



國立屏東科技大學

National Pingtung University of Science and Technology

NPUST 2022 Sustainability Report



▲ Professor Mei-Hsiu Hwang, aka Ali-Duma (black bear mama) in Bunun language, has dedicated to the conservation of the Formosan black bear for a quarter century, and her research team earned the first prize for “Ecology Co-Benefit” at the 2021 USR Awards by *Global Views Monthly*.

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About this Report

The National Pingtung University of Science and Technology (NPUST or the/this University) publishes its sustainability report biannually. After the first issue, “2020 Sustainability Report”, released in 2020, the “2022 Sustainability Report” (this Report) is the second issue. This Report aims at informing stakeholders of our performance in four aspects: sustainability governance, financial management, environmental sustainability, and social co-prosperity.

► Value of Report

- To present our specific strategies and key performance indicators (KPIs) for the short, medium, and long terms for promoting material issues and issues of medium influence.
- To link institutional development plans to SDGs and to plan KPIs for the short, medium, and long terms in correspondence with the material topics of the Global Reporting Initiative (GRI).
- To disclose information transparently.
- To demonstrate the action power toward sustainable development.
- To ensure legal and regulatory compliance.

► Reporting Content and Boundaries


This Report has been prepared in accordance with the GRI Standards (2021) published by the Global Sustainability Standards Board (GSSB). Information has been consolidated and disclosed in respect of GRI’s reporting principles for defining report content: materiality, stakeholder inclusiveness, sustainability context, and completeness. Sustainability information has been disclosed in accordance with the Sustainability Accounting Standard for Education published by the Sustainability Accounting Standards Board (SASB).

► Reporting Period

NPUST has reported the information cited in this Report for the period from 1 August 2020 to 31 July 2022, i.e. the academic years (AY) 2020 and 2021, and from 1 January 2021 to 31 December 2022, i.e. fiscal year (FY) 2021 and 2022. To ensure data completeness, some data may be extracted from AY2019-2021 and AY2020-2022. Data involving comparison, estimation, or special implications will be explained in the Report.


► Report Preparation and Quality Management

The vice president for academic affairs of NPUST also manager of NPUST Sustainable Development Office (SDO) asked all units to provide the relevant data. After the the review and discussion of the Sustainability Advisory Committee (SDAC), the Sustainability Working Term continued with the data integration and report compilation and printing.




Consultation Focus

The Sustainability Working Term drafted the report framework, the concerned issues, and production process. The president of NPUST convened the SDAC meeting to review and verify the reporting scope.



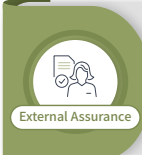
Report Compilation

The Sustainability Working Term prepared the first draft by consolidating the data provided by the responsible units for each disclosure issues.




Report Review

The president of NPUST convened the SDAC meeting to review this Report, give advice, and make corrections.



External Assurance

NPUST hired a third-party certification body to conduct a pre-examination and complete the secondary verification of this Report.



Final Draft Publication

This Report has been published after the review and approval of SDAC and the president of NPUST.

► Report Verification

This Report was verified by the British Standards Institution (BSI) in March 2023 to ensure compliance with the GRI sustainability reporting standards and coverage of NPUST’s social responsibility and sustainability topics. The BSI Certificate of Verification is appended to this Report.

► Contact Information

Should you have any recommendations or suggestions for this Report, please feel free to contact us:

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From the President of NPUST



President of NPUST *C. L. Chang*

Since the establishment in 1924, NPUST has been upholding its mission to develop talents and technology for agriculture over the last century. In response to the wave of environmental sustainable development, we have established and implemented four institutional development themes: “agro-technology”, “eco-technology”, “platinum society”, and “sustainable economy”, for school development to promote interdisciplinary instruction and research in collaboration with the seven NPUST colleges.

Facing climate change and the transition to the sustainable (circular) economy, in addition to the research of climate smart agriculture, we also actively engage in the development of eco-friendly farming and the protection of environmental resources. With such we aim to thrive rural development, benefit remote townships and vulnerable or disadvantaged groups, and develop the Satoyama sustainable economy.

To promote sustainability education through concerted efforts, apart from establishing strategies for sustainable talents education, incorporation SDGs into the institutional development plans, and building an eco-friendly campus for sustainability, we also integrate sustainability into the course and research contents. We set up the “NPUST Sustainable Development Office” in 2020 to integrate the research workforce and various industrial resources within NPUST. In February 2023 we established the seventh “Taiwan

Sustainability Hub (TSH)” in Taiwan as a platform for agricultural practice exchange among the industry, government, academia, research institutions, and society. With such we aim at demonstrating our determination to promote sustainability and university social responsibility (USR) through internal and external collaboration.

In institutional governance, at the University Education Performance Rankings by *Cheers* magazine, we were ranked among the Top 20 in 2018 and 2020. At the Best University Ratings by *Global View Monthly*, we were ranked No. 19 in Taiwan and No. 7 among universities of science and technology in 2018; No. 19 in Taiwan and No. 5 among universities of science and technology for two consecutive years in 2019 and 2020; and No. 20 in Taiwan and No. 6 among universities of science and technology in 2021 and 2022. Among 149 colleges and universities across Taiwan, our performance is excellent.

In environmental sustainability, we have invested university endowment fund in the establishment of a number of centers for the research of carbon inventory and the circular economy and engaged in massive forestation for carbon reduction with excellent performance. We were also ranked No. 1 in Taiwan for nine consecutive years at the *UI GreenMetric World University Rankings*, particularly in 2022 when we were ranked No. 27 in the world and No. 3 in Asia among 1,050 universities from 85 schools.

In social responsibility, we have been implementing USR for years and act as the local think tank to provide assistance for community placemaking and development. Over the years we have earned recognition from all parts of society in ecological conservation and guidance for farmers to practice eco-friendly farming. For example, at USR Awards by *Global Views Monthly*, we earned the first place in “Ecology Co-Benefit” in 2021, the first place in “Integrated Performance” and the model award in “Ecology Co-Benefit” in 2022, and the first place in “Green Campus” and the model award in “Welfare for Co-Living” in 2023. All these achievements are the combined efforts of both teachers and students of NPUST.

Additionally, at the Impact Rankings by *Times Higher Education*, we were ranked among the world’s top 301-400 universities and the 3rd of all universities and 1st among universities of science and technology in Taiwan in our first participation in 2021 and the world’s top 201-300 universities and the 1st among universities of science and technology in Taiwan. We also earned the Platinum Award for the University Sustainability Report at the 2021 Taiwan Corporate Sustainability Awards (TCSA).

In view of the responsibility of higher education, apart from promoting campus sustainability governance, we should also extend our social influence off-campus. In 2021 we signed a memorandum of cooperation with the “Taiwan Institute for Sustainable Energy (TAISE)” to declare our determination to practice sustainable development and commitment to give back to society with the power of scholarship that covers education, research, promotion, and practice through real action. In 2022 we advocated the establishment of the “Taiwan University Alliance for Sustainable Governance (TUASG)” with nine national universities, such as the National Taiwan University and National Taiwan Normal University, hoping to share the information and knowledge in relation to campus sustainability governance among all higher education institutions to take up the sustainable development and social responsibility of universities and achieve the goal of sustainable development through collaboration.

Cover Story

► 1. Building a Pureland on Earth for Human-Bear Co-Prosperity and Co-Living 15.5

Professor Mei-Hsiu Hwang, aka Ali-Duma, of the Institute of Wildlife Conservation and her team won the **first prize for “Ecology Co-Benefit”** at the 2nd USR Awards 2021 by *Global Views Monthly* with the project “Building a Pureland on Earth for Human-Bear Co-Prosperity and Co-Living”. According Professor Hwang, “Currently, there are about **200-600** Formosan black bears in Taiwan, while the minimum safe population size is 2,000 heads. In the future, we will maximize our influence through speeches, environmental education courses, cross-department interdisciplinary collaboration, student engagement, and various types of exchange activities. In addition to “delisting the Formosan black bear (*Ursus thibetanus formosanus*) from the list of protected species in Taiwan”, we also hope that our people can value their hometown starting from animal conservation, so as to leave for the future generations the most valuable and most natural species in each inch of soil where grass, flowers, and trees grow. [Further reading](#)

▼ Professor Mei-Hsiu Hwang earned the first prize for “Ecology Co-Benefit” at the 2nd USR Awards 2021 by *Global Views Monthly*.



▲ Professor Mei-Hsiu Hwang is the first scholar in Taiwan to track the Formosan black bear with radio transmitters.

► 2. University Sustainability Initiative: Practicing Sustainable Development



NPUST has been devoted to the education, research, promotion, and practice of sustainable development and USR to pay back society with the power of scholarship through real action. To promote the “university sustainability initiative” and further the vision of sustainability education and development, TAISE signed a letter of intent on cooperation with us, hoping to contribute to the fulfillment of corporate social responsibility (CSR), USR, sustainable energy, climate change, and sustainable development together with NPUST in terms of the following six aspects: “organizing conferences or training courses in relation to sustainable development”, “promoting activities on topics in relation to sustainable development”, “encouraging the research and spread of knowledge in relation to sustainable development”, “supporting actions in relation of green campus”, “encouraging the engagement in activities in relation to sustainable development of staff and students”, and “promoting the Alliance for Sustainable Development Goals (A•SDGs) together”. [Further reading](#)

◀ NPUST signed a MOC with TAISE for promoting the “university sustainability initiative”.



Focus on the Sustainable Practice of SDGs

▶ SDG1 Strengthen the poor and the vulnerable, social and economic security, and care services

1.4 2.3 8.8 11.3 12.8



As a member of the *The International Partnership for the Satoyama Initiative (IPSI)*, Professor Mei-Hui Chen of the Department of Forestry is the director of IPSI Southern Region and regional leader for 2022-2023. Based on the satoyama spirit, Professor Chen and her Community Forestry Lab team have been stationing in **11** remote townships in Pingtung to equip the poor and the vulnerable with the post-disaster recovery capability. Her two cases of success, including the “Sheding (Kulaliuc) Community” and “Ali (Adiri) Community”, **made her a two-time winner for first prize in the Action Plan category at the “National Sustainable Development Awards”**, and the Sheding (Kulaliuc) Community also earned the group excellence award at the **3rd National Environmental Education Award**.

In 2021 Professor Chen and the Forestry Bureau co-established Taiwan’s first Community Forestry Center to link **6** cooperation network points and procedures **5** community forestry technical manuals and videos for sharing to ingrain community forestry across Taiwan and accelerate eco-friendly rural development. [Further reading](#)



▲ Education of growing the marbled jewel orchid (*Anoectochilus formosanus*) for promoting the under-forest economy.



▲ Presentation of the community forestry technical manuals and location achievements.

▶ SDG2 Ensure food security, end hunger, and promote sustainable agriculture

2.4 12.8



Professor Yu-Min Wang of the General Research Service Center and his International Irrigation R&D Service Center develop and promote the System of Probiotic and Rice Intensification (SPRI). Apart from saving water by up to **30%**, recycled organic fertilizers are used to increase paddy output by **25-30%**, plant health is improved to reduce pesticide use, and field GHG emissions are reduced to achieve eco-friendly farming featuring less water consumption, less fertilizer use, less pesticide use, and less carbon emissions. With the project “Reconciliation between Land and the Golden Rice Wave”, the International Irrigation R&D Service Center earned the **model prize for “Ecology Co-Benefit”** at the 3rd USR Awards 2022 by *Global Views Monthly*.

Currently, the center has engaged in contract farming for over **100 hectares** of paddy fields with farmers. Apart from winning partnership contracts from TECO Group, the Taitung Farm of Veterans Affairs Council (VAC), and Yeedon Enterprise, Professor Wang and the center also wish to promote this smart farming method across Taiwan and even to both diplomatic and non-diplomatic allies so as to achieve the goals of ending hunger, achieving food security, and promoting sustainable agriculture. [Further reading](#)



▲ International Irrigation R&D Service Center earned the model prize for “Ecology Co-Benefit” at the 3rd USR Awards 2022 by *Global Views Monthly*.



▲ Promote the SPRI to Yeedon Enterprise Co., Ltd.(San- Hao Rice)

▶ SDG3 Ensure healthy lives and promote well-being for all at all ages

3.4



We established the Center for Sustainable Healthcare in 2021 to develop healthcare talents, guide and empower health-related businesses, study healthcare-related issues, and promote and publicize health and well-being.

In developing healthcare talents, the center offers seven long-term care courses and caregiver training courses. During 2019-2022, a total of **120** students earned their certificate of completion, and 13 of them further took the caregiver certificate examination.

In extending instruction to research, the center implemented 3 extended university-industry research projects in 2022, including:

1. Pingtung County Community Integrated Service Center Quality Improvement Guidance Project
2. Pingtung County Homecare Support Service Guidance Project
3. Pingtung County Community Age-Friendly Promotion and Guidance Project

[Further reading](#)



▲ Unveiling ceremony of the Center for Sustainable Healthcare.



▲ Activity of the Community Age-Friendly Promotion and Guidance Project

▶ SDG4 Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

4.3

4.5



On commission of the Ministry of Education (MOE), we implemented the TVET Curriculum Optimization Project during 2020-2022. With NPUST as the core base, we horizontally integrated Pingtung and Taitung regions and combined the teachers, equipment, and teaching materials and resources of **5** partner schools and the industries to demonstrate the synergy through strategic alliance with senior high schools and vocational high schools. Over the past three years, we walked through Pingtung and Taitung regions; matched **10** non-indigenous and non-city senior high schools and vocational high schools in remote townships; established three interdisciplinary communities: “smart agriculture”, “tourism and hospitality”, and “geographic information”; formed 10 interdisciplinary course development teams; organized 20 mentor professional empowerment workshops; supported **52** featured courses for senior high schools and vocational high schools; and assisted with the empowerment vocational senior high school teachers to sustain talents development. [Further reading](#)



◀ 2020 MOE Technical and Vocational Education Optimization Project: Southern II Region Strategic Alliance Signing Ceremony and New Curriculum Collaboration Achievement Presentation

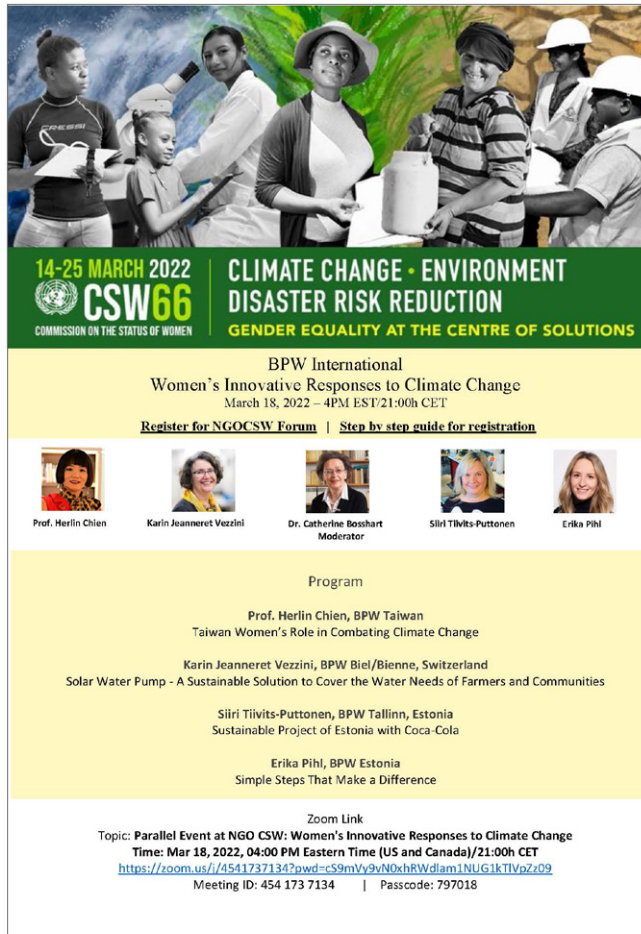
▶ SDG5 Achieve gender equality and empower all women and girls

5.5 13.3



At the sixty-sixth session of the Commission on the Status of Women (CSW66) in 2022, the theme “achieving gender equality and the empowerment of all women and girls in the context of climate change, environmental and disaster risk reduction policies and programmes” was prioritized to offer a platform to speak up and exchange for those **advocating women’s rights and benefits and gender equality** around the globe.

Associate Professor Herlin Chien of the Center for General Education and women representatives from Switzerland, Estonia, and other countries were invited to be the firm speakers at the parallel event of CSW, a non-governmental organization (NGO). Associate Professor Chien spoke up for women at the forum with a paper titled “The Role of Women in Taiwan in the Context of Climate Change”. [Further reading](#)



▲ Poster of the parallel event at CSW66.

▶ SDG6 Ensure availability and sustainable management of water and sanitation for all

6.6 11.6 13.3 14.2 15.1



In response to the 2021 World Rivers Day, Deputy CEO Associate Professor Herlin Chien of the NPUST Sustainable Development Office invited **5 units**, including the Pingtung County Environment Protection Bureau, Wanlian Township Office, Blue Donggang Creek Conservation Association of Taiwan, city councilors, and community watches, and over **100** NPUST teachers and students to co-organize the “2021 NPUST Support for World Rivers Day: Challenges of Livestock Wastewater and Opportunity Exploration” event through a hybrid format. In addition to the physical ecological inspection and seminar, a celebration of “World Rivers Day” was also held online with **over 100 countries** around the world to support the global World Rivers Day that cares about the environment, culture, and ecology of rivers and to protect natural resources together. [Further reading](#)

Over 100 NPUST teachers and students supported World Rivers Day that evokes their river conservation spirit. ▶▶



▶ SDG7 Ensure access to affordable, reliable, sustainable and modern energy for all

7.1 7.2 2.4 8.10 8.13 12.5 13.3 17.1



We make all efforts to develop green energy. To support NTUST, apart from donating EV energy storage and fast charge stations and lithium battery packs amounting over **NT\$40 million**, Phihong Technology Co., Ltd. and Phoenix Battery Corporation also held the opening ceremony of the Center for Sustainable R&D at NPUST in 2022.

Forming with the advanced green energy technology, agricultural and forestry circular economy value creation, biomass energy circulation, and livestock environment sustainability technology teams, the “Center for Sustainable R&D” is an important NPUST unit that combines renewables development and the circular economy to develop the collection, storage, and use of renewables. The four center laboratories support and integrate with each other with renewables, aiming to apply these technologies help industries enhance sustainable competitiveness in the future. [Further reading](#)



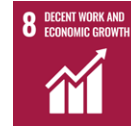
▲ The opening ceremony of four major NPUST teaching and R&D centers. Director-General of the Department of Technological and Vocational Education, Ministry of Education, presided on the opening ceremony.



▲ EV energy storage and fast charge station

▶ SDG8 Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

8.5 8.6 4.6



In 2020 we began undertaking the Pingtung County Labor College for **three years**. The college offers courses for license/certificate examinations, employment development, and entrepreneurship by integrating with the nearby universities, senior high schools and vocational high schools, and businesses. In the past three years, the College offered **87 courses** that attracted the participation of **1,829 trainees**.

As a platform for continuing and extension education and lifelong learning, apart from letting workers sharpen their area-specific skills to enhance productivity, the College also allows them to learn a second specialty to enhance employability and encourage youth to return to work or start a business in their hometowns. [Related report: Information and International Affairs Department, Pingtung County Government](#)

▼ Pingtung County Labor College

Source: [Information and International Affairs Department, Pingtung County Government](#)



▶ **SDG9 Build affordable, safe, eco-friendly, and resilient and sustainable transport** 9.1 11.2



▲ Source: *Global View Monthly*/Photo: Hung-Wen CHEN
Professor Yung-Chuan Chen of the Department of Vehicle Engineering (left) and students test the electrical device of the personal rapid transit (PRT) system.



