiversity protection. These groups have the capacity to coordinate and execute various initiatives, including but not limited to organizing events, conducting awareness campaigns, and engaging in practical activities such as tree planting.





Efforts to promote peace, justice, and strong institutions encompass various activities.

OUR COMMITMENT

We are committed to contributing to the well-being and safety of the community and to addressing the complex challenges related to peace, justice, and the strength of institutions.



Public Engagement

Preventing Sexual Violence

Promoting these principles and working to prevent sexual violence and harassment on campus and in society at large is crucial. It involves not only addressing incidents when they occur but also implementing proactive measures to create an environment where such incidents are less likely to happen. This might include education and awareness campaigns, policy changes, and fostering a culture of respect and consent. It is an ongoing effort that requires collaboration from all members of the community to achieve the goal of a safer and more compassionate environment.

Prevention Radicalism and Terrorism

The Pancasila Education Study Center held a Group Discussion Forum titled "Key Thoughts About the Criteria for Radicalism and Efforts to Overcome It." Radicalism can spread through anyone, even thinkers, government leaders, and academics. Extremists are usually people or groups that go against what the country's founders agreed on. We need to all have the same ideas about how to understand and fight anarchism if we want to be more successful.

When people are poor and having trouble getting work, radical ideas can spread. This can make someone easily angry and open to wild ideas. Inequality in society can also lead people to join reform groups because they want to change the ideas behind the current government and state to improve things. Conditions are also crucial for fundamentalism. If the conditions are good, the seeds of extremism will not grow. Additionally, we should be aware of how social media can make people more extreme.

Research

Smart Trash Application for Waste Management

Waste management is one of the main concerns, especially plastic waste. Plastic waste dominates and causes an increase in environmental pollution, including land pollution, sea pollution, and air pollution. The city of Yogyakarta contributes 300 tons of waste per day, and this will increase when the holidays arrive.

The source of this waste is households, which produce around 0.7 kilograms to 1 kilogram daily. The cause is plastic waste, which has not been appropriately handled, causing various environmental problems.

The Smart Trash application is an education and plastic waste management platform in the form of an Android application. This application aims to help manage plastic waste better and become an educational and interactive platform with an attractive design by implementing user-friendly and up-to-date technology.

University Policy

UNY Stop Sexual Violence

UNY has Issued a Regulation to Stop Sexual Violence. Five goals have been set to stop sexual violence as follows. We work to prevent sexual violence against and by UNY residents; we protect all UNY residents from all types of sexual violence and uphold honor and dignity; we offer services and help to stop sexual violence against and by UNY residents; we make a safe space for victims of sexual violence; and we work to improve service synergy as a way to stop sexual violence at UNY.



Cultural Strengthen

In Hanjayeng Bawana, The Wiyata Dance

The meaning of this dance is the hope of UNY to reach the goals of becoming a top-notch, creative, and innovative university built on loyalty, freedom, and intelligence by 2025. Professor Kuswarsantyo and Titik Agustin proposed this dancer with four male and seven female. Men's dancers are a sign of power who live by the idea of "Joged Mataram," which is based on group life. The word for "seven female dancers" in Javanese is "pitulungan", or in English "assistance."

The props of the dance, like a stick with a trident tip for male dancers, show they are strong enough to hit their goal. There is a trident at the end of the spear as a reminder of how all UNY academics must work together with their imagination, emotion, and initiative as teachers, researchers, and people who help the community. The female dancer wearing the "Keris" stands for success and honor.

UNY Professors Play Ketoprak

Ketoprak is a Javanese art to entertain the public. This art is also proof of the rich culture and traditional arts that Indonesia has. The most prominent characteristic of this art is the use of Javanese language, accompanied by melodious gamelan so that the nuances of Javanese culture are very strong. UNY is also committed to preserving this traditional culture by regularly staging *Ketoprak* performances.