Yung-Chuan Chen, director of the Intelligent Agricultural Machinery Center and professor of the Department of Vehicle Engineering, has developed different types of autonomous smart electric vehicles for agriculture, fisheries, and animal husbandry, such as the multifunctional agricultural smart EV, paddy EV, and fish feed dispensing EV. Through technological transfer, the Center engages in collaborative development with manufacturers and allows them to mass-produce products and apply for funding to the Council of Agriculture (now Ministry of Agriculture) to provide farmers with government-subsidized and affordable, high-performance agricultural machinery.

In 2022 the intelligent vehicle team won the three-year contract, “Light Rail Vehicle (LRV) Boogie System Autonomous Technology Upgrading”, with a value of **NT\$200 million**. This contract aims at developing the technology for domestication of the key LRV component “boogie system” so as to optimize Taiwan’s public transport system. [Related report: Global View Monthly](#)

▶ **SDG10 Reduce inequality within and among countries** 10.4 1.a 4.5



In 2022 summer break, we co-organized the one-week exploration camp on “Industry 4.0 and Intelligent Technology Application” for senior high school students under the Care for Vulnerable and Disadvantaged Groups in Remote Township Communities in Southern Taiwan project with A-Kong-Dien Rotary Club of RID3510 and Taiwan Fund for Children and Families (TFCF) and in collaboration with the controlled cases of senior high schools and vocational high schools of the Kaohsiung, Pingtung, and Taitung branches of TFCF. Aiming at broadening the horizons of students and helping them uncover the new direction for career development, the camp attracted about **100** participants. [Further reading](#)



◀ Opening ceremony of the “Industry 4.0 and Intelligent Technology Application” exploration camp for senior high school students of the Care for Vulnerable and Disadvantaged Groups in Remote Township Communities in Southern Taiwan project.

10.6 2.a 4.3 8.6 17.10

Through cooperation with the Overseas Community Affairs Council (OCAC), we established the “Southeast Asia High-Tech Agricultural Talents Training Base” and expanded the recruitment of overseas Chinese students to pursue higher education in Taiwan to develop high-tech talents required by businesses at home and abroad. Since 1963 we have organized **41 sessions** of the Overseas Youth Vocational Training School and have trained about **2,000** students from the New Southbound countries. With the OCAC support, we recruit more outstanding international talents with the two-year associate degree program “Plant Industry and Sophisticated Tropical Agriculture” to promote cooperation with developing countries. [Further reading](#)

▼ Unveiling ceremony of the Southeast Asia High-Tech Agricultural Talents Training Base.



▶ SDG11 Make cities and human settlements inclusive, safe, resilient and sustainable

11.3 11.4 1.3



Our USR projects in relation to indigenous communities fall into two categories: (1) on-campus: “Indigenous Community Traditions and Cultures and Industrial Practice” interdisciplinary micro program; and (2) off-campus: construction and application of the mountain and forest culture and knowledge learning base in collaboration with indigenous communities: Padain Community in Majia (Makazayazaya) Township and Kaviyangan Community and and Tjaranauma Community in Taiwu (Kulaljuc) Township.

The “micro program” designed for USR is a **10-credit** interdisciplinary program. Students must design itineraries for indigenous communities for close-distance experience of different lifestyles to eliminate the unconscious “micro discrimination”, learn to respect different cultures, and build a friendly environment for ethnic fusion and inclusion. [Related report: CSR@天下](#)



▲ Face and solve problems together with indigenous communities with indigenous communities as the subject matter through meetings with with indigenous communities.



▲ Discover indigenous communities and transform systemically their stories and daily-life knowledge into community resources.

▶ SDG12 Promote the green economy and ensure sustainable consumption and production patterns

12.5 2.5



Through years of efforts, Mr. Wen-Yang Yeh of Dollarmon Biotechnology has successfully restored the near-extinct native Taiwan tangerine (*Citrus depressa*) and thrived the tangerine in Taiwan. Through collaboration with Professor Hsueh-Ling Cheng and Professor Chi-I Chang of the Department of Biological Science & Biotechnology, Dollarmon Biotechnology has engaged in the research of citrus biological active substances and developed a wide variety of products. They have also signed the university-industry collaboration project and technological transfer contract. [Further reading](#)



▲ Presentation of the “Restoration of Taiwan Tangerine & Agricultural Biotechnology University-Industry Collaboration”.



▲ Biotech product development

▶ SDG13 Optimize mitigation and adaption actions to combat climate change and its impacts

13.2 2.4



In 2022 the College of Agriculture integrated departments and colleges to establish the “College of Agriculture Office for Promotion of Net Zero Emissions and Carbon Sink for Tropic Organic Farming”. With the multidisciplinary capability, the Office applies for projects and provides guidance for the up-, medium-, and down-stream ecosystems to achieve carbon reduction by stage at least cost. During 2021-2022 the research team won the climate change project from the Ministry of Science and Technology (now National Science and Technology Council), becoming the only university of science and technology to win this subsidized project. [Further reading](#)

13.2 2.4 12.8

Under the direction of the Agriculture and Food Agency, Council of Agriculture (now Ministry of Agriculture), the College of Agriculture and Department of Plant Industry, the Agronomy Society of Taiwan, Preparatory Office of the Pingtung Agricultural Biotechnology Park of the Council of Agriculture (now Ministry of Agriculture), and the Academia-Industry Consortium for Agricultural Biotechnology Park co-organized the “**Conference on the Sustainable Carbon Management of Tropical Agriculture**” to discuss four main topics: “Policy and Status of Carbon Reduction and Carbon Sink Enhance”, “Sustainable Carbon Management Strategy for Net Zero Emissions”, “Theories and Methods of Carbon Emissions and Carbon Sink”, and “Case Study of Farmland Sustainable Carbon Management” so as to achieve net zero emissions in agriculture. [Further reading](#)



▲ College of Agriculture Office for Promotion of Net Zero Emissions and Carbon Sink for Tropic Organic Farming



▲ Conference on the Sustainable Carbon Management of Tropical Agriculture

▶ SDG14 Conserve and sustainably use the marine ecosystems to ensure biodiversity and prevent marine environmental deterioration

14.1 14.2 12.8



Based on the concept to prevent marine environmental deterioration, the Aquatic Animal Nutrition R&D Team led by Professor Yu-Hung Lin of the Department of Aquaculture successfully developed the “sustainable substitute ingredient” to replace the fish meal animal protein with the “lactic acid bacteria fermented soybean meal” provided by DaBomb in a tripartite collaboration project with DaBomb Protein Corporation and world-leading aquatic feed manufacturers. The resultant paper “Replacing Fish Meal with Lactic Acid Bacteria Fermented Soybean Meal for Enhancing the Immune Response and Nutrient Digestion Rate of White Shrimps” **was accepted for publication in Aquaculture, the top international journal for aquaculture.**

In the alternative fish meal formula, Professor Yu-Hung Lin found that by increasing the content of “lactic acid bacteria fermented soybean meal” to 13% and **reducing the content of “fish meal” from originally 15% to 3.75%** will not affect the growth of white shrimps but also can effective enhance their “immune response”, “nutrient digestion rate”, and “digestive system health.” [Further reading](#)



◀ The Department of Aquaculture engages in a collaborate R&D project with DaBomb Protein Corporation and world-leading aquatic feed manufacturers. The paper on the “sustainable substitute ingredient” was accepted for publication in a top international journal.



▶ SDG15 Conserve and sustainably use terrestrial ecosystems to ensure biodiversity and prevent land degradation

15.4 15.5 10.6 11.3 12.5 12.8



The team of the Bird Ecology Lab of the Institute of Wildlife Conservation engages in the “Save Our Strigiformes” (SOS, localized) environmental and ecological restoration project through strategic alliance with Farglory Life Insurance. This project aims at building a sustainable ecology for owls and eagles and promote industrial and economic development in local communities and remote townships by linking to the 3-in-1 framework comprising sustainable ecology (ecology), toxin-free production (production), and healthy life (life).

With Gaoshu Township in Pingtung as the base, the team of the Bird Ecology Lab and Farglory Life Insurance erected habitat racks and nest boxes in the pineapple field for owls and eagles to take rest and reduce pesticide use through the prevention by predatory birds to promote the health of agricultural ecology. [Further reading](#)



▲ Building homes for owls with nest boxes.



▲ Farglory Life Insurance signed a contract to promote sustainable ESG with NPUST.

▶ SDG16 Promote peaceful and inclusive societies to ensure judicial justice, build an accountable and inclusive public opinion system

16.2 4.7 5.5 10.3 17.7



In 2021 the four-session online symposium “Crime, Criminalisation and Injustice International Workshop, CCI” lasted for one month was co-organized by the University of Leeds of the UK and Chairperson Li-Yu Chang and Assistant Professor Pei-Chun Pan of the Department of Social Work. CCI was attended by scholars and experts of related fields from 16 colleges and universities in 5 countries, including Finland, Australia, Portugal, Japan, and Taiwan. Each session was attended by about 300 domestic participants and 200 foreign participants.

Topics discussed in the CCI included “race, crime, and welfare”, “welfare criminalisation, and civil right”, “physical disabilities, crime, and discrimination”, “youth, marginalization, gender, and crime”. Each topic was discussed in one weekly session. [Further reading](#)



▲ Promote peaceful and inclusive societies through the “Crime, Criminalisation and Injustice International Workshop”.

▶ SDG17 Build global partnership for sustainable development

17.10 4.3



NPUST is the founding school and member of the **University Network for Tropical Agriculture (UNTA)**. Currently UNTA has 28 member schools from 13 countries, with the secretariat set at the NPUST. We have established the **Taiwan Education Center Thailand** at Maejo University, Kasetsart University, and King Mongkut's Institute of Technology Ladkrabang in Thailand. Since undertaking the operations of the Taiwan Education Center in 2013, we have organized the Thailand-Taiwan Education Fair in Thailand for 10 consecutive years to attract Thai students to study in Taiwan so as to promote the government's policy of New Southbound talents development.

Regardless of the pandemic, we co-organized the "8th Taiwan-Thailand Higher Education Online Forum" with the Association of Private Higher Education Institutions in Thailand (APHEIT) to discuss the topic "Transboundary Cooperation and Sustainable Development in the Post-COVID 19 Era". The forum attracted **a total of 254 participants from 129 schools in both Taiwan and Thailand**. [Further reading](#)

In 2022 we organized the Thailand-Taiwan Higher Education Fair Online in Thailand. Director-General Nicole Yen-Yi Lee of the Department of International and Cross-strait Education, Deputy Representative Hsiu-Mei Hsueh of the Taipei Economic and Cultural Office in Thailand, and NPUST President Chang-Hsien Tai

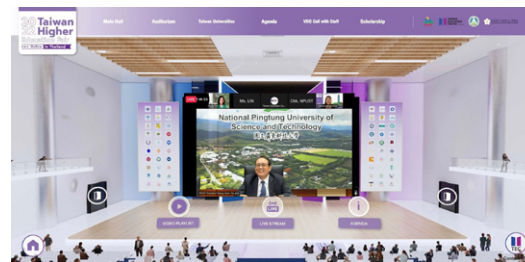
presided on the opening ceremony. **A total of 62 colleges, universities, and Chinese language centers of Taiwan** participated in the event, the highest number of participants over the years. The fair attracted a total of **30,000 clicks** accumulatively. [Further reading](#)

17.10 2.4 4.3

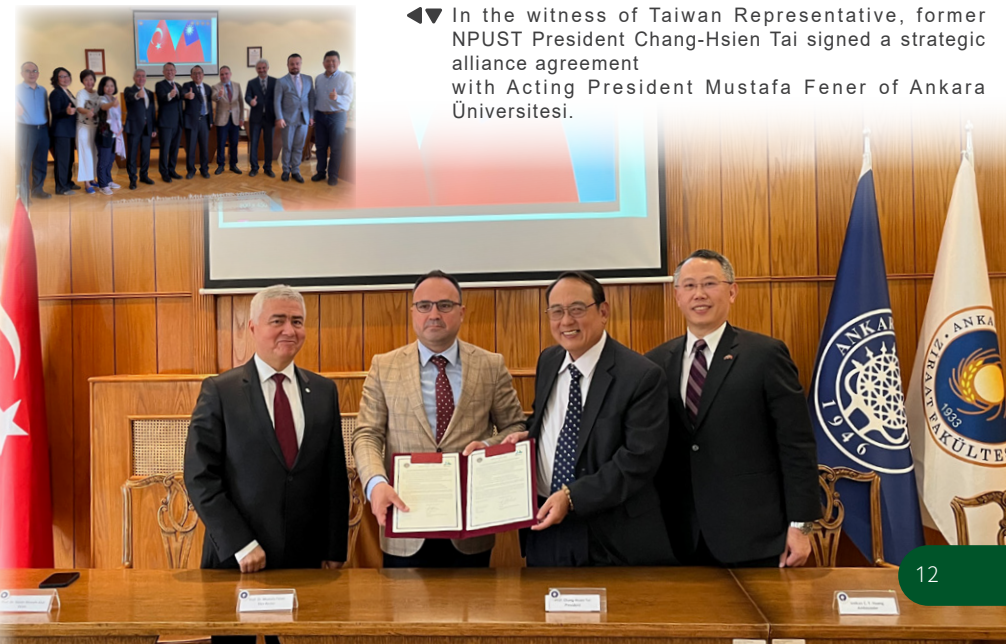
In 2022, President Chang-Hsien Tai took faculty members to Turkey for an academic exchange. In the witness of Taiwan Representative Volkan Chih-Yang Huang, we signed a strategic alliance agreement with Mustafa Fener, acting president of Ankara Üniversitesi and professor of the Department of Mechanical Engineering, hoping to promote further technological and academic exchange between both universities in areas of precision agriculture, smart agriculture, and mechanical technology, so as to solve the food security issue and food shortage difficulty in the challenge of international food crisis. [Further reading](#)



▲ The "8th Taiwan-Thailand Higher Education Online Forum" in 2021.



▲ The "Thailand-Taiwan Higher Education Fair Online in Thailand" in 2022.



◀ In the witness of Taiwan Representative, former NPUST President Chang-Hsien Tai signed a strategic alliance agreement with Acting President Mustafa Fener of Ankara Üniversitesi.

01. Operations and Development of Sustainable University

國立屏東科技大學



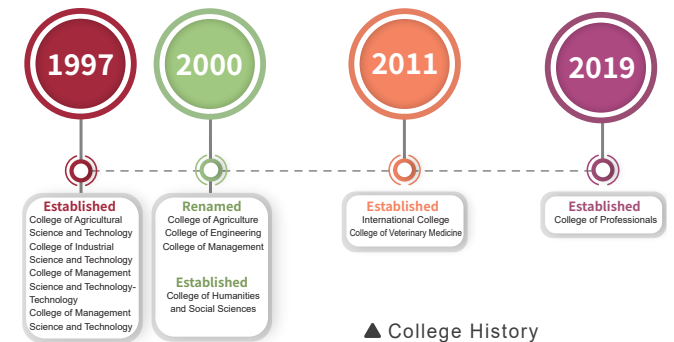
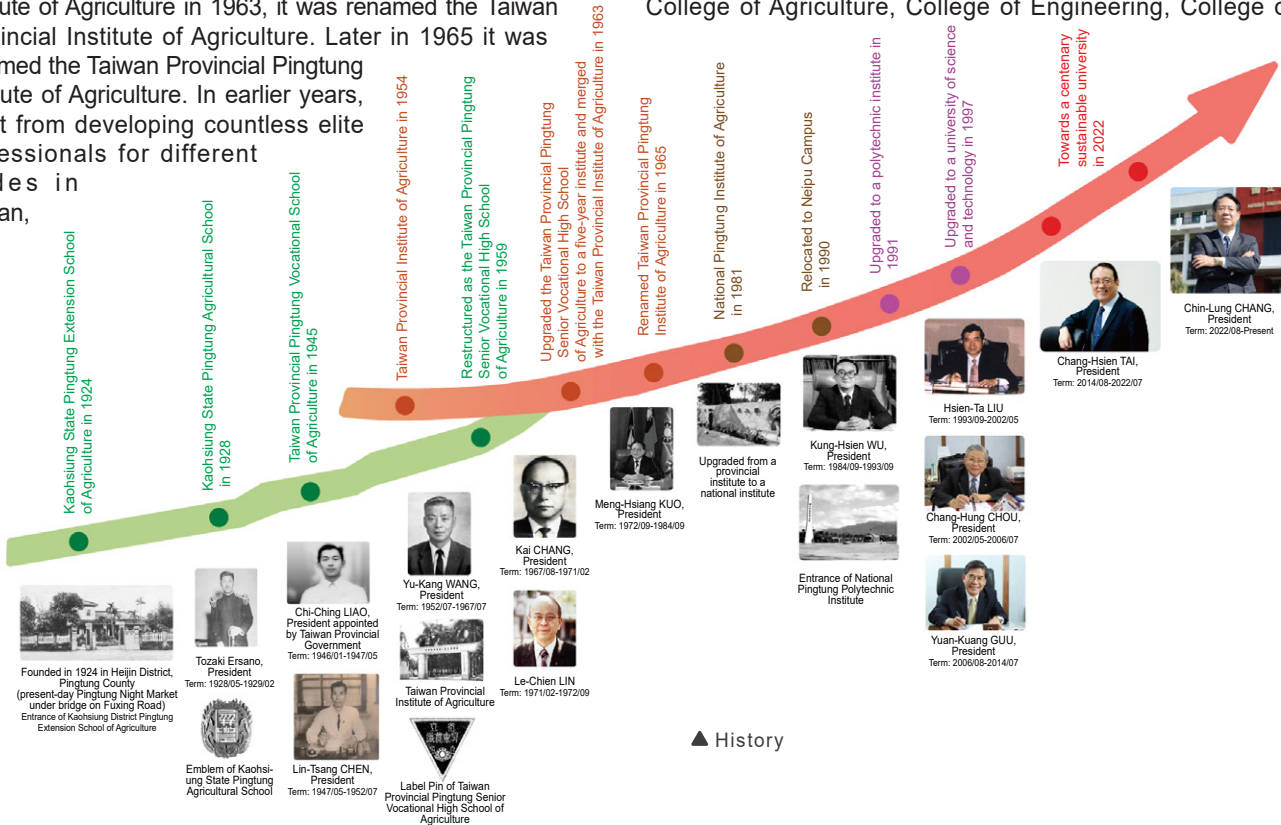
► 1-1 NPUST History GRI 2-6 | SV-ED-000.A

The National Pingtung University of Science and Technology (NPUST or this/the University) was established in 1924 during Japanese colonization as the “Kaohsiung State Pingtung Extension School of Agriculture”. Over the years we have gone through a number of organizational changes before becoming the present-day NPUST. These changes included the Kaohsiung State Pingtung Agricultural School in 1928, the Taiwan Provincial Pingtung Vocational School of Agriculture in 1945, and the Taiwan Provincial Institute of Agriculture in 1954. Together with National Taiwan University, Taiwan Provincial Teachers College (present-day National Taiwan Normal University), Taichung College of Agriculture (present-day National Chung Hsing University), and Taiwan Provincial College of Engineering (present-day National Cheng Kung University), we were known as Taiwan’s five major educational institutions then. After the Taiwan Provincial Pingtung Senior Vocational High School of Agriculture was promoted to a five-year junior college and merged with the Taiwan Provincial Institute of Agriculture in 1963, it was renamed the Taiwan Provincial Institute of Agriculture. Later in 1965 it was renamed the Taiwan Provincial Pingtung Institute of Agriculture. In earlier years, apart from developing countless elite professionals for different trades in Taiwan,

we have also established an overseas agricultural mission famous far and wide. In addition to consolidating diplomatic relations for the country, we have also set a robust foundation for Taiwan’s economic takeoff. Later in 1991 we were promoted to the National Pingtung Polytechnic Institute. Alongside the National Taiwan Institute of Technology in northern region and the newly established National Yunlin Institute of Technology, we were then the only three institutes of technology in Taiwan’s technical and vocational education and training (TVET) system. Later in 1997, we were promoted to the National Pingtung University of Science and Technology together with the promotion of the other two. Hence, we have been the leading character at each stage of Taiwan’s TVET development.