Learning and Students

Merdeka (Freedom) Curriculum

This practitioner lecture responds to the Sociology Education Study Program in response to the new curriculum, the Merdeka Curriculum, established by the Indonesian Ministry of Education, Culture, Research and Technology. The workshop class was held to prepare Sociology Education students in Educational Practice. This Practice must be held in the 7th semester. The Merdeka Curriculum is now starting to be used by schools in carrying out teaching and learning activities. Therefore, Sociology Education students need to understand the Merdeka Curriculum in depth. This aims to enable students to become friends who develop together with teachers and students during educational practices at school.

Crime and Anarchical Reduction of Klitih

Klitih often occurs, causing discomfort and insecurity in the community. *Klitih* (Javanese) is looking for the wind outside the house or wandering around and doing positive things to fill your free time. The meaning of *Klitih* is positive, but this meaning has shifted to a more negative one due to the large number of cases of violence, mostly committed at night by teenagers. Emotional management and self-control programs for elementary and middle school children as a preventive measure before they enter adolescence are vulnerable to harmful environmental influences. The solution to this problem is tailored to the child's growth and development stages so that they will be better prepared to face the challenges of the next step in adolescence.

Example Activities

Stop Kids From Stunting

Stunting is when a child under five doesn't grow properly because they aren't getting enough food. Long-term hunger, a lack of variety in food and animal protein sources, not getting enough vitamins and minerals, being pregnant as a teen and having babies too close together, or not having access to health services like clean water and toilets can all cause stunting. This will affect children's growth and development. Besides that, problems with their cognitive and motor development will make them less productive as adults and make them more likely to get diseases that don't spread.

To stop from growing too short, kids should take folic acid at least one month before they get pregnant or usually take iron while they are menstruating. Don't forget to start nursing as soon as the baby is born, ensure the baby only gets breast milk, and keep breastfeeding until the child is at least two years old. Starting at six months, give the child carbs, animal protein, veggie protein, greens, and fruit. Pay attention to when the child is hungry or full, how to eat, and by whom (response feeding).





Strengthen the action and bring the global partnership for sustainable development back to life.

OUR COMMITMENT

We committed to collaborating with universities, NGOs, government agencies, associations, schools, and businesses on a national, regional, and global scale to achieve the SDGs more effectively in areas like teaching and learning, research and publication, and community service.



Public Engagement

Most of the time, we talked about efforts by businesses, non-profits, academic institutions, the public, and government agencies to work together to solve problems, obtain people involved, and make choices that impact the whole community or society.

The goals of the partnership are to promote openness, participation, and decision-making. In this partnership activities, we involved a lot of numerous groups, including people, experts, and organizations. We used appropriated choices and methods as straightforward as possible to build trust. People should be able to help shape laws, projects, and other efforts.

The partnership encourages people to get involved in politics and gives people and groups the power to have a say in matters that affect them. Problem-solving can happen through public hearings, neighborhood meetings, polls, or online forums where people can give their opinions.

We also include ways to hold government agencies and other institutions responsible for their choices and actions in our relationship plan. These partnerships usually last for a long time and aim to make organizations and the public more connected in the long term.

Research

Research partnership

We actively engage in partnerships at the global, national, and regional levels to contribute to the realization of sustainable development goals.

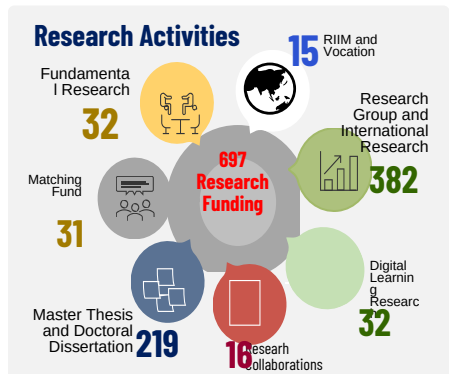
Global: Global collaborations play an essential part in tackling challenges that are beyond the scope of individual nations operating in isolation. The attainment of shared goals necessitates the use of diplomatic strategies, the establishment of international accords, and a steadfast dedication to collaborative efforts.