In response to the social development trend and institutional development, we made continuous growth and expansion based on the excellent foundation of the College of Agriculture. Currently, we have become a university of science and technology (UST) with seven colleges, including the College of Agriculture, College of Engineering, College of

Management, College of Humanities and Social Sciences, International College, College of Veterinary Medicine, and College of Professionals. In the future, we aim at becoming a first-rate international agricultural UST specializing in both teaching and research. Due to the spatial limit of the original campus, former president Meng-Hsiang Hsu visionarily relocated the school to the Neipu Campus lying by Mt. Dawu and in front of the Donggang River in 1986. The concerted efforts in planning and construction of later presidents and staff have facilitated campus development, campus environment optimization, and instructional and research equipment expansion, transforming the Neipu Campus from a large pineapple field into the main NPUST campus of 297.37 hectare with a building area of over 30 hectares. Today, NPUST has the largest main campus among all universities in Taiwan. Additionally, NPUST also includes the Baoli Forest Station (267.9 hectare) in Checheng Township, Pingtung, and the Daren Forest Station (576 hectare) in Taitung. Praised as a national park university, NPUST is recognized as the most beautiful green and LOHAS campus with the highest level of biodiversity.



“Benevolence and Truth” is the NPUST motto. Currently, we have a total of 10,687 students (including 614 international students), a total of 447 full-time faculty members (including project academic and research staff), and a total of 228 part-time faculty members. Through the combined efforts of both academic administrative staff, apart from continuously developing and optimizing tropical agriculture, we also combine the recourses of all the College of Engineering, College of Management, College of Humanities and Social Sciences, International College, College of Veterinary Medicine, and College of Professionals to enhance our academic and R&D capacity and actively expand international cooperation and academic exchange towards a long-lasting, sustainable university.

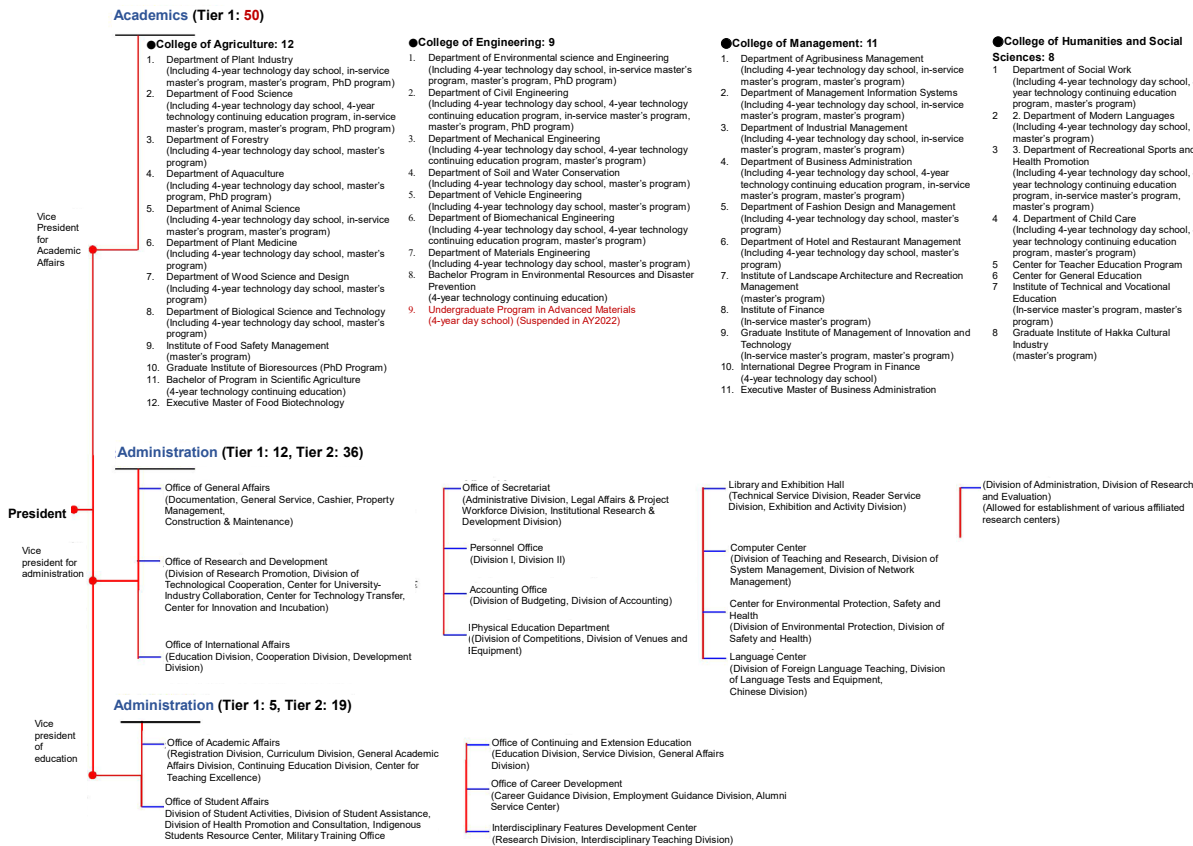
1-2 Operations and Development of Sustainable University

GRI 2-1, GRI 2-9 to 2-18

Organizational Profile

The president of NPUST takes charge of institutional administration and institutional development and represents NPUST externally. In addition to being assisted by three vice presidents, including the vice-president for academic affairs, the vice-president for administration affairs, and the vice-president for educational affairs, the president is also supported by 17 administrative units, including the Office of Academic Affairs, Office of Student Affairs, Office of General Affairs, Office of Research and Development, and others to promote academic, R&D, promotional, and guidance policies. Academically, the NPUST has 50 departments (institutes/programs/in-service master's programs) in 7 colleges engaging primarily in academics, research, promotion, and guidance.

Organizational Chart of National Pingtung University of Science and Technology (AY2022-2023)



School Basic Data

Name of School	National Pingtung University of Science and Technology
Main Campus	No. 1, Xuefu Road, Neipu Township, Pingtung County.
Downtown Campus	No. 151, Xinyi Road, Pingtung City
Practice Agricultural Station	Baoli Agricultural Station (No. 20, Zhushu Road, Baoli Village, Checheng Township, Pingtung County) Renda Agricultural Station (South Link Highway, Daren Township, Taitung County)
President	Chin-Lung Chang
Website:	https://wp.npu.edu.tw/

Land Area and Floor Area Per Student

Number of Students	10,687
Average Floor Area Per Student (m2)	29.88
Average Land Area Per Student (m2)	278.25


Classroom Data

Classroom Type	Quantity (units)
General Classroom	
Auditoriums: 28	
Laboratories: 43	
Computer Laboratories: 20	
Anatomy Classroom: 2	
Audiovisual Classrooms: 4	
Practice Classrooms: 15	399
Audiovisual Auditoriums: 11	
Common Subject Special Classroom: 1	
Professional Classrooms: 44	
Language Laboratories: 10	
Baking Laboratories: 1	
Miscellaneous Classrooms: 84	
Laboratories (including faculty member laboratories)/ Factory Member laboratories	587
Conference Rooms	47
Offices	140
Total	1,173



Note: 1. Units above marked in red letters are department or institute classes changed in semester 2, AY2022.
 2. The Institute of Materials Engineering (master's program) in Semester 1, AY2022, has been renamed the "Department of Materials of Engineering (including 4-year technical day school and master's program) Added the "Program of Artificial Intelligence and Mechatronics of the College of Professionals".
 3. The Bachelor of Program in Scientific Agriculture (4-year technology continuing education) in Semester 1, AY2022, has been renamed the "Extension Education Bachelor's Program in Scientific Agriculture (4-year technology continuing education) in Semester 2, AY2022."

Major Events

Sustainability-Related Major Events in Past 3 Years

Year/Amount	Event Type	Event
2020	Strategic Alliance/MOC/University-Industry Collaboration	<ul style="list-style-type: none"> Signed a strategic alliance agreement on university-industry collaboration with the Center for Long-Term Care Promotion of Buddhist Tzu Chi Charity Foundatio. 3 Signed a strategic alliance agreement on offering the in-service master's program through university-industry collaboration with Ark International Co., Ltd. specializing in fishery and electricity symbiosis. 7 8 14 Signed the memorandum of cooperation (MOC) on strategic alliance for CSR with Rong Hua Elementary School and Zhong Young Livestock Farm. 2 4 Signed a MOC on strategic alliance and donation of the X-ray detector-Mic V14C to NPUST Veterinary Medical Teaching Hospital with InnoCare Optoelectronics Corporation. 3 15 Held the signing ceremony of the memorandum of understanding (MOU) between the International Education R&D Center with universities from Indonesia, Thailand, and Malaysia. 4 Signed a MOC on the spatial makeover for NPUST libraries and exhibition centers with Hong Pu Construction Corporation to pay back the alma mat9
	Opening/Unveiling	<ul style="list-style-type: none"> Unveiled the "Smart Agriculture Center & Smart Agriculture Demonstration Site" in response to the Forward-Looking Project 2017-2021 of the Ministry of Education (MOE). 2 4 12 Added the Multifunctional Positive Negative Animal Facility to the Research Center of Active Natural Products Development of the Department of Biological Science and Technology. 3 15 Signed a MOC with TECO Foods for university-industry collaboration and unveiled the MOS Burger NPUST Store with TECO Foods. 2 12
	Awards	<ul style="list-style-type: none"> Ranked No. 1 in Taiwan, No. 4 in Asia, and No. 31in the world for 7 consecutive years at the UI GreenMetric World University Ranking. Earned the model award for "Living Co-Prosperity" and "Ecology Co-Benefit", across categories, at the 1st USR Awards by <i>Global Views Monthly</i>.
2021	Strategic Alliance/MOC/University-Industry Collaboration	<ul style="list-style-type: none"> Signed the MOU with the Taiwan Institute for Sustainable Energy (TAISE) to contribute to sustainable development together with TAISE.  Signed a strategic alliance agreement with 10 schools under the MOE Technical and Vocational Education Optimization Project: Southern II Region Strategic Alliance. 4 17 Signed a strategic alliance agreement with Gogoro Taiwan Limited. 7 Signed a strategic alliance agreement with the Taiwan Fund for Children and Families (TFCF) to encourage students from low-income families to continue with study based on the concept of "end poverty with education". 1 4 10 Organized the 1st Taiwan-Guam University Education Summit and signed a MOC with six universities, including the University of Guam. 2 4 17 Signed a the letter of intent for strategic alliance with the Veterans Affairs Council (VAC). 11 17 Promoted the "Dairy Cow Health Checkup University-Industry Collaboration" between the Department of Veterinary Medicine and Creation Food Co., Ltd. to introduce Taiwan's fist "Complete Dairy Cow Full-Scale Health Checkup Program". 3 The Center for University Social Responsibility Ministry of Education signed an agreement with 8 universities online and co-organized SIG learning activities with NPUST. 4 17
	Opening/Unveiling	<ul style="list-style-type: none"> Opened and unveiled the Joint Office of the Alumni Association of NPUST and Department Alumni Associations. (SDG11,17) 11 17 Openen the "Future Dreams, High-Tech Venue: Mong Shang Gymnasium 2.0". 3 9 Unveiled the Smart Media Research Center and the Sustainable Healthcare Center. 3 4 8
	Awards	<ul style="list-style-type: none"> Ranked top of universities of science and technology (USTs) in Taiwan and among the world's top 301-400 universities at the Impact Rankings by <i>Times Higher Education</i>. Earned the first prize for "Ecology Co-Benefit" at the 2nd USR Awards 2021 by <i>Global Views Monthly</i> with the project "Building a Pureland on Earth for Human-Bear Co-Prosperity and Co-Living". Dean Shih-Chu Chen of the College of Veterinary Medicine was awarded the 2021 National Award for Distinguished Contribution to Industry-Academia Cooperation Earned the Platinum Award for the University Sustainability Report at the 2021 Taiwan Corporate Sustainability Awards (TCSA) with the NPUST 2020 Sustainability Report.
	Vocational Senior High School	<ul style="list-style-type: none"> Affiliated National Fongshan Senior Commercial & Industrial Vocational School (FSVS) to NPUST and passed the six-month preparation. 4

Sustainability-Related Major Events in Past 3 Years

Year/Amount	Event Type	Event
 2022	President Handover	<ul style="list-style-type: none"> Former President Dr. Chang-Hsien Tai handed over to the new president Dr. Chin-Lung Chang.
	Strategic Alliance/MOC/ University-Industry Collaboration	<ul style="list-style-type: none"> Signed a the letter of intent for strategic alliance with the National Research Institute of Chinese Medicine, MOHW, on the technology R&D of medicinal herb plantation. 3 Signed the cooperation agreement with the Taiwan Hakka Culture Development Center, Hakka Affairs Council on the academic research and cultural education and promotion of Hakka and ethnic relations and others. Signed a the letter of intent for strategic alliance with Ministry of Health and Welfare Pingtung Hospital to promote industrial upgrading and talents development. 3 Signed a strategic alliance agreement with Pihong Technology Co., Ltd. and Phoenix Battery Corporation for the co-development of renewables. 7 Signed the sister school MOC with Bulent Ecevit University and Ankara University of Turkey. 4 17 Signed a strategic alliance agreement with ANT for collaboration on talents development. 8 14 Signed a a the letter of intent on cooperation with the Overseas Community Affairs Council (OCAC) to promote Southeast Asia High-Tech Agricultural Talents Training Base. 2 4 8 10 17 Signed the university-industry MOC with CECI Engineering Consultants, Inc., Taiwan to improve national engineering quality together. 8 9 Signed a strategic alliance agreement with Crowne Plaza An Ing Hotel Tainan for talents development. 8 Advocated the establishment of the Taiwan University Alliance for Sustainable Governance (TUASG) with eight national universities to take up the sustainable development and social responsibility of universities and achieve the goal of sustainable development through collaboration.  Signed a MOC with Isabela State University of the Philippines to establish the sister school relationship. 4 17 Signed a MOC with the BaFang Dumpling Welfare and Charitable Foundation to enhance technical talents development through university-industry collaboration to revive the glory of Taiwan's swine industry. 2 4 8
	Opening/Unveiling	<ul style="list-style-type: none"> Opened a grade C softball and baseball field. 3 Opened the Center for Sustainable R&D, Artificial Intelligence and Mechatronics Building, Intelligent Agricultural Machinery Center, Big Data Center & 3D Printing Center. 2 6 7 9 11 12 13 17 Opened the Agricultural Product Value-Added Proofing Center to improve the guidance of processing technology of agricultural products for farmers in Kaohsiung and Pingtung regions. 2 12
	Awards	<ul style="list-style-type: none"> Ranked No. 1 in Taiwan, No. 3 in Asia, and No. 27 in the world for 9 consecutive years at the UI GreenMetric World University Ranking. Ranked top of USTs in Taiwan and among the world's top 201-300 universities at the 2022 Impact Rankings by <i>Times Higher Education</i> (THE), with a progress by 100 places.. Earned the first prize for integrated performance in the technical and vocational education and training (TVET) category and the model award for "Ecology Co-Benefit" with the Reconciliation between Land and the Golden Rice Wave project at the 3rd USR Awards 2022 by <i>Global Views Monthly</i>.

● Operation of University Council Meeting and University Committees

– University Council Meeting-Top Decision-Making Body

NPUST is a national university of science and technology (UST) that does not need a board of director. We have established the Organizational Charter of National Pingtung University of Science of Technology in accordance with Article 36 of the *University Act*, with the “**University Council**” (UC) being the top decision-making body to decide on the important institutional matters. The UC is formed by the “representatives of academic and administrative officers”, “representatives of academic staff”, “representatives of teaching assistants, administrative staff, military training instructors and school nurses, and contract employees”, “representatives of school workers and campus police”, and “student representatives”. UC invites the chairperson of the alumni association to the UC meeting to express opinions so as to ensure the inclusiveness and diversity of school decision-making.

Except for the representatives of academic and administrative officers whose UC term will be the same as their academic and administrative positions, the term of all other UC representatives will be one academic year.

The president convenes at least two UC meetings each academic year to review and oversee the University’s matter’s in relation to sustainability governance, environment protection, and stakeholder engagement.

– Election of President

The NPUST has one president to take charge of institutional administration and institutional development and represents NPUST externally. As the term of former President Chang-Hsien Tai expired on July 31, 2022, the President Election Committee was thus form 10 months before the expiration of his term in accordance with Article 8 of the Organizational Charter of National Pingtung University of Science of Technology. The committee was seated by 21 members, including nine UC representatives (seven academic staff representatives and two administrative staff representatives), nine alumni representatives and independent community representatives, and three MOE-selected representatives. Additionally, the total number of committee members in any gender must at least be one third of all committee members. Professor Chin-Lung Chang was elected as the 7th NPUST president and officially appointed by MOE Minister Wen-Chung Pan on August 1, 2022, with a term of four years.

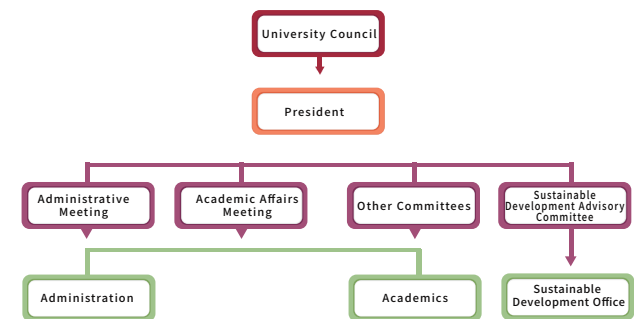


▲ Inauguration ceremony of the new NPUST president.

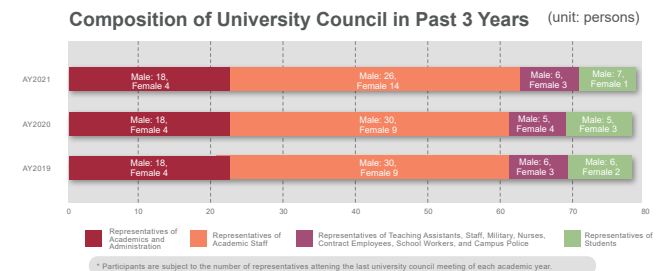
– Operation of Committees

NPUST administrative organizations are established and administrative, research, and instruction units are timely adjusted based on the institutional development planning. Each organization or unit establishes its own organizational charter. The president forms the “Institutional Development Committee” with administrative and academic officers, academic staff representatives, and community representatives to promote and review matters in relation to institutional development. Task forces or working teams are formed in accordance with the organizational charter to address economic (EC), environmental (E), and people (P) impacts. Additionally, stakeholders within the school will be the members or participate in these task forces and working teams to conduct performance evaluation.

*Please refer to the [Organizational Charter of National Pingtung University of Science and Technology](#) for the details regarding the composition of NPUST committees.



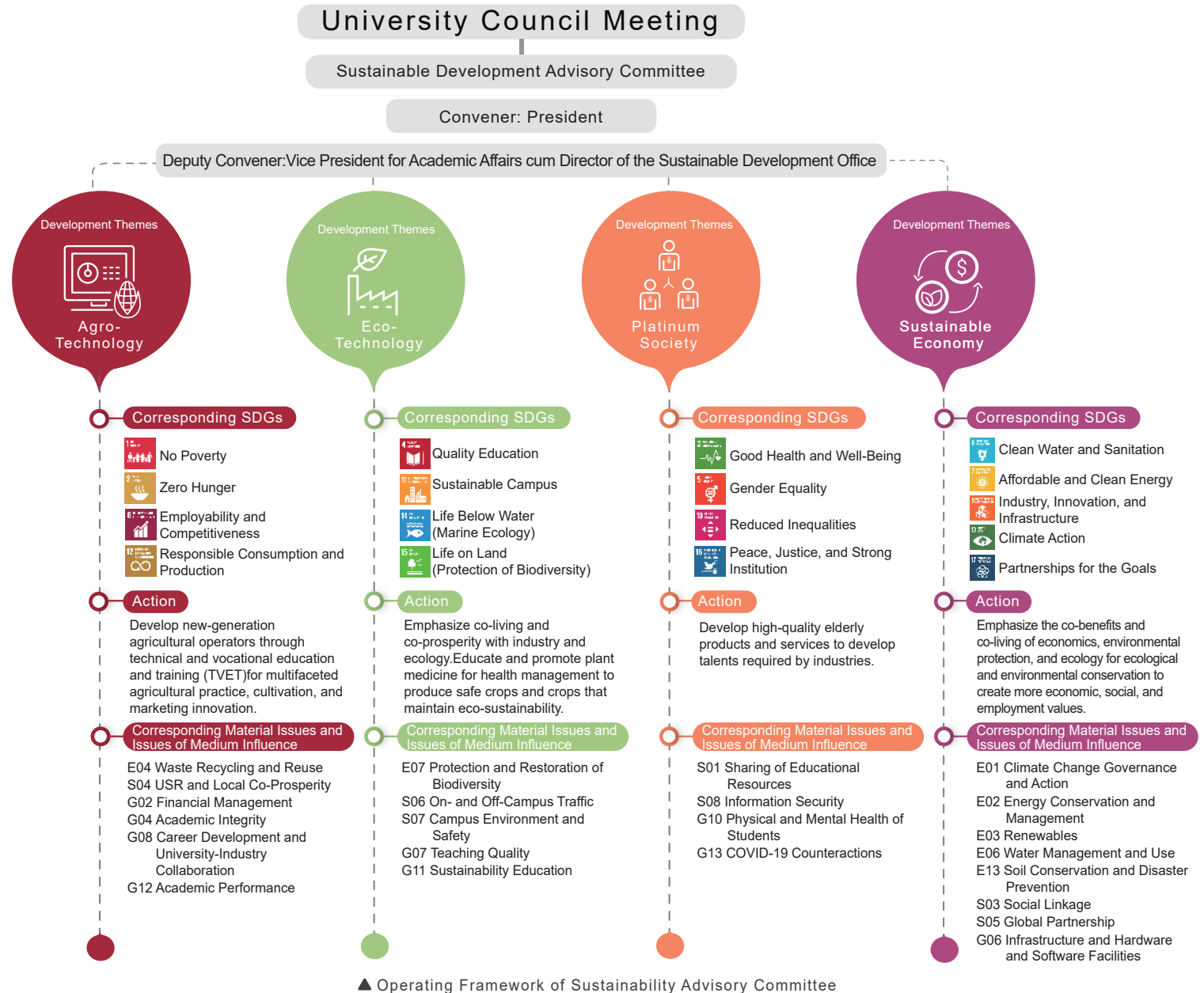
▲ Operating Framework of UC and Committees



● Sustainability Development Advisory Committee

We have specifically established the NPUST Sustainable Development Office (SDO) to unfailingly manage sustainability and social responsibility and create the sustainable campus culture. We integrate the spirit of sustainability development into education, R&D, operations, and social service to comply with the spirit of SDGs through integrated institutional administration. SDO is chaired by the vice president for academic affairs to lead the CEO, deputy CEO, executive secretary, and assistants to take charge of various sustainable development matters and compile the sustainability report.

We have also established the Sustainability Development Advisory Committee (SDAC) with 25 members. The president and vice president for academic affairs are the convener and deputy convener respectively. SDAC holds at least one meeting each academic year. Based on the four NPUST development themes: Agro-Technology, Eco-Industry, Platinum Society, and Sustainable Economy and in correspondence to the SDGs, the material issues and issues of medium influence, SDAC study, discuss, and assess the University's sustainable development policy and oversee the implementation of sustainable development.



Operation and Aspects of Impacts of NPUST Committees

Committee	Responsible Unit	Number of Representatives	Meeting Cycle	Aspect of Impact
Institutional Development Committee	Office of Secretariat	25	Once each semester	EC, E, P
Sustainability Development Advisory Committee	NPUST Sustainable Development Office Website	26	Once each academic year	EC, E, P
Student Affairs Committee	Office of Student Affairs	19	Once each semester	P
Gender Equality Committee	Office of Student Affairs	19	Once each semester, of whenever there is a case.	P
Meal Service Committee	Office of Student Affairs	26	Once each semester	P
Life and Service Education Steering Committee	Office of Student Affairs	41	Once each semester	P
Traffic Safety Education Committee	Office of Student Affairs	82	Once each semester	E, P
Student Reward and Disciplinary Committee	Office of Student Affairs	14	Once each semester, of whenever there is a case.	P
Campus Bullying Prevention and Response Team	Office of Student Affairs	19	No annual meeting, or whenever there is a case.	P
Student Club Review Committee	Office of Student Affairs	17	Once each semester	P
Club Activity Funding Review Committee	Office of Student Affairs	9	Once each semester	EC, P
Scholarship Review Committee	Office of Student Affairs	41	Once in semester 1 and twice in semester 2.	EC, P
Health Committee	Office of Student Affairs	20	Once each semester	P
Student Grievance Review Committee	Office of Student Affairs	15	whenever there is a case.	P
Special Education Promotion Committee	Office of Student Affairs	36	Once each semester	P

Committee	Responsible Unit	Number of Representatives	Meeting Cycle	Aspect of Impact
Indigenous Students Resource Centers and Advisory Committee	Office of Student Affairs	8	Once each academic year	P
Excellent Student Advisor Reward Evaluation Committee	Office of Student Affairs	7	Once each academic year	P
University Curriculum Committee	Office of Academic Affairs	24	Once each semester, or whenever necessary.	P
College Required Course Instructional Committee	Office of Academic Affairs	16	Once each semester	P
Off-Campus Internship Committee	Office of Academic Affairs	23	Once each semester, or whenever necessary.	P
Distance Learning Committee	Office of Academic Affairs	57	At least once each semester	P
Teaching Excellence Evaluation Committee	Office of Academic Affairs	7-15	1-2 meetings each academic year	P
Student Recruitment Committee	Office of Academic Affairs	8-54	1-3 meetings during recruitment period	P
Campus Planning Committee	Office of Secretariat	24	whenever there is a case.	E, P
General Education Committee	Center for General Education	19	Once each semester	P
Agriculture Promotion Committee	Office of Continuing and Extension Education	16	Once each semester	P
Institutional Animal Care and Use Committee	Laboratory Animal Center	7-15	Once each semester	P
Library Committee	NPUST Library and Exhibition Hall	45	Once each semester	P
Career Development Committee	Office of Career Development	57	Once each semester	P
Information System Management Committee	Computer Center	30	Once each academic year	P

Committee	Responsible Unit	Number of Representatives	Meeting Cycle	Aspect of Impact
Evaluation Steering Committee	Office of Evaluation	11	Once each academic year	P
International Affairs Advisory Committee	Office of International Affairs	21	Twice each semester	P
Center Review Committee	Language Center	7	2-3 meetings each semester	P
General Research Service Center Steering Committee	General Research Service Center	9	whenever there is a case.	P
General Affairs Meeting	Office of General Affairs	21	Once each semester	E, P
University Endowment Fund Management Committee	Office of General Affairs	15	Once each semester or as necessary	EC, P
School Workers (Mechanics and Drivers) Performance Evaluation Committee	Office of General Affairs	13	Once each academic year	EC, P
School Workers Pension Reserve Supervisory Committee	Office of General Affairs	41	Once each semester	EC, P
Biosafety Committee	Center for Environmental Protection, Safety, and Health	14	Once each semester	P
President Election Committee	Personnel Office	21	Once every four or eight years	P
Faculty Evaluation Committee	Personnel Office	30	Three times each semester or as necessary	P
Staff Performance Evaluation Committee	Personnel Office	15	3 meetings each academic year	P
Staff Selection and Evaluation Committee	Personnel Office	15	whenever there is a case.	P

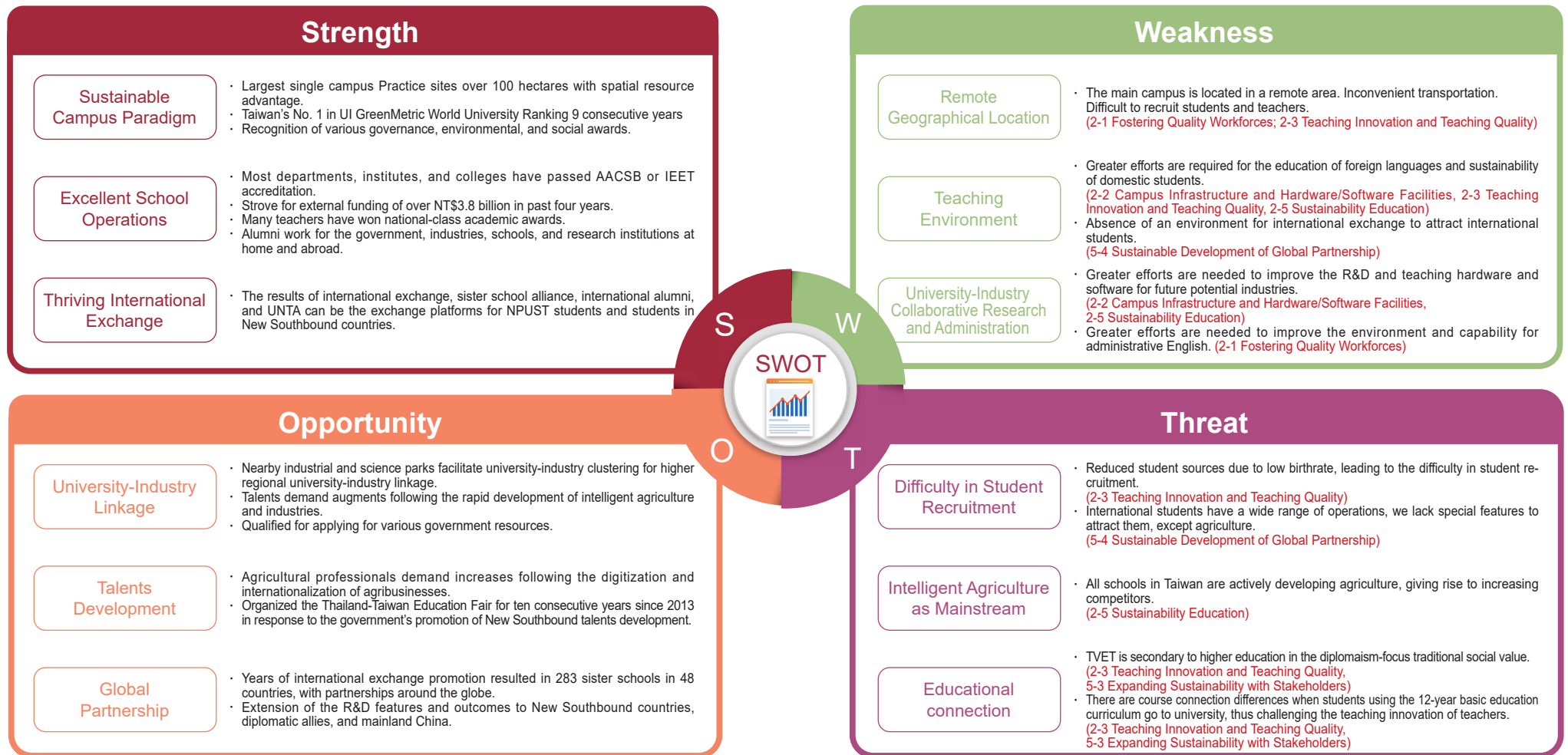
Committee	Responsible Unit	Number of Representatives	Meeting Cycle	Aspect of Impact
Committee for Evaluation of Research Staff Hired With University Endowment Fund	Personnel Office	15	At least once each semester	P
Faculty Grievance Review Committee	Personnel Office	18	whenever there is a case.	P
Staff Grievance Review Committee	Personnel Office	11	whenever there is a case.	P
Intellectual Property Right Advisory Committee	Office of Research and Development	18	At least twice each year	P
University-Industry Collaborative Research Reward Evaluation Committee	Office of Research and Development	18	At least twice each year	P
Technology Transfer Reward Evaluation Committee	Office of Research and Development	11	Once each year	P
Instrument Management Committee	Office of Research and Development	12	At least once each year	P
Incubation Center Promotion Committee	Office of Research and Development	10	1-2 meetings each year	P
Committee for Evaluation of Faculty Research Allowances	Office of Research and Development	11	Once each year	EC, P
NSTC Research Funding Evaluation Committee	Office of Research and Development	18	3 times each year	P
Faculty Research Outcome Competition Evaluation Committee	Office of Research and Development	8	Once each year	P
Journal Paper Reward Evaluation Committee	Office of Research and Development	10	Once each year	P
Committee for Selection of Distinguished Professors with Outstanding Contribution	Office of Research and Development	10	Once each year	P
Distinguished Professor Evaluation Committee	Office of Research and Development	9	2 times each year	P
Research Outcomes Management and Use Audit Team	Office of Research and Development	5	At least once each year	P
IP Rights Protection Publicity and Promotion Team	Office of Research and Development	19	At least once each year	P

*EC=economic, E=environmental, and P=people

► 1-3 Concept and Vision of Sustainable Development GRI 2-22

● SWOT Analysis

SWOT analysis shows that we can integrate the geographic, spatial, and resource advantages to develop tropical agriculture as the sixth industry so as to overcome the geographic and regional limitations. Apart from enhancing international competitiveness with the internationally famous tropical agricultural features, we will guide academic staff to engage in interdisciplinary cooperation and attract outstanding students by integrating the features of the seven NPUST colleges to address the current instructional and R&D bottlenecks and the threat of low birth rate. Our responses to the strengths, weaknesses, opportunities, and threats of NPUST are shown below.



● Development Goals and Visions

To achieve sustainable institutional governance, we have integrated the 17 SDGs into our medium- and long-term institutional development plans and combined the institutional resources to develop talents with three qualities (professional, international, and holistic); to develop and optimize the characteristics of tropical agriculture, enhance the effectiveness of university-industry collaboration, increase talents development and academic research capacity, extend international cooperation and academic exchange, enhance international competitiveness, and set deepening and strengthening theory-practice integration, cross-discipline, and innovation as the mission; and to turn NPUST into a teaching and research university to fulfill the vision of a first-rate agricultural UST.



▲ Sustainable Development Vision

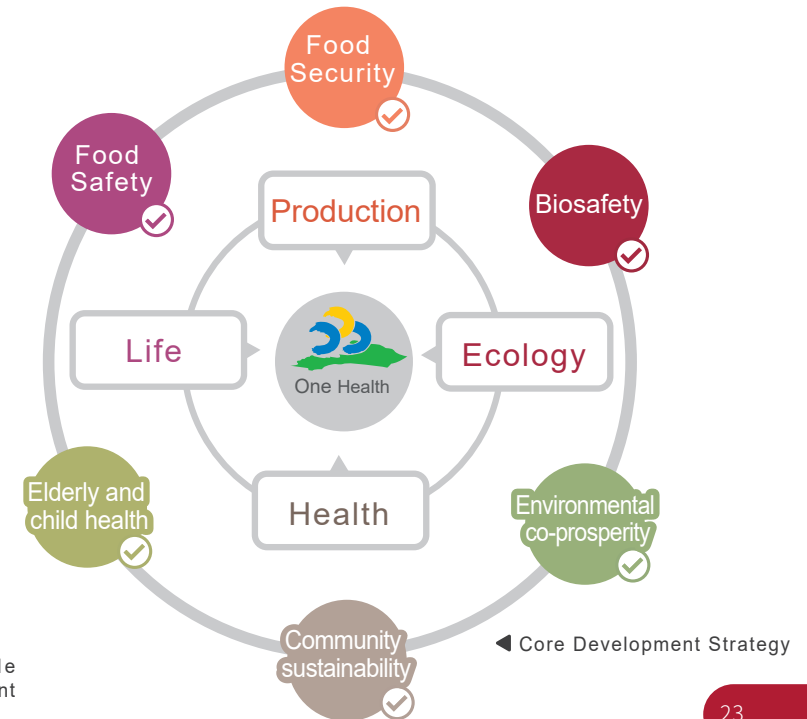


● Sustainable Development Themes and Strategies

We emphasize the interdisciplinary integration of features of the seven NPUST colleges; actively develop smart machinery, green energy technology, biomedicine, new agriculture, and circular economy in correspondence to the "5+2" Innovative Industries Plan; and explicitly implement the commitment of and realize university sustainability and USR through ten action plans.

Facing the challenges of climate change, energy crisis, illnesses, hunger, and international conflicts, we align with the spirit of the 17 SDGs and set "agro-technology", "eco-industry", "platinum society", and "sustainable economy" as our four development themes so as to devote to the Earth's sustainable development.

In response to the international "one health" concept, we set the "production, ecology, life, and health" (PELH) as the core development strategy and food security, food safety, intergenerational health, community sustainability, environment co-prosperity, and biosafety as the directions for development towards the goal of "one health" balancing human health, biohealth, and environmental health, so as to achieve USR and the 17 SDGs.



► 1-4 Sustainable Financial Management GRI 201-4 | SV-ED-270a.3

Our sustainable financial management strategy includes: increase income, effectively enhance budget management, and improve operating performance to promote institutional development goals and implement action plans, while optimizing financial self-determination and sustainability at the same time.

● Financial Highlights

Government subsidization and self-raised fund are the main sources of income of NPUST. To increase self-raised income, we have established the Investment Management Team to assess investment targets. Currently, we secure steady income mainly through the NTD and USD term deposits of the university endowment fund and capital. The 2022 income from interest was NT\$16.12 million. In addition to investing the self-raised fund in instructional and research facilities, we also give back to students, industries, and society.

Our total assets have been increasing over the past three years. In 2022 the total income increased by 3% over 2020, and the government subsidy also increased by 6.76% over 2020 to NT\$1,342,390,000. To develop a better environment for instruction and learning, we increase our investment in teaching, research, student guidance, cooperative education, continuing and extension education, student scholarships and incentives every year. The total expenses on related funds in 2022 increased by 4.83% over 2020.

Total Assets in Past 3 Years (unit: NT\$10 thousands)

Title/Year	2020	2021	2022
Total Assets	846,345	850,305	856,469

Amount of Incomes in Past 3 Years (unit: NT\$10 thousands)

Title/Year	2020	2021	2022
Total Income	254,686	252,439	262,547
Income from Government Subsidization	125,738	126,948	134,239
Income from Subsidization for Teaching and Research	99,647	99,647	105,592
Income from Other Forms of Subsidization	26,090	27,301	28,647
Self-Raised Income	128,948	125,491	128,308
Income from Tuition and Fees	47,927	48,019	47,955

Amount of Incomes in Past 3 Years (unit: NT\$10 thousands)

Title/Year	2020	2021	2022
Income from Cooperative Education	62,916	63,236	65,984
Income from Continuing and Extension Education	1,169	1,030	1,282
Income from Royalties	581	1,226	888
Miscellaneous Income	648	618	631
Income from Interest	1,512	1,416	1,612
Balance from Currency Exchange	0	0	167
Income from Asset Use and Royalty	5,796	4,195	4,655
Income from Donation	1,219	1,220	1,161
Income from Indemnification (Compensation)	0	0	0
Income from Fines for Non-Compliances	111	107	87
Miscellaneous Income	7,069	4,424	3,886

Amount of Expenditures in Past 3 Years (unit: NT\$10 thousands)

Title/Year	2020	2021	2022
Total Expenditure	263,173	269,978	274,518
Cost of Teaching, Research, and Student Guidance	155,938	159,981	162,260
Cost of Cooperative Education	61,898	63,006	65,825
Cost of Continuing and Extension Education	1,169	1,022	1,277
Student Scholarships and Incentives	5,770	5,843	6,277
Managerial Expense and General Affairs Expense	30,053	31,062	31,036
Research and Development Expenses	581	1,226	888
Miscellaneous Business Expenses	645	612	627
Deficit from Currency Exchange	617	551	0
Deficit from Property Transaction	13	43	4
Miscellaneous Expenses	6,489	6,632	6,324

● Financial Management and Performance

Except in 2021 under the influence of COVID-19, our university endowment fund increased, on principle, every year over the past three years to NT\$2.62 billion in 2022. This amount included the basic MOE subsidization at 51.1% and self-raised income at 48.9%. Although the actual expense on institutional development practice also increased, due to the effective financial management and the depreciation and amortization excluded from the calculation of surplus and deficit, the final accounting of the past three years shows a **substantive surplus in a good financial condition**.

In accordance with Article 9, paragraph 1, Act for Management and Supervision of Endowment Fund for National Universities, the maximum amount of personnel expense must not exceed 50% of the school's self-raised income in the most recent year. Our personnel expense during 2020-2022 did not exceed the 50% of the income as shown in the annual accounts. To optimize instructional space and facilities, we engaged in a number of construction projects for sustainable development in the past three years. Although the amount of available funds reduced, **the amount of the actual available funds was still above the statutory standard**.

Improvement Plans for Available Funds with Unaccomplished Annual Targets (over 2020)

Project with Unaccomplished Targets/Year	2021	2022
Available Fund	Reduced by 14.3%	Reduced by 38.3%
Improvement Plan	Actively increase the proportion of self-raised income; strive for projects from MOE, government departments, and private businesses; offer continuing and extension education courses to increase income and actively raise funds; and increase income, effectively enhance budget management, and improve operational performance.	

Available Funds After Final Accounting in Past 3 Years

(unit: NT\$ 10 thousand)

Title/Year	2020	2021	2022
Cash and Term Deposit	199,580	196,476	175,921
Add: Short-term realizable assets	5,378	3,216	4,964
Less: Short-term payable liabilities	80,451	87,498	90,203
Less: Number of unrealized subsidization plans in capital account	1,963	2,337	2,064
= Available Fund (H)	122,544	109,857	88,618

Incomes and Expenditures (Final Account) in Past 3 Years

(unit: NT\$10 thousands)

Title/Year	2020	2021	2022
MOE Basic Subsidization	99,647	99,647	105,592
MOE Additional Subsidization (including competitive projects)	26,091	27,300	28,647
Self-Raised Income	128,948	125,492	128,308
Total Income	254,686	252,439	262,547
Total Expenditure (excluding depreciation)	226,012	230,921	243,006
Total Expenditure (including depreciation and amortization)	263,175	269,978	274,518

Amount of Personnel Expense in Self-Raised Income After Final Account

(NT\$ 10 thousand)

Title/Year	2020	2021	2022
Amount of Basic Salary of Personnel within Staff Complement (plus any seniority salary) and Extra-Allowance Payments	10,163	9,993	11,913
Expenses of Personnel Outside Staff Complement	37,224	52,150	46,623
Remuneration for Credits in Self-Raised Income of Personnel within Staff Complement	1,062	1,185	1,040
Total Amount of Payments within 50% of Self-Raised Income Under Article 9, Paragraph 1, Act for Management and Supervision of Endowment Fund for National Universities (A)	48,449	63,328	59,576
Self-Raised Income After Financial Account in the Most Recent Year (B)	133,485	128,948	125,491
Ratio of Personnel Expenses within 50% of Self-Raised Income Under Article 9, Paragraph 1, Act for Management and Supervision of Endowment Fund for National Universities (C=A/B)	36.30%	49.11%	47.47%

Substantive Surplus/Shortage After Financial Account in Past 3 Years (unit: NT\$ 10 thousand)

Title/Year	2020	2021	2022
Total Income	254,686	252,439	262,547
Total Expenditure	263,175	269,978	274,518
Add: Amount of depreciation and amortization excluded from surplus/deficit calculation	18,940	17,772	13,091
Substantive Surplus/Deficit	10,451	233	1,120

Average Monthly Cash Current Expenditure After Final Account in Past 3 Years (unit: NT\$10 thousand)

Title/Year	2020	2021	2022
Total Operational Expenditure	268,807	263,175	269,978
Less: Depreciation, Depletion, and Amortization	35,264	37,164	39,057
Less: Cost of Cooperative Education	64,456	61,898	63,006
Add: Depreciation, Depletion, and Amortization Under Cost of Cooperative Education	2,041	2,255	2,141
= Cash Current Expenditure (I)	171,129	166,368	170,056
Monthly Cash Current Expenditure (J=I/12)	14,261	13,864	14,171
Multiples of Available Funds in Monthly Cash Current Expenditure After Final Account in the Most Recent Year (K=H/J)	27.1	7.92	6.25

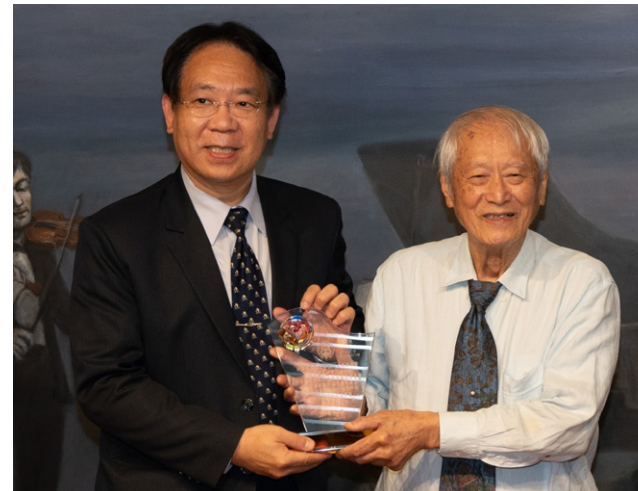
We actively strive for projects from the industry, government, academic institutions, and research institutions. In the past three years, the amount of subsidization and income from project implementation was over NT\$2.9 billion, including over NT\$2.1 billion from university-industry collaboration projects (non-MOE-commissioned and subsidized projects). Despite the macroeconomic slump due to COVID-19 during 2020-2022, thanks to the increased demand for technology in relation to agriculture, food security, environment protection, disaster prevention, and epidemic control due to climate change and the society aging trend, based on the four institutional development themes and through integrating the advantages of our interdisciplinary teams, **we maintained growth against the prevalence of COVID-19 in 2022 by implementing government-subsidized projects and commissioned projects with a total amount of over NT\$1 billion.** To enrich the university funds and improve teaching and research facilities, we actively strove for cash and equipment donation from enterprises, alumni, and communities. During 2020-2022 we received donation amounting to over NT\$78.16 million.

Amount of Confirmed Subsidized and Commissioned Projects in Past 3 Years (unit: NT\$10 thousand)

Fund Source/Year	2020	2021	2022
Council of Agriculture (now Ministry of Agriculture)	20,143	23,492	31,564
Ministry of Science and Technology (now National Science and Technology Council)	14,679	14,266	11,509
Other MOST (NSTC) Projects	2,285	1,638	1,956
Ministry of Education	28,366	27,105	23,308
Other Central Government Projects	3,160	5,706	12,009
Local Government	6,127	5,098	6,493
Other Private Businesses	4,207	4,437	5,163
Suppliers and Private Businesses	12,129	11,636	14,044
Total	91,098	93,378	106,047

External Donations in Past 3 Years

Year	Category	Business	Alumni	Animal Shelter	Others	Total (NT\$)
2020	Cash Donation	3,821,223	572,974	3,276,517	3,252,974	10,923,688
	Equipment Donation	9,189,771	-	-	504,491	9,694,262
2021	Cash Donation	3,256,564	934,000	3,076,851	3,860,579	11,127,994
	Equipment Donation	24,898,369	-	-	-	24,898,369
2022	Cash Donation	5,042,500	1,153,377	2,017,196	2,517,459	10,730,532
	Equipment Donation	10,791,041	-	-	-	10,791,041
Total (NT\$)		56,999,468	2,660,351	8,370,564	10,135,503	78,165,886



◀ President Chin-Lung Chang presented the Institutional Development Contribution Award and MOE Trophy to Professor Ching-Jung Chen of the CJ-Chen Art Education Foundation for donating works valued tens of millions of NTD for collection by NPUST.



▲ President Chin-Lung Chang presented the Institutional Development Contribution Award and MOE Certificate of Appreciation to Chairperson Pao-You Liu of Merry Yard International Enterprise for donation of NT\$1 million to sponsor the construction of the "Lagoon Bookstore" and "Lagoon Florist" in the library.



▲ President Chin-Lung Chang presented the Institutional Development Contribution Award and MOE Certificate of Appreciation to Chairperson Chien-Ching Chang of Taiwan Hipoint Corporation for donation of the plant research environment simulator valued over one million NTD for university-industry collaboration.



▲ President Chin-Lung Chang presented the Institutional Development Contribution Award and MOE Certificate of Appreciation to TCI Co., Ltd. for donation of over NT\$1 million to build the "biodiversity park" together with NPUST.

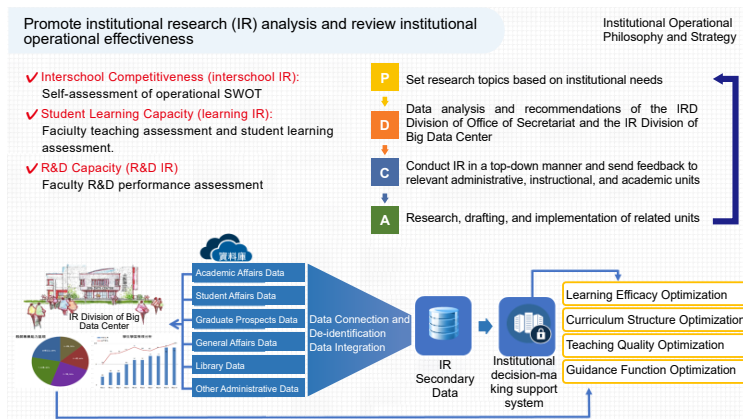


▲ President Chin-Lung Chang presented the Institutional Development Contribution Award and MOE Certificate of Appreciation to the survivor of late NPUST President Dr. Meng-Hsiang Hsu for donation of over NT\$1 million in the name of Dr. Meng-Hsiang Hsu as scholarships for students from low-income families.

► 1-5 Risk Management and Assessment GRI2-18

In addition to the professional institutional research (IR) system, we have also established an internal audit mechanism to control various internal controls and assess risks to reduce risk so as to achieve the goal of sustainable development and maintain the rights and interests of stakeholders.

● Institutional Analysis and Operational Performance Review



● Internal Control Mechanism

We have established the “Internal Control Project Team” in accordance with the “Internal Control Optimization Implementation Plan” of the Executive Yuan. The team is chaired by the vice president for administrative affairs to establish, oversee, and control various operations for internal control and risk assessment.

– Internal Control System and Implementation

We have established and implemented the “NPUST Internal Control system”. All administrative and academic units select items requiring risk control, plan the relevant operating procedures, and complete the overall and operational self-assessments to ensure the effectiveness of implementation of NPUST’s action plans.

After the audit, the “University Endowment Fund and Internal Audit Team” submit an audit report to the UC meeting, and the president will sign the “Statement of Internal Control”. The contents and processes of internal control are published on [Internal Control Section](#) of the NPUST website. **The 2021 and 2022 audit results show no non-compliances.**

● University Endowment Fund and Internal Control and Audit

To optimize fund management and utilization, increase fund value and improve operational performance, ensure the continued effectiveness of the internal control, and implement the internal audit function.

The 2021 audit was postponed due to COVID-19 prevalence. For the onsite audits, the audit team held two meetings and selected 12 audit items in 2021 and held four team meetings and selected 16 audit items in 2022. Every year we publish the “Internal Control and University Endowment Fund Audit Report” on the “[Institutional Information Disclosure Section](#)”.



▲ NPUST University Endowment Fund & Internal Control and Audit Process

● Institutional Information Disclosure

We are Taiwan’s first UST to launch the Institutional Information Disclosure demonstration site.



● University Evaluation Performance

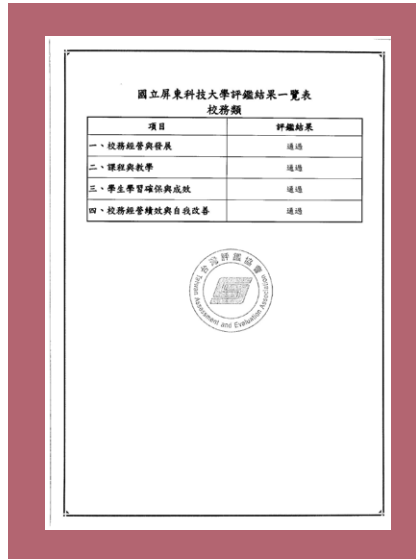
Our operational performance has earned recognition from all parts of society. During the 2019 MOE University of Science and Technology Evaluation, we passed all four institutional evaluation items, including “school positioning and features”, “curriculum and instruction”, “student learning assurance and efficacy”, and “institutional operational performance and self-improvement”, and the professional department/institute evaluation.

In 2019 the departments and institutes of the College of Agriculture, College of Management, International College, and College of Veterinary Medicine commissioned the Higher Education Evaluation and Accreditation Council of Taiwan (HEEACT) to implement quality assurance and accreditation. A total of 12 departments and institutes passed the accreditation for six years, and 6 departments and institutes passed the accreditation for three years. The departments and institutes of the College of Engineering and the College of Humanities and Social Sciences applied for accreditation to the Institute of Engineering Education Taiwan (IEET), and 5 departments and institutes passed the accreditation for six years and 8 departments and institutes passed the accreditation for three years. Departments and institutes passing the accreditation for three years received the interim audit in 2022 and passed the three-year accreditation.

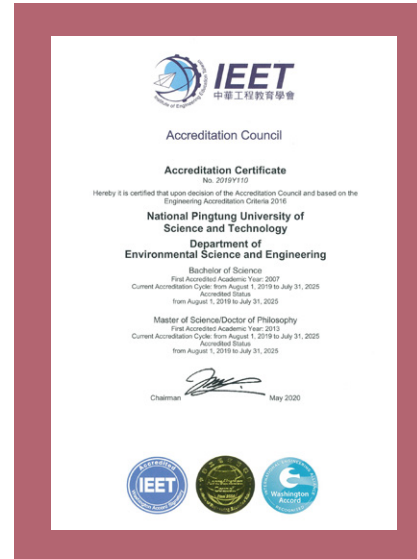
At HEEACT’s “2022H2 Collegiate Teacher Education Evaluation” in 2022, the Center for Teacher Education “passed” all six evaluation items.

In 2022 we also passed the international accreditation of the Association to Advance Collegiate Schools of Business (AACSB), promoted to the world’s top 6% collegiate schools of business.

In 2022 we participated in the QS Stars University Ratings for the first time and earned 4 stars (Very Good) for overall performance. Among the 8 rating categories, we were rated 5 stars (Excellent) in six items, including teaching quality, facilities, innovation, employability, academic development, and inclusiveness.



▲ Four institutional evaluation items and professional departments and institutes evaluation



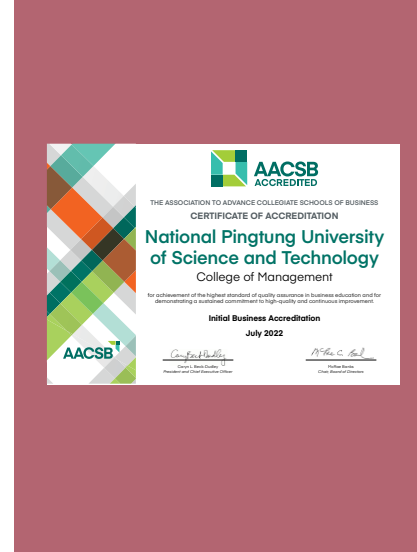
▲ Institute of Engineering Education Taiwan (IEET) Accreditation



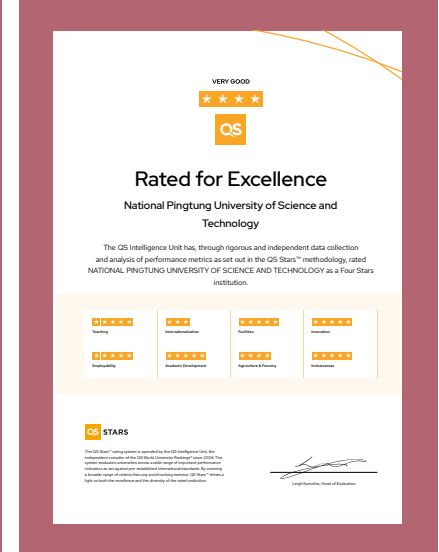
▲ Institute of Engineering Education Taiwan (IEET) Accreditation



▲ HEEACT Collegiate Teacher Education Evaluation



▲ AACSB International Accreditation



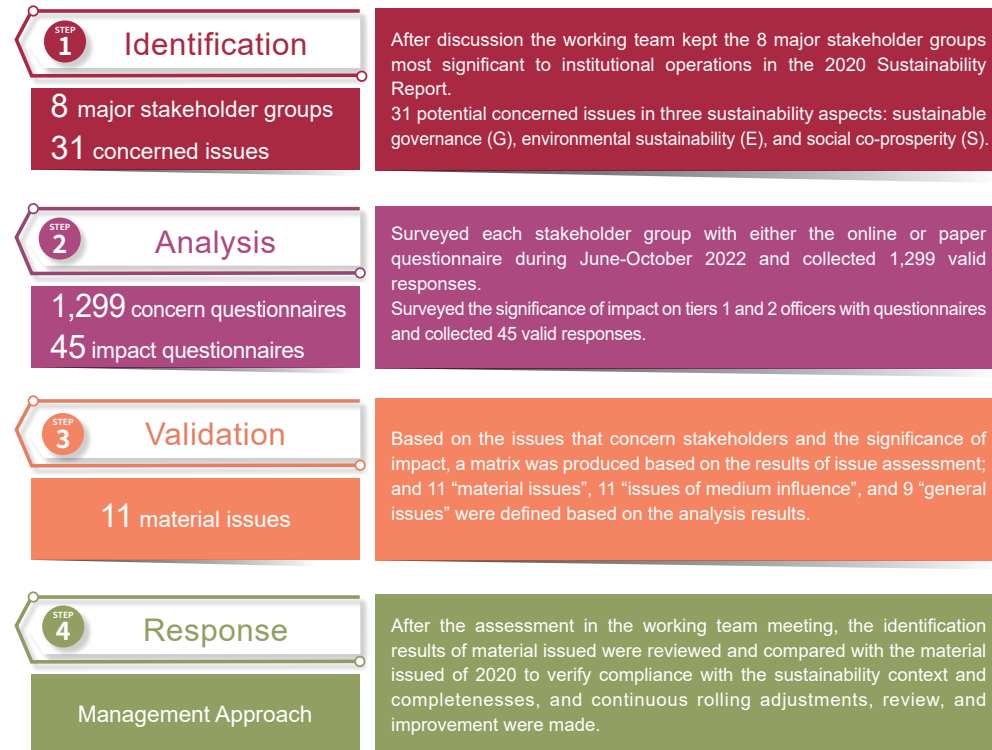
▲ QS Stars Ratings

► 1-6 Stakeholder Inclusiveness (GRI 2020)

GRI 2-4, GRI 2-23~26, GRI 2-29, GRI 3-1~3

In compliance with the principles for defining report content: stakeholder inclusiveness, sustainability context, and completeness, of the GRI Standards (2020), we developed a sustainability questionnaire to measure the issues that concern stakeholders through the questionnaire survey and the statistical analysis of survey results. We also included sustainability issues when considering the significance of impact and risk assessment of environmental, social, and governance (ESG) issues to identify the material issues of NPUST for the reference of addressing stakeholders and establishing management approaches, as well as amending our sustainability management strategies and long-term goals. We also used these results for the reference of sustainability report preparation so as to inventory the current status of our sustainability performance and encourage all units to make continual improvement to achieve the ultimate goal of stakeholder inclusiveness.

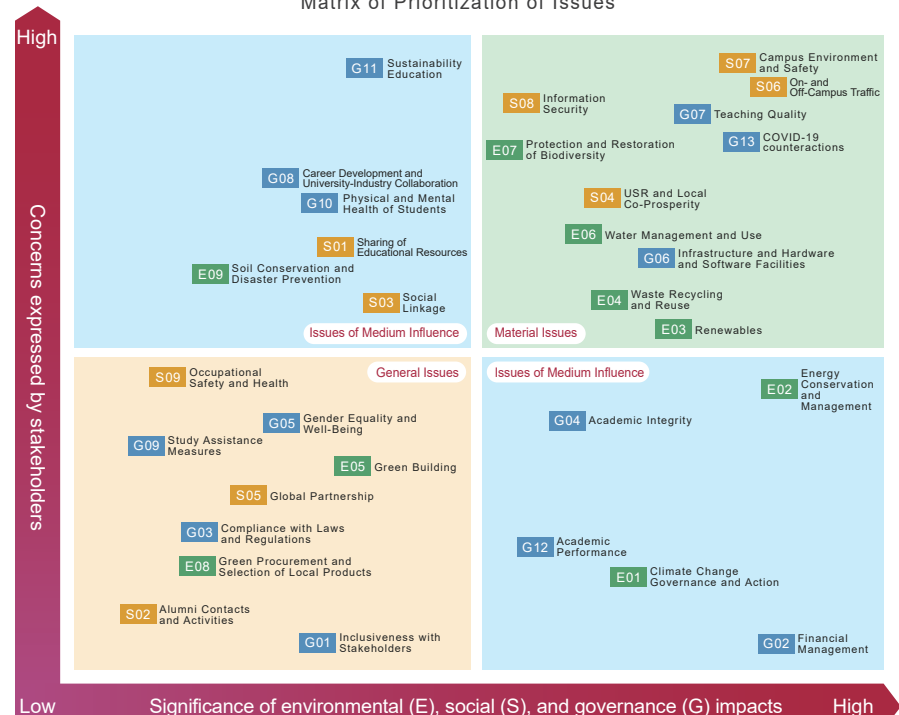
Process for Assessing Stakeholders and Material Issues



● Identification of Sustainability Issues

To ensure access to the stakeholder opinions, we gathered sustainability-related issues with reference to the GRI Standards, SDGs, and social development trends. Then, we consolidated 31 ESG issues for materiality investigation. To measure the tension of stakeholders in individual sustainability issues, we conducted both online and paper surveys for stakeholders to express their tension over the sustainability issues that concern them. Then, levels 1 and 2 NPUST officers were asked to assess the significance of impacts of various ESG issues. Lastly, a total of 11 material issues were identified after statistical analysis. Through discussion the working team identified that "global partnership" is also a material issue to NPUST, thus making up to a total of 12 material issues for prioritizing disclosure and establishment of short-, medium-, and long-term targets. As issues of medium influence and general issues are potential issues of NPUST, we still disclose the focus and effectiveness of the actions taken in this Report.

Matrix of Prioritization of Issues



● Disclosure of Material Issues and Analysis of Their Boundaries

Aspect	12 Material Issues	Boundaries of Impact on Value Chain												Corresponding GRI Material Topic/ Self-Defined Topic	Corresponding SDG	Corresponding
		Section				Outside of Organization				Positive	Negative	Actual	Potential			
		Students	Academic/ Administrative Staff	Parents	Communities and Residents	Government and NGOs	Suppliers	Alumni	vocational senior high School							
Sustainability Governance (G)	G06 Infrastructure and Hardware/ Software Facilities	●	●	◎	◎	◎	●	◎	●	✓		✓		G101 Campus Development	4.7	2-2 Campus Infrastructure and Hardware/ Software Facilities
	G07 Teaching Quality	●	●	●	◎	●	◎	●	●	✓		✓		G102 Faculty Quality	4.7	2-3 Innovative Teaching and Teaching Quality
	G13 COVID-19 Countermeasures	●	●	●	●	●	◎	◎	◎			✓	✓	G103 Study at Ease	3.3	2-6 COVID-19 Counteractions
Environmental Sustainability (E)	E03 Renewables	◎	●		◎	●				✓			✓	GRI302 Energy	7.1	4-1 Low-Carbon Campus
	E04 Waste Recycling and Reuse	◎	●		◎	●	●			✓			✓	GRI306 Waste	11.6, 12.4, 12.5	4-1 Low-Carbon Campus
	E06 Water Management and Use	◎	●	◎	◎	●				✓		✓		GRI303 Water and Effluents	6.3, 6.5	4-2 Sustainable Water Management
	E07 Protection and Restoration of Biodiversity	◎	●	◎	◎	◎				✓		✓		GRI304 Biodiversity	12.2, 15.4, 15.5	4-3 Protection and Restoration of Biodiversity
Social Co-Prosperity (S)	S04 USR and Local Co-Prosperity	●	●	◎	●	●	◎	●	●	✓		✓		GRI413 Local Communities	11.A, 12.B, 17.17	5-3 Expanding Sustainability with Stakeholders
	S05 Global Partnership	●	●	◎		◎		●		✓		✓		S101 Global Partnership	17.16	5-4 Sustainable Development of Global Partnership
	S06 On-Campus and Off-Campus Traffic	●	●	●	●	◎	◎	◎	●			✓	✓	S102 Sustainable Commuting	11.2	5-1 Campus Safety
	S07 Campus Environment and Safety	●	●	●	◎	◎	◎	◎	◎			✓	✓	S103 Campus Safety	11.1	5-1 Campus Safety
	S08 Information Security	●	●			◎	●		◎	✓			✓	GRI418 Customer Privacy	16.10	5-1 Campus Safety

● Direct Impact ◎ Indirect Impact

Management Approaches

Apart from aligning with the SDGs, we also correspond our 6th Institutional Development Plan to the material issues and issues of medium influence that concern stakeholders and establish management approaches corresponding to the material topics in the GRI Standards for each responsible unit to achieve the short-, medium-, and long-term targets in sustainability governance, environmental sustainability, and social co-prosperity through specific strategies and actions.

Alignment of the 6th Institutional Development Plan with the 17 SDGs

Aspect of Sustainable Development	Sustainability Governance (G)			Environmental Sustainability (E)	Social Co-Prosperity (S)
	Sustainable Operations	Teaching and Learning	Research and University-Industry Collaboration		
Corresponding SDG Targets	4.7 16.2 16.7	3.4 4.7	4.4 4.7 8.6 17.16	6.3 6.5 7.1 11.6 12.2 12.4 12.5 13.1 13.2 13.3 15.4 15.5	1.4 4.3 4.5 11.A 12.B 17.2 17.17
Corresponding Material Topics	G101 Campus Development G102 Faculty Quality G103 Study at Ease			GRI 303 Water and Effluents GRI 304 Biodiversity GRI 306 Waste	GRI 413 Local Communities GRI 418 Customer Privacy S101 Global Partnership S102 Sustainable Commuting S103 Campus Safety
Corresponding Material Issues and Issues of Medium Influence	G02 Financial Management G04 Academic Integrity G13 COVID-19 Countermeasures	G06 Infrastructure and Hardware/Software Facilities G07 Teaching Quality G10 Student Physical and Mental Health G11 Sustainability Education	G08 Career Development and University-Industry Collaboration G12 Academic Performance	E01 Climate Change Governance and Action E02 Energy Conservation Management E03 Renewables E04 Waste Recycling and Reuse E06 Water Management and Use E07 Protection and Restoration of Biodiversity E09 Soil Conservation and Disaster Prevention	S01 Sharing of Education Resources S03 Social Linkage S04 USR and Local Co-Prosperity S05 Global Partnership S06 On-Campus and Off-Campus Traffic S07 Campus Environment and Safety S08 Information Security
Action Plans	Action Plan 1: Enlighten Intelligence and Deepen TVET Action Plan 2: Talents Development and Student Fulfillment Action Plan 4: Student Character Formation and Career Development Action Plan 6: R&D and University-Industry Collaboration Action Plan 8: Improve Reading Quality and Build An Artistic Campus Action Plan 9: Promote A Digital Lifestyle and Build Cloud Integrated Services Action Plan 10: Administrative Reformation and Efficiency Enhancement			Action Plan 7: Towards A World's Top University Action Plan 9: Promote A Digital Lifestyle and Build Cloud Integrated Services Action Plan 10: Administrative Reformation and Efficiency Enhancement	Action Plan 1: Enlighten Intelligence and Deepen TVET Action Plan 3: Cultivate Taiwan, Embrace the World Action Plan 5: Extend Excellent Achievements, Fulfill Social Responsibilities
2021-2026 Institutional Development Plan Targets and Themes	World's first-rate agriculture university of science and technology	Develop professional, international, and holistic talents	Deepen and strength theory-practice integration, cross-discipline, and innovation; develop and optimize the characteristics of tropical agriculture; improve the effectiveness of university-industry collaboration.	Eco-technology and sustainable economy, emphasize the co-living and co-prosperity of industry and ecology, and the reciprocity and symbiosis of economy and environmental protection.	Develop talents for industries relating the platinum society; enhance international cooperation and academic exchange, enhance international competitiveness.

Corresponding Material Issues and Issues of Medium Influence and Management Approaches: Sustainability Governance (G-1)

Aspect of Sustainable Development	Institutional Operations (G-1)		
Corresponding Material Issues and Issues of Medium Influence	G02 Financial Management	G04 Academic Integrity	G13 COVID-19 Countermeasures
Policy/Commitment	1. Actively increase the proportion of self-raised income; strive for projects from MOE, government departments, and private businesses; offer continuing and extension education courses to increase income; and actively raise funds to increase income. 2. Strengthen internal control and implement internal audit, control various internal control mechanisms and lower risk. 3. Optimize fund management and utilization, increase fund value and improve operational performance, ensure the continued effectiveness of the internal control system. 4. Establish the "Regulations for Academic Integrity Management and Self-Discipline", develop the academic integrity education mechanism, and ensure the suitability and legality of academic activities. 5. Improve administrative and academic performance; build a sustainable campus for quality teaching, research, learning, guidance, and service.		
Targets and Current Actions	1. Establish the 6-Year Institutional Development Plan and make rolling modification. 2. Establish various committees according to the university organizational charter, smoothen institutional operations, and actively communicate with stakeholders. 3. Implement budget execution, management, and evaluation, strengthen the internal control mechanism, and ensure financial transparency. 4. Implement institutional accreditation and professional department/institute evaluation through professional accreditation/evaluation bodies; implement analysis according to the PDCA cycle; and make continuous of school operational performance to ensure target accomplishment. 5. Offer academic and research integrity courses; form the "Teaching Ethics Violation Review Team"; and organize the academic integrity alliance to promote related affairs. 6. Plan various campus countermeasures against COVID-19 to maintain campus safety and ensure non-interrupted schooling for students.		
Responsibility and System	Accounting Office, Office of Secretariat, Personnel Office, Office of Continuing and Extension Education		
Resources	Government subsidization, self-raised funds, and donations.		
Grievance Mechanisms	President's Email, Office of Evaluation Email, and Personnel Office Email		
Specific Strategies and Actions	1. Government subsidization and self-raised funds are the major financial sources. The 2022 total income increased by 3%. 2. For the onsite audits, the University Endowment Fund Audit Team held two team meetings and selected 12 audit items in 2021 and held four team meetings and selected 16 audit items in 2022. 3. Passed the IEET accreditation (College of Agriculture, College of Engineering, and College of Humanities and Social Sciences) in 2022. Passed HEEACT's "2022H2 Collegiate Teacher Education Evaluation" in 2022, the Center for Teacher Education "passed" all six evaluation items. Passed the AACSB international accreditation and promoted to the world's top 6% collegiate schools of business . Participated in the QS Stars University Ratings and earned 4 stars (Very Good) for overall performance in 2022. 4. In addition to conferences, social media, the school website, and school email and phone, we also communicate with stakeholders through different channels, such as newspapers, magazines, TV, and other print and electronic media. During 2021-2022 we held a total of 265 achievement presentations. 5. During AY2019-2021, we offered 36 courses on academic integrity and research ethics for 75 hours. 6. During the COVID-19 pandemic, we promoted the "student advisor care and advice mechanism" to timely care about the condition of students, with results including 161 times of service, 74 video interviews, and 190 telephone interviews.		
2021-2022 Target Accomplishment	1. Available funds: NT\$1,098,570,000 for 2021 and NT\$886,180,000 for 2022. (Improvement Plans) (Information Restatement: In the 2020 report, the amount of "total income" was misplaced in "available fund", and it should thus be corrected to NT\$1,355,550,000 for 2019 and NT\$1,225,440,000 for 2020). 2. Non-compliances with academic integrity: None for both 2021 and 2022 <input checked="" type="checkbox"/> .		
Short-Term Targets (2023-2024)	Available funds in 2023: MT\$1,000,000,000 Available funds in 2024: MT\$1,100,000,000	Non-compliances with academic integrity in 2023: None. Non-compliances with academic integrity in 2024: None.	School disruption due to COVID-19 in 2023: None School disruption due to COVID-19 in 2024: None
Medium-Term Targets (2025-2026)	Unfailingly implement internal control and internal audit to ensure sustainable institutional operations and maintain zero non-compliance .	Continue to implement education for academic integrity and IP right protection to ensure the legality of academic activities and zero non-compliance with academic integrity .	In response to the actual epidemic condition, coordinate and effectively integrate resources within the university and implement various epidemic control measures to provide teachers and students with worry-free teaching and learning environment and maintain zero school disruption .
Long -Term Targets (2027-2033)	To become the best TVET establishment for top sustainable development talents.		

All Accomplished Partially Accomplished Unaccomplished

Corresponding Material Issues and Issues of Medium Influence and Management Approaches: Sustainability Governance (G-2)

Aspect of Sustainable Development	Teaching and learning (G-2)			
Corresponding Material Issues and Issues of Medium Influence	G06 Infrastructure and Hardware/ Software Facilities	G07 Teaching Quality	G10 Student Physical and Mental Health	G11 Sustainability Education
Policy/Commitment	1. Build complete infrastructure and hardware/software facilities. 2. Promote courses with innovative teaching models and contents including cross-discipline and cross-industry practice and sustainability elements. 3. Relax instruction regulations and establish reward systems to encourage and enhance teaching and research effectiveness. 4. Introduce multiple admission channels and promote well-established funding measures to aid economically disadvantaged students to ensure study at ease.			
Targets and Current Actions	1. Update and enrich teaching facilities and space and optimize interdisciplinary teaching equipment and buildings. 2. Improve library hardware and software, promote library resource sharing, and enrich library resources. 3. Offer professional, general, and interdisciplinary competence empowerment courses to narrow the education-employment gap. 4. Promote flexible pay and grade promotion diversification for academic staff. 5. Improve the public student loan and guidance mechanism, build education resources and environments for gender equality, and maintain the physical and mental health of both teachers and students.			
Responsibility and System	Office of Academic Affairs, Office of General Affairs, Personnel Office, Office of International Affairs, International College, Center for General Education, Language Center			
Resources	Government subsidization, self-raised funds, and Higher Education Sprout Project funds.			
Grievance Mechanisms	President's Email, Office of Academic Affairs Email, Personnel Office Email, Office of General Affairs Email, Office of Secretariat Email			
Specific Strategies and Actions	1. Updated and enriched teaching facilities, optimized teaching equipment and buildings, and built the Intelligent Agricultural Machinery Center, Sustainable R&D Center, and Aquaculture and Conservation Center. 2. Opened the "Happiness, Intelligence, and Freedom Idea Development Center, Lagoon Bookstore, and Lagoon Florist in AY2021 to create a warm and sweet reading environment. 3. Offered micro interdisciplinary courses in the College of Professionals, including 80 courses in AY2020 and 5 lectures and 110 courses in AY2021. 4. Promoted flexible pay and grade promotion diversification for academic staff; reward excellent talents, academic staff with distinguished performance in university-industry collaboration, research, and instruction; distinguished professors with outstanding contributions; and excellent student advisors. 5. Increased access to higher education and optimized student assistance mechanisms; introduced registration fee discounts, protected admissions, and offered scholarships and grants for economically disadvantaged students to aid economically disadvantaged students through multiple funding channels.			
2021-2022 Target Accomplishment	1. Expenditure on hardware and software facilities: NT\$371,980,000 for 2021 <input checked="" type="checkbox"/> , and NT\$114,030,000 for 2022 <input checked="" type="checkbox"/> . (Improvement Plans) (Information Restatement: In the 2020 report, there was a typography in "expenditure on hardware and software facilities", it should thus be corrected to NT\$224,990,000 for 2019 and NT\$323,600,000 for 2020). 2. Teacher growth and training activities: 70 sessions with 2,544 participants in AY2020 (Improvement Plans), 133 sessions with 4,880 participants in AY2021 <input checked="" type="checkbox"/> . 3. Guidance-individual interview: 2,996 times in AY2020 <input checked="" type="checkbox"/> , 2,733 times in AY2021 <input checked="" type="checkbox"/> . 4. Scholarships and grants for economically disadvantaged students: 11,539 times with NT\$194,600,000 for AY2020 <input checked="" type="checkbox"/> , 11,548 times <input checked="" type="checkbox"/> with NT\$197,210,000 for AY2021 <input checked="" type="checkbox"/> .			
Short-Term Targets (2023-2024)	Expenditure on hardware and software facilities Increase by 1% (NT\$125,000,000) in 2023 Increase by 1% (NT\$137,000,000) in 2024	Teacher growth and training activities Increase by 3 sessions in 2023 Increase by 5 sessions in 2024	Guidance-related activities: At least 10 sessions each semester. Number of participants in health promotion activities: Increase by 2,550 persons in 2023 (est.) Increase by 2,600 persons in 2024 (est.)	Funds for encouraging academic staff to implement sustainability-related projects: Increase by at least 1% each year.
Medium-Term Targets (2025-2026)	Actively increase self-raised funds and government subsidization to promote campus environment sustainable development, and maintain an annual budget for campus environment sustainable development at over 50% of the total budget	Optimize academic staff quality by reducing the student-teacher ratio. AY2022: 21.5 AY2022: 21.4	Professional training for professional counselors: At least 20 hours each year. Activities for maintaining student physical and mental health and student guidance: 10 activities each year.	Funds for encouraging academic staff to implement sustainability-related projects: Increase by at least 1% each year.
Long -Term Targets (2027-2033)	Focus on sustainability education, enrich teaching resources and sharpen teacher competencies to build a venue for developing future international talents familiar with carbon credits.			

All Accomplished Partially Accomplished Unaccomplished

Corresponding Material Issues and Issues of Medium Influence and Management Approaches: Sustainability Governance (G-3)

Aspect of Sustainable Development	Research and University-Industry Collaboration (G-3)		
Corresponding Material Issues and Issues of Medium Influence	G08 Career Development and University-Industry Collaboration		G12 Academic Performance
Policy/Commitment	1. Build a practical campus environment for university-industry collaboration and improve the effectiveness in university-industry collaboration of academic staff. 2. Add value to the industry through the technology transfer of and commodify research outcomes and knowhow. 3. Relax legal and statutory restrictions and expand capacity in practical research. 4. Improve the practical capability of students and help students experience the workplace earlier.		
Targets and Current Actions	1. Form a cross-department, cross-college teaching team and enrich the practical industry experience of academic staff for implementation in the course. 2. Promote sustainability-related collaboration projects among the industry, government, and university; facilitate cross-discipline integration; and add value to the industry through the technology transfer of and commodify research outcomes and knowhow. 3. Implement full-scale off-campus internship and interdisciplinary professional license training. 4. Implement career counseling, enhance competence and ability aptitude exploration to facilitate employment.		
Responsibility and System	Office of Academic Affairs, Office of Research and Development, all colleges, and Office of Career Development		
Resources	Government subsidization, self-raised funds, and project funding from MOE, government department, and private businesses.		
Grievance Mechanisms	President Email, Office of Research and Development Email, Personnel Office Email		
Specific Strategies and Actions	1. Encourage faculty teams to participate in interdisciplinary research teams projects: University-industry collaboration linked: 37 projects; strengthening the interdisciplinary practice of students: 18 projects; strengthen the interdisciplinary R&D and university-industry collaboration of teachers and students, patent and technology transfer, and the research capacity of new academic staff. 2. Build a funding system for about 59 interdisciplinary research teams with about 1,131 academic staff members engaging in interdisciplinary research projects; and strengthen the interdisciplinary research and university-industry collaboration capacity of academic staff. 3. Establish a cross-industry and cross-disciplinary platform; help academic staff form 55 research teams; and let 172 academic staff members to lead 190 students to extend research capacity to nearby schools and industries. 4. Encourage academic staff to work in the field to strengthen university-industry linkage and demonstrate the education for employment characteristics of TVET to realized local social responsibility. 5. Build 29 internship workshops of up to 120 hectares for students of all colleges to practice and develop skills.		
2021-2022 Target Accomplishment	1. Organized the Joy Type Introduction Alumni Talk Series: 15 sessions with 862 participants for AY2020 <input checked="" type="checkbox"/> , 22 sessions with 865 for AY2021 <input checked="" type="checkbox"/> 2. Amount of collaboration projects among industry, the government, university, and research institutions: NT\$626,640,000 in 2021 <input checked="" type="checkbox"/> , NT\$799,240,000 in 2022 <input checked="" type="checkbox"/> .		
Short-Term Targets (2023-2024)	100% participation rate in on-campus or off-campus internship of fresh graduates every year.	Interdisciplinary professional licenses: 1,500 licenses each year.	Career guidance and employment guidance: 200 sessions each year; 3,000 participants each year. Increase the amount of collaboration projects among industry, the government, university, and research institutions by 1% each.
Medium-Term Targets (2025-2026)	Actively engage in cooperative education with businesses at home and abroad for a 100% participation rate in on-campus or off-campus internship of fresh graduates every year. Enhance guidance and improve employability for a 90% employment rate of fresh graduates every year.		Increase the amount of collaboration projects among industry, the government, university, and research institutions by 1% each.
Long -Term Targets (2027-2033)	Optimize career guidance, build a teacher support system, and become the cradle for developing industry masters and providing talents required by society.		

All Accomplished Partially Accomplished Unaccomplished

Corresponding Material Issues and Issues of Medium Influence and Management Approaches: Environmental Sustainability (E)

Aspect of Sustainable Development	Environmental Sustainability (E)		
Corresponding Material Issues and Issues of Medium Influence	E02 Energy Conservation Management E03 Renewables	E01 Climate Change Governance and Action E04 Waste Recycling and Reuse E06 Water Management and Use E07 Protection and Restoration of Biodiversity	E09 Soil Conservation and Disaster Prevention
Policy/Commitment	1. Comply with the Talloires Declaration, practice the green campus, build a low-carbon sustainable campus with energy conservation and information security. 2. Increase campus renewables equipment through self-generation for self-consumption in response to the government's 2025 energy policy. 3. Establish the campus waste disposal policy to implement campus waste reduction; promote the policy for the protection and restoration of biodiversity. 4. Promote the annual "Traffic Safety Education Implementation Plan"; implement road safety facility and vehicle management, education, and publicity; and set the sustainable commuting targets. 5. Form the full-time information security committee, establish policies and regulations, build a quality intelligent campus with information security. 6. Assist local governments in developing disaster prevention and mitigation awareness in residents of local communities and improving the preventive measures for disaster resistance, avoidance, and reduction of communities to fulfill USR.		
Targets and Current Actions	1. Establish the "Center for Sustainable Development" for continuous resource R&D and integration, and develop the collection, storage, and use of renewables. 2. Implement energy conservation management and draw up the annual targets and work plans for energy conservation. 3. Implement sustainable water management; water conservation facilities, education, and research; enhance water saving and domestic sewage recycling and reuse. 4. Implement the ESH management system and practice waste reduction, resource reclamation, recycling, and reuse. 5. Guide the new student motorcycling program; implement the free NPUST shuttle bus policy to encourage public transport use to reduce the number of motorcycles, reduce air pollution, and maintain the health of teachers and students. 6. Implement various information security control measures and organize various education and training activities for information security and the <i>Personal Information Protection Act</i> . 7. Assist local governments in the outreach and research of disaster prevention and mitigation through the Soil and Water Conservation Technique Education Center (SoWaCTEC), Disaster Prevention and Mitigation Technology Research Center (DPC), and Compound Disaster Prevention Research Center(CDPRC).		
Responsibility and System	Office of General Affairs; Center for Environmental Protection, Safety, and Health; Sustainable Development Office; Computer Center; Soil and Water Conservation Technique Education Center; and Disaster Prevention and Mitigation Technology Research Center		
Resources	Government subsidization, self-raised funds, and project funding from MOE, government departments, and private businesses.		
Grievance Mechanisms	Office of General Affairs Email, Center for Environmental Protection, Safety, and Health Email, SDC Email		
Specific Strategies and Actions	1. Reduced energy consumption and GHG emissions, with the 2021 total emissions down by 1,537tCO ₂ e over 2020. 2. Invested NT\$34.56 million in replacing old and high power consumption equipment and NT\$14.88 million in installing intelligent energy-efficient facilities during 2021-2022 to build a low-carbon and energy-efficient campus. 3. Installed solar panels at the Smart Agriculture Center, fishery and electricity symbiosis aquaculture and fish meal farm, mushroom factory, green grocery greenhouse, 8 student halls, libraries, exhibition halls, and the general buildings. 4. Promoted the agriculture circular economy and established the "Agricultural and Forestry Byproducts Recycling Value Creation and Development Center" to help farmers turn agricultural waste into resource. 5. Built the artificial wetland and vegetation purification and sewage treatment and recycling facilities for "total recycling and zero discharge" of domestic sewage. 6. Established the Protected Wildlife Shelter to help rescue domestic wildlife up to 152 heads in 45 species. 7. Introduced the NPUST shuttle bus, e-bus, DRTS intelligent NPUST shuttle bus booking, and motorcycling reduction program to reduce traffic accidents. 8. Implemented the "ISO 27001 Information Security Management System (ISMS), IT-related support service systems, and the "BS 10012 Personal Information Management System (PIMS) to ensure information security. 9. Implemented disaster prevention drills, education, and outreach in local communities and elementary schools; and arranged the fundamental and special training for disaster relief volunteers and water conservation volunteers.		
2021-2022 Target Accomplishment	1. On-campus restaurant pass rate: 99% in AY2020 <input checked="" type="checkbox"/> and 100% in AY2021 <input checked="" type="checkbox"/> 2. UI GreenMetric World University Ranking: No. 1 in Taiwan for nine consecutive years during 2014-2020; No. 3 in Asia and No. 27 in the world in 2022, one place higher than No. 4 in Asia and two places higher than No. 29 in the world in 2021. 3. Public transport ridership: 111,898 persons in AY2020 <input checked="" type="checkbox"/> and 74,633 in AY2021 <input checked="" type="checkbox"/> . (Improvement Plans) 4. Information security education and training courses: 8 sessions with 293 participants in 2021 <input checked="" type="checkbox"/> and 9 sessions with 322 participants in 2022 <input checked="" type="checkbox"/> .		
Short-Term Targets (2023-2024)	1. Save electricity by 1,000 GJ in 2023, 1,000 GJ in 2024 2. Use renewables by 26,800GJ in 2023, 26,900 GJ in 2024	1. Mitigate climate change by growing 1,000 trees in 2023 and 1,000 trees in 2024. 2. Recycle and reuse waste for over 30% in 2023 and 2024. 3. "Total recycling and zero discharge" of domestic sewage in 2023-2024. 4. Promote ecological conservation with over 2 businesses.	Disaster prevention and mitigation collaboration projects with industries and the government 30 projects in 2023 30 projects in 2024
Medium-Term Targets (2025-2026)	Actively promote energy audit and employ management mechanisms to reduce energy consumption by 1 energy usage index (EUI) each year.	1. Continue to use water conservation facilities to save water and recycle and reuse domestic sewage to reduce secondary (irrigation) water consumption by 1% each year. 2. Reduce the weight of non-hazardous waste by 1% each year. 3. Develop shrimp conservation and culture talents to protect aquatic animals.	Expand soil and water conservation and improve professional techniques for farmland soil and water conservation to strive for collaboration projects with industries and the government by 1%.
Long -Term Targets (2027-2033)	Combine institutional development with SDGs, further sustainable development actions, and continuously practice the SDGs and sustainable campus to become the bellwether of Taiwan's green universities and No. 1 in Taiwan, No. 3 in Asia, and No. 27 in the world at the UI GreenMetric World University Ranking.		

All Accomplished Partially Accomplished Unaccomplished

Corresponding Material Issues and Issues of Medium Influence and Management Approaches: Social Co-Prosperity (S)









Aspect of Sustainable Development	Social Co-Prosperity (S)				
Corresponding Material Issues and Issues of Medium Influence	S01 Sharing of Education Resources, S03 Social Linkage	S04 USR and Local Co-Prosperity	S05 Global Partnership	S06 On-Campus and Off-Campus Traffic S07 Campus Environment and Safety	S08 Information Security
Policy/Commitment	1. Practice sustainable actions hand in hand with stakeholders to expand sustainability for social co-prosperity towards sustainable development. 2. Engage in strategic alliance with businesses for university-industry collaboration and industry co-creation and assist with agricultural technology upgrading for the win-win of university and industry. 3. Link the governmental and non-governmental organizations, flip the public's sustainability thinking, and promote legal amendments for social co-benefits. 4. Actively cultivate the potential TVET student sources in response to the low birthrate trend to co-construct a perfect and quality TVET environment. 5. Introduce the advanced technology from and enhance technological exchange with Europe, the USA, and Japan to enrich the university's R&D capacity and promote our technology R&D outcomes to New Southbound countries and diplomatic allies.				
Targets and Current Actions	1. Activate the "USR Implementation Plan" and link to the "Higher Education SPROUT Project"; and form an interdisciplinary team with teachers and students for practice in local communities. 2. Disseminate NPUST's sustainable development spirit through alumni at home and abroad and promote and further develop our sustainability brand to agriculture, forestry, fisheries, and animal husbandry 3. CSR x USR: University-industry collaboration with PX Mart, wpd Taiwan Energy, and Farglory Life Insurance for ecological conservation to expand the power of sustainable development. 4. Implement the "TVET Curriculum Optimization Project" based in NPUST to enhance the professional competence of vocational senior high school teachers and improve the quality of the new curriculum in collaboration with five TVET colleges. 5. Organize international sustainability courses for students with thematic collaboration and mutual visits to facilitate and deepen student exchange with sister schools.				
Responsibility and System	Office of Academic Affairs, Office of Student Affairs, Office of Career Development, Office of Continuing and Extension Education, Alumni Center, Office of International Affairs, office of Secretariat, academic units of colleges and departments				
Resources	Government subsidization and self-raised funds				
Grievance Mechanisms	President Email, Office of Academic Affairs Email, Interdisciplinary Features Development Center Email, Office of International Affairs Email				
Specific Strategies and Actions	1. Took service-natured student groups to provide service in communities and remote areas on holidays or summer and winter breaks to care for society. 2. Establish the "USR Office" to promote USR pilot projects, seed projects, and germination projects, and a total of 76 projects were implemented during 2020-2022. 3. Encouraged alumni to practice sustainability through agricultural waste reuse, sustainable eco-friendly cultivation, preservation of the characteristics of indigenous buildings and cultures, mountain and forest protection, biogas generation, and low-carbon accommodation. 4. Strove for projects to organize health and welfare service activities to take care of the health of community residents. 5. Offered 330 physical courses for continuing and extension education to encourage community residents to engage in lifelong learning and promote local inclusion. 6. Visited 10 non-indigenous and non-city senior high schools and vocational high schools in remote townships in Pingtung and Taitung, formed 10 interdisciplinary course development teams, organized 20 mentor competence empowerment workshops, and supported 52 featured courses for senior high schools and vocational high schools. 7. Organized the two UNTA Sustainability Programs, including hiring 13 heavyweight instructors from six schools to offer online lectures in 2021 and 7 domestic and foreign instructors in 2022.				
2021-2022 Target Accomplishment	Overseas internship: One student in AY2020 <input checked="" type="checkbox"/> and 33 students in AY2021 <input checked="" type="checkbox"/> . (Improvement Plans)				
Short-Term Targets (2023-2024)	Various physical courses for continuing and extension education 100 courses in 2023 and 100 courses in 2024	Promote USR projects 35 projects to serve 8,500 persons in 2023 40 projects to serve 8,500 persons in 2024	Overseas internship 95 students in 2023 100 students in 2025	1. Public transport ridership 76,000 persons in 2023 76,000 persons in 2024 2. Campus safety outreach 42 sessions in 2023 45 sessions in 2024	Information security education and training courses 10 courses for 341 persons in 2023 10 courses for 360 persons in 2024
Medium-Term Targets (2025-2026)	Increase various courses for continuing and extension education by 1%. Increase agrotechnology guidance and consultation services by 1%.	Continuously implement USR projects and extend to international practice (apply for at least one MOE international education project), increase teacher and student participation in service groups by 1%.	Increase participants in overseas internships by 1% to broaden the international horizons and enrich the practical experience of students.	Implement campus traffic safety measures and reduce traffic accidents by 1%.	Implement information security control measures and maintain zero personal information leakage.
Long -Term Targets (2027-2033)	Demonstrate USR to build better ecology and a better society for co-prosperity of humanities hand in hand with stakeholders.				

All Accomplished Partially Accomplished Unaccomplished









● Stakeholder Engagement

In addition to channels including conferences, discussions, websites, telephone, email, evaluation systems, service platforms, training camps, and institutional accreditation, we make smart use of various social media and run various print and electronic media, such as Facebook, LINE, newspapers, magazines, and TV, to communicate with stakeholders and present the R&D outcomes of teachers and students and share the information regarding the important development and various activities of NPUST. During 2020-2022 we organized 374 presentations and were covered by the media in 2,800 reports for stakeholders to fully understand the direction and performance of institutional operations to effectively achieve the goal of stakeholder engagement and earn their support and recognition.

NPUST Channels for Stakeholder Communication

Important Stakeholder	Contact	Concerned Material Topic	Communication Channel	Frequency	2021		2022		Section Corresponding to Concerned Issues
					Quantitative Performance	Performance of Physical Communication	Quantitative Performance	Performance of Physical Communication	
 Students	Recipients of quality education and future focus of sustainability brand	G07 Teaching Quality G13 COVID-19 Countermeasures S06 On-Campus and Off-Campus Traffic S07 Campus Environment and Safety S08 Information Security	E-learning evaluation system Student grievance Student representatives meeting Social media	2 times each semester Any time 1 time each semester Any time	25 sessions 3,377 persons	27 sessions 3,352 persons		2-3 Innovative Instruction and Teaching Quality 2-6 COVID-19 Counteractions 5-1 Campus Safety	
 Academic and administrative staff	Institutional operation staff	G13 COVID-19 Countermeasures S04 USR and Local Co-Prosperity S06 On-Campus and Off-Campus Traffic S07 Campus Environment and Safety S08 Information Security	All NPUST committees University Council Meeting Faculty Evaluation Committee/University Student Advisor Meeting Academic and administrative staff grievance Labor-management meeting	At least once each semester 1 time each semester 3 times each semester Any time Irregularly	419 sessions 8,501 persons	468 sessions with 8,935 participants		2-6 COVID-19 Counteractions 5-1 Campus Safety 5-3 Expanding Sustainability with Stakeholders	
 Parents	Partners supporting education promotion	G13 COVID-19 Countermeasures S06 On-Campus and Off-Campus Traffic S07 Campus Environment and Safety	Discussion for parents of new students Social media Phone number and email of each unit	1 time each semester Any time Any time	Halted during the pandemic	3 sessions 870 persons		2-6 COVID-19 Counteractions 5-1 Campus Safety	
 Communities and the public	USR partners	G13 COVID-19 Countermeasures E03 Renewables E04 Waste Recycling and Reuse E06 Water Management and Use	Group services Community empowerment Social media	Irregularly Irregularly Any time	157 sessions 2,560 persons	161 sessions 3,374 persons		2-6 COVID-19 Counteractions 4-1 Low-Carbon Campus 4-2 Sustainable Water Management	
 Governmental organizations and non-governmental organizations	Members of the alliance for institutional development and social innovation	E07 Protection and Restoration of Biodiversity S04 USR and Local Co-Prosperity S07 Campus Environment and Safety	Institutional operational evaluation Participation in discussions and seminars Various professional institutional accreditations Irregular official documents and correspondence	1 time every five years Any time 1 time every three or six years Any time	41 sessions 491 persons	33 sessions 500 persons		4-3 Protection and Restoration of Biodiversity 5-1 Campus Safety 5-3 Expanding Sustainability with Stakeholders	
 Suppliers (Businesses and internship partners)	Assist in raising and deepening education expertise	G06 Infrastructure and Hardware/Software Facilities G07 Teaching Quality S08 Information Security	Center for Environmental Protection, Safety, and Health Office of General Affairs (procurement/construction projects)	Any time Any time	124 sessions 430 persons	107 sessions 102 persons		2-2 Campus Infrastructure and Hardware/Software Facilities 5-1 Campus Safety	
 Alumni	Support of NPUST brand development	G07 Teaching Quality S07 Campus Environment and Safety	Alumni service platform Alumni forum Graduate status survey	Any time 1 time each semester Any time	25 sessions 1,531 persons	113 sessions 4,580 persons		2-3 Innovative Instruction and Teaching Quality 5-1 Campus Safety	
 Vocational senior high school	Potential recipient of education	G07 Teaching Quality S07 Campus Environment and Safety S08 Information Security	Teacher training camps for senior high schools and vocational high schools Student camps for senior high schools and vocational high schools	At least 2 times in the summer break At least 2 times in the summer break	219 sessions 4,486 persons	151 sessions 2,956 persons		2-3 Innovative Instruction and Teaching Quality 5-1 Campus Safety	

Examples of Important and Best Results in Stakeholder Engagement

Stakeholder	Material Concerned Issue	SDGs Relevance	Stakeholder	Material Concerned Issue	SDGs Relevance
Students	G13 COVID-19 Countermeasures	3.3	Governmental organizations and non-governmental organizations	E07 Protection and Restoration of Biodiversity Biodiversity	15.2
		Fo Guang Shan Monastery donated us the “thermometer & disinfection channel” that can measure the body temperature and dispense alcohol for disinfection when a person passes through to improve our epidemic control during the prevalence of COVID-19 so as to maintain non-disrupted schooling. Further reading			On commission of the Pingtung County Government, the research team of Professor Chien-Chang Chen of the Department of Forestry conducted a health checkup of the trees within the important venues, including the campus of elementary, junior high, and senior high schools and parks and greeneries in the urban areas within the jurisdiction of the Pingtung County Government to enhance the safety of public venues and improve the health of trees so as to maintain green cultural assets hand in hand with the county government. Further reading
Academic and administrative staff	S04 USR and Local Co-Prosperity	2.1 4.7 12.8	Suppliers (Businesses and internship partners)	G06 Infrastructure and Hardware/Software Facilities	4.4 8.6
		The Office of Continuing and Extension Education organized the “Little Farmers One-Day Experiential Camp” in collaboration with the Lin Yun Elementary School of Pingtung County for students to experience the efforts of rice seedling dibbling and rice harvesting of farmers. The Department of Plant Industry donated about 30kg of fragrant rice grown by the department to Lin Yun Elementary School in Pingtung County to fulfill USR. Further reading			Kuozui Motors donated the Toyota Corolla Altis Hybrid the Department of Vehicle Engineering for use in instruction, practice, and research to help with instructional hardware upgrading for students to connect with the industry and develop vocational talents hand in hand. Further reading
Parents	S06 On-Campus and Off-Campus Traffic	11.2	Alumni	S07 Campus Environment and Safety	4.7 12.5
		In consideration of the difficulty in getting a ticket and carrying heavy luggage when returning home during long holidays and at the end of each semester for students living in other counties and cities, the student union charters coach for them every time for students to go home safe and parents to feel no worries.			Chairperson Pao-You Liu of Merry Yard International Enterprise sponsored the construction of the “Lagoon Bookstore” and “Lagoon Florist” on the first floor of the school library in the library makeover project that fuses with the “aquaponics” and “horticultural therapy” features of our smart agriculture to provide students with a quality reading environment. Further reading
Communities and the public	E04 Waste Recycling and Reuse	12.4	vocational senior high School	G07 Teaching Quality	4.3 4.7 13.3 15.1
		We co-organized the “flea market” with Neipu Township Office to raise the awareness of environmental protection in citizens through the exchange and sales of pre-owned items to reduce waste and resource wastage. Further reading/Related report: China Daily News Cloud			We promote the summer training camp for teachers and students of senior high schools and vocational high schools to link to the professional knowledge and state of senior high schools and vocational high schools and UST, promote the mutual exchange of teachers and students, achieve the goals of resource sharing and playgroup, and so to attract students of senior high schools and vocational high schools to enroll on NPUST. Further reading

02 Sustainability Governance and Performance (G)

- Academic and administrative staff from the southern region during 2020-2022: **71%**, providing local employment
- Taiwan's first "Academic and Administrative Staff Stress-Relief Center" equipped with **2** visually impaired masseurs.
- Total amount of funds for optimizing teaching space and facilities during 2020-2022: **NT\$800 million**
- Number of certificates and licenses obtained by students during AY2019-2021: 6,091, the number of certificates and licenses obtained in AY2021 over AY2019: **▲10.4%**.
- Scholarships and grants for economically and culturally disadvantaged students each year: **8%** of the total amount of tuition and fees and **5% more** than that of MOE; benefited up to **41,324 persons** with a total amount of **over NT\$31 million**.
- Employment rate of graduates during AY2019-2021: **over 94.6%**.
- Total income from university-industry collaboration projects and technology transfer during 2020-2022: **over NT\$2 billion** and **over NT\$37 million** respectively.
- Research fund for sustainable development during AY2019-2021: about **NT\$1.6 billion**, nearly **50%** of the total R&D funds.



■ In 2022 we earned the first prize for "integrated performance" in the VTET category at the USR Awards 2022 by *Global Views Monthly*. This has proven the success of our outstanding multifaceted school administration that aims to cultivate top talents who seek the common good with the land and environment and to develop power that changes society for sustainable development. [Further reading](#)

► 2-1 Fostering Quality Workforces 3.7 4.2 4.7 8.5 10.3

GR12-7~8, GR12-18~21, GR12-26, GR1401, GR1404, GR1405 | SV-ED-000.D

In response to the need for teaching, research, and institutional development, we have established a well-planned personnel system in accordance with the organizational charter. Academic staff, administrative staff, and contract staff are hired in accordance with the “NPUST Regulations for Assessment of the Appointment and Promotion Full-Time Academic Staff”, “NPUST Regulations for Assessment of the Appointment and Promotion of Academic Staff Hired with the University Endowment Funds”, and “NPUST Instructions for the Selection and Promotion/Transfer of Contract Staff” to maintain fair, impartial, and open recruitment and appointment and build diversified, competitive academic and administrative workforces based on the “appointment by talent” principle.

In the past three years, over 61% of staff are academic staff, and over 71% of all staff are from the southern region. Hence, we offer stable local opportunities.

We have also been facing a retirement trend in recent years, with 87 academic and administrative staff retiring in the past three years. To improve teaching quality, expand R&D capacity, and enhance administrative efficiency, apart from hiring 109 new academic and administrative staff with outstanding academic and practical achievements, we have also established the General Research Service Center (GRSC) to recruit excellent non-NPUST scholars and hire outstanding graduates from NPUST postgraduate programs to be research staff, develop a talents formation system, and create a sound research environment to retain quality talents.

● Human Resources

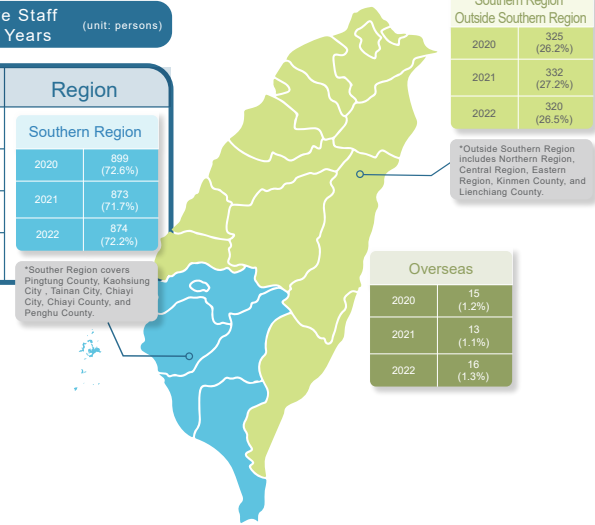
Workforces in Past 3 Years (unit: persons)

Year	Full-time Staff				Non-full time Staff				Total
	Full-time Academic Staff	Full-time Administrative Staff	Contract Staff	Total	Part-time Academic Staff	Fixed-term Contract Staff	Temporary Workers	Total	
2020	445 (35.9%)	159 (12.8%)	180 (14.6%)	784 (63.3%)	234 (18.9%)	5 (0.4%)	216 (17.4%)	455 (36.7%)	1,239
2021	411 (33.7%)	154 (12.6%)	184 (15.2%)	749 (61.5%)	225 (18.5%)	3 (0.2%)	241 (19.8%)	469 (38.5%)	1,218
2022	447 (36.9%)	158 (13.1%)	179 (14.8%)	784 (64.8%)	228 (18.8%)	4 (0.3%)	194 (16.1%)	426 (35.2%)	1,210

*Source: October data reported to the Database of Higher Technological and Vocational Education
 *Full-time academic staff include academic staff within the staff complement, project academic staff, research staff, and teaching assistants and military training instructors in the former system.
 *Administrative staff include both civil services and campus police.

Total Number of Academic and Administrative Staff by Gender, by Age, and by Region in Past 3 Years (unit: persons)

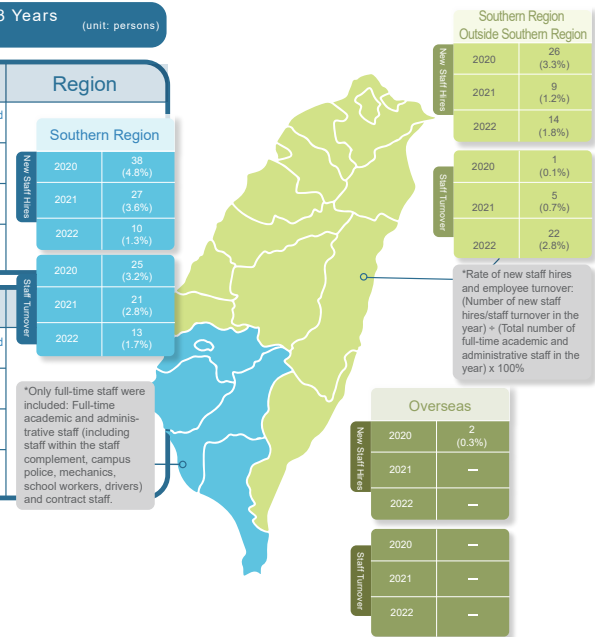
Year	Gender		Age			Region	
	Male	Female	30 years old and below	31-50 years old	51 years old and above	Southern Region	Outside Southern Region
2020	709 (57.2%)	530 (42.8%)	166 (13.4%)	569 (45.9%)	504 (40.7%)	899 (72.6%)	325 (26.2%)
2021	698 (57.3%)	520 (42.7%)	178 (14.6%)	526 (43.2%)	514 (42.2%)	873 (71.7%)	332 (27.2%)
2022	701 (57.9%)	509 (42.1%)	158 (13.1%)	558 (46.1%)	494 (40.8%)	874 (72.2%)	320 (26.5%)



New Staff Hires and Staff Turnover in Past 3 Years by Gender, by Age, and by Region (unit: persons)

Year	Gender		Age			Region	
	Male	Female	30 years old and below	31-50 years old	51 years old and above	Southern Region	Outside Southern Region
2020	39 (5.0%)	27 (3.4%)	13 (1.7%)	42 (5.4%)	11 (1.4%)	38 (4.8%)	26 (3.3%)
2021	18 (2.4%)	1 (0.1%)	9 (1.2%)	23 (3.1%)	4 (0.5%)	27 (3.6%)	9 (1.2%)
2022	12 (1.5%)	12 (1.5%)	4 (0.5%)	16 (2.0%)	4 (0.5%)	10 (1.3%)	14 (1.8%)

Year	Gender		Age			Region	
	Male	Female	30 years old and below	31-50 years old	51 years old and above	Southern Region	Outside Southern Region
2020	11 (1.4%)	15 (1.9%)	2 (0.3%)	11 (1.4%)	13 (1.7%)	25 (3.2%)	1 (0.1%)
2021	12 (1.6%)	14 (1.9%)	9 (1.2%)	5 (0.7%)	12 (1.6%)	21 (2.8%)	5 (0.7%)
2022	20 (2.6%)	15 (1.9%)	4 (0.5%)	2 (0.3%)	29 (3.7%)	13 (1.7%)	22 (2.8%)



● Remuneration and Promotion

To protect the human rights of academic and administrative staff, promote labor-management harmony, and build a friendly workplace environment, we have established applicable regulations in compliance with the civil service laws and regulations, and regulations in compliance with the *Labor Standards Act* for school workers and contract staff.

The compensation for full-time academic staff and research staff is based on the “Salary Structure for Full-Time Academic Staff of Public Universities” to comply with the payment regulations of the Ministry of Education. The compensation of full-time administrative staff is based on the “Directions for Salary Payment of Nationwide Military, Public Service, and Teachers”. The compensation for contract staff is based on the “NPUST Contract Staff Salary Payment Standard” regardless of gender. However, the salary of the same pay grade may vary due to seniority and duty allowances.

The ratio of the annual total compensation for the highest-paid individual to the median annual total compensation for all staff is at 1-3. The compensation for all academic and administrative staff is subject to raise according to the raise for civil service by the government.

Ratio of Annual Total Compensation in Past 3 Years

Category	Job Title/Year	2020	2021	2022
Full-Time Staff	Academic Staff	2.056	2.276	2.717
	Administrative Staff	1.936	1.760	1.820
	Administrative Assistants	1.262	1.242	1.184

*Included full-time staff only.

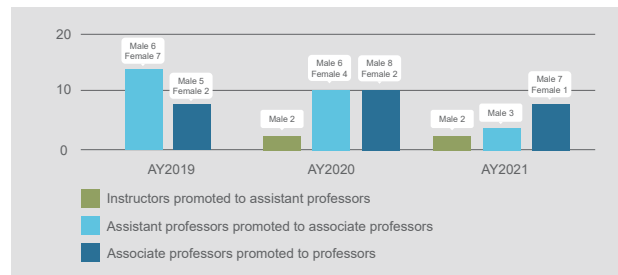
*Ratio of annual total compensation: Annual total compensation for the organization's highest paid-individual/Median annual total compensation for all of the organization's employees (excluding the highest-paid individual)

The raise and promotion of academic staff are subject to the “NPUST Regulations for Assessment of the Appointment and Promotion Full-Time Academic Staff” and “NPUST Regulations for Appointment and Promotion

of Extra-Complement Full-Time Academic Staff”. The promotion of academic staff is assessed through the on-campus preliminary and second reviews, off-campus expert review, and on-campus final review based on their professional achievements and performance in teaching, research, service, and student advising. A total of **55** teachers passed the promotion assessment in the past three academic years.

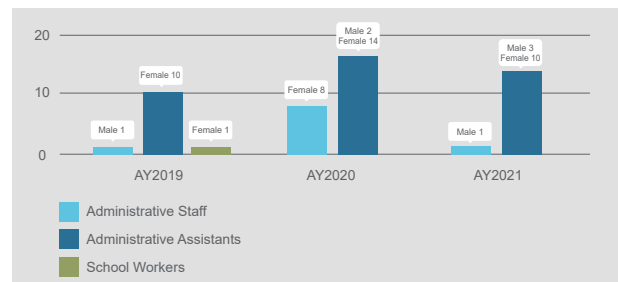
We established the “NPUST Instructions for Staff Selection, Promotion, and Transfer” in accordance with the *Civil Service Promotion Act, Enforcement Rules of the Civil Service Promotion Act, and Scoring Sheet for Promotion of Civil Service of the Executive Yuan and Its Government Agencies and Government Schools*. The promotion and transfer of staff are subject to the Instructions in a fair, impartial, and open manner. A total of **54** school workers and contract staff received a promotion in the past three years.

Number of Academic Staff with Promotion in Past 3 Academic Years (unit: persons)



*Including full-time and project academic staff.

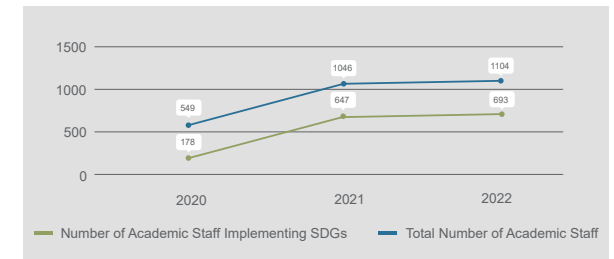
Number of Staff/Contract Staff with Promotion in Past 3 Academic Years



● Rewards and Benefits

To develop talents and recruit and retain top talents with excellent performance, we have established the relevant regulations to raise the standard and effectively improve the overall teaching quality and academic achievements of academic staff with incentives, encouragements, and rewards and reward and subsidize them with the relevant funds. A total of 2,699 persons received flexible pay and academic rewards with a total amount of over NT\$86.18 million in the past three years. Additionally, flexible pay is granted to encourage teachers with distinguished performance in USR education promotion and SDG-related affairs. A total of 1,518 persons received flexible pay amounting to over NT\$26.58 over the past three years. The amount of compensation in 2022 was 5% higher than that of 2020.

Number of Academic Staff Receiving flexible pay and Academic Rewards in Past 3 Years



To reward staff with outstanding performance, we organize outstanding staff, outstanding administrative assistant, and outstanding school worker selection in accordance with the “NPUST Instructions for Selection and Reward of Staff with Outstanding Performance” and “NPUST Instructions for Rewarding School Workers with Outstanding Performance”. A total of **29** staff, administrative assistants, and school workers were rewarded with a total of **NT\$115,000** in the past three years.



We arrange insurance for all full-time academic and administrative staff (excluding part-time staff) in accordance with the *Civil Servant and Teacher Insurance Act* and the *Labor Insurance Act* to ensure pension protection by seniority after retirement. Full-time academic and administrative staff are also entitled to the parental leave, family care leave, continuing education leave, and leave for other matters. They may also apply for the leave of absence in accordance with the *Regulations Governing Unpaid Leave of Absence for Civil Service*, *Regulations Governing Unpaid Leave of Absence for Teachers*, and *Regulations for Implementing Unpaid Parental Leave for Raising Children* and return to work and resume payment after the leave or the extinguishment of the reasons for the unpaid leave of absence. **The return to work and retention rates of employees of academic and administrative staff after parental leave in the past three years are all 100%.**

Status of Parental Leave of Full-Time Staff in Past 3 Years (unit: persons)

	Gender	2020	2021	2022
Number of employees that were entitled to parental leave	Male	7	5	10
	Female	24	14	18
Total number of employees that took parental leave	Male	0	2	1
	Female	3	14	8
Staff due to return to work after taking parental leave (A)	Male	0	1	1
	Female	6	4	2
Staff who did return to work after parental leave	Male	0	1	1
	Female	6	4	2
Employees retained 12 months after returning to work following a period of parental leave (C)	Male	0	1	-*
	Female	6	4	-*
Return to work rate (B/A)	Male	-	100%	100%
	Female	100%	100%	100%
Retention rate (C/B)	Male	-	100%	-
	Female	100%	100%	-

*Returning to work for less than 12 months in that year.

● Friendly Campus

– Harmony and Health

1. Enhancing friendship exchange between academic/administrative staff and students

We provide great sports facilities and space for academic and administrative staff and students to use by online booking during the lunch break and after school. We also organize various activities, such as student advisor training camps, officer team building, mechanic training camp, year-end party, school anniversary grassland concert, concerts, fairs, and academic and administrative staff competitions in the school anniversary sports meet, to promote friendship exchange between academic and administrative staff.



▲ 2021 "Love, Joy, Peace" Christmas Tree Lighting. [Further reading](#)

2. Protecting physical and mental health of academic/administrative staff and students

To build a healthy campus, we have established the Center for Health Consultation and Promotion to comprehensively assess the health promotion needs of students and academic and administrative staff; guide students and academic and administrative staff to voluntarily and autonomously develop health management through health education, activities, health services by combining with community resources; and offer physical and mental health promotion and healthcare services on campus to all academic and administrative staff and students.

Statistics of Health Promotion Activities in Past 3 Years (unit: persons)

Issue/Year	2020	2021	2022
Healthy Body Weight with Metabolic Syndrome Prevention	1,103	1,063	680
Tobacco Hazard Prevention with No-Smoking Campus and Anti-drug	783	11,916	802
Sex Education with AIDS Prevention	1,646	982	951
Self-Imposed Health Management	16,359	195	86
Healthy Life for Elderly Students	57	0	0
Self-Defence Training	144	88	0
Campus Drug Abuse	0	0	28
Total	20,092	14,244	2,547

3. Stress Relief Center and Spa & Beauty Center for academic and administrative staff to relieve physical and mental stress

We equip the "Academic and Administrative Staff Stress Relief Center" with two visually impaired masseurs to provide massage service on weekdays. As a favorite service of academic and administrative staff, the center is always fully booked and has served 3,724 persons in the past three years.

We also establish the [Spa & Beauty Center](#) for students of the Department of Fashion Design and Management to practice by providing academic and administrative staff and students with services including Thermage® CPT, stress-relieving massage, instrumental weight loss, and manicure after school for staff to maintain beauty after work.

Service at the Spa & Beauty Center. ▶



– Communication Optimization

Academic staff established the “Teachers’ Unions” in accordance with the *Civil Associations Act* and *Teachers’ Act* in 2006. Contract staff appoint school representatives in accordance with the *Labor Standards Act* and *Regulations for Implementing Labor-Management Meeting* and elect contract staff representative to hold the “labor-management meeting”. Students organize the “Student Union and Student Council”. Various robust communication platforms are thus established.

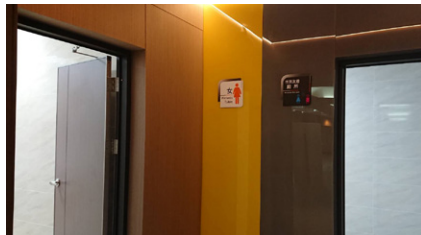
Although there is no labor union at NPUST, we have established the “Faculty Grievance Review Committee”, “Staff Grievance Review Committee”, and “Student Grievance Review Committee” to review related grievances and provide platforms for opinion expression and defense. During AY2019-2021, we received one faculty grievance; **zero staff grievance; and 23 student grievances** and held 14 review meetings to protect the rights and interest of academic staff and maintain the learning, living, and education rights and interests of students.

– Gender Equality and Well-Being

1. Promoting gender equality and anti-bullying

To promote substantive gender equality, we have specifically establish the **Gender Equality Education Committee** in accordance with the *Gender Equity Education Act* and set up a website to publish and publicize relevant information.

To develop civic literacy featuring the respect for human rights and gender equality in students, we



▲ Establishment of gender-friendly restrooms for a more inclusive environment.



▲ Website of the Gender Equality Education Committee

plan and implement courses and activities in relation to gender equality and establish the “NPUST Instructions for Organization of Gender Equality Education Committee”, “NPUST Regulations for Campus Bullying Prevention”, “NPUST Regulations for Prevention, Grievance