Globally, we committed to collaborate with partnerships: Asia (764 partners), Australia (60 partners), Europe (50 partners), USA (45 partners), Embassy (15 partners), Overseas School (13 partners), Afrika (4 partners), and Overseas Industry (10 partners).

National: The primary objectives of these partnerships are to tackle particular national issues, collectively attain common goals, or efficiently execute policies and programs that provide comprehensive benefits for the whole country. The national partnerships approach has several manifestations and incorporates many stakeholders, including governmental bodies, non-governmental organizations, enterprises, and community collectives. Nationally, We collaborate with Indonesian Educational Institutions (852 partners), Indonesian Organizations (68 partners), and Government and NGOs (168 Partners).



University Policy
The projects that are linked to the sustainable development goal take the lead in influencing policy. It connects researchers with lawmakers and other influential people, building long-lasting relationships and effects on policy involvement.



Learning and Students

Learning Partnerships

Through partnerships with public, private, and civil society groups, we're dedicated to giving students the information, skills, and chances to work on all 17 SDGs. By dedicating efforts to providing students with the knowledge, skills, and opportunities to work on the SDGs, you are not only promoting awareness but also fostering the development of future leaders who can contribute to a more sustainable and equitable world. Education and empowerment are crucial elements in achieving the SDGs.

Our learning platform connects with all partners group by **technology integration** to facilitate adaptive and data-based learning; then, it grows online learning that offers mass online education with various platform choices and flexible allocations and times that students can access.

Online Learning and Massive Open Online Courses (MOOCs): the emergence of online learning platforms that are accessible, offer flexibility, and meet the diverse learning styles of students.

Blended learning is when you learn both in person and online. This has made it possible for students to learn independently and in real time.

Gaming and edutainment is a learning process that includes gaming techniques in learning material to increase student involvement and motivation because learning becomes more fun.

Lifelong Learning and microcredentials: lifelong learning is a continuous process of acquiring the knowledge and skills needed in the rapidly changing modern world.

Personalized learning technology has enabled learning that adapts instruction, content, and learning experiences to meet the needs, interests, and abilities of individual students on a personal/individual basis.



This approach moves away from the traditional one-size-fits-all education model and focuses on providing personalized learning pathways for students.

Project-Based Learning and STEAM (Science, Technology, Engineering, Arts, and Mathematics): project-based learning emphasizes direct, experience-based learning and combines STEAM subjects. This is believed to improve students' ability to think critically, solve problems, and develop innovative solutions.

The flipped classroom is where students study at home using the online method, and then in class, it is devoted to discussions and group activities. This method encourages active learning and interaction with friends.

Global collaboration and learning technology have facilitated global cooperation and communication between students and educators worldwide. Global collaboration has led to the emergence of diverse ideas, expertise, and resources to address global challenges more effectively.

University partnerships

We realize this strategy is a powerful means of advancing the Sustainable Development Goals (SDGs) and fostering collaboration between academia, public institutions, private sector organizations, and civil society. We took various forms of partnerships to obtain several benefits, including Research and Innovation, Education and Training, Knowledge Sharing, Cross-Sector Collaboration, Practical Projects, Advocacy and Awareness, and Networking and Partnerships.

When forming partnerships with universities, it's essential to establish clear goals, roles, and responsibilities and to ensure that the partnership aligns with the specific SDGs and objectives you aim to address. These collaborations can leverage the knowledge, resources, and expertise of the academic community to create meaningful and sustainable contributions to the global effort.

Example Activities

UNY Collaborate with Astoetic

Nusantara Module Batik Training. On Saturday, October 29, and November 5, 2022, Independent Student Exchange Students from UNY who are members of the Nusantara Module explored the "Astoetic Batik Center" in the Jeblog area, Bantul.

The purpose of this visit is to **preserve batik as the cultural heritage** of the Indonesian nation. During their stay, students were introduced to the history of batik and its development. Apart from that, students were also introduced to the use of a batik pen plotter tool, which is the result of collaboration between Astoetics and the UNY Electronics Engineering Education Department in 2021-2022.





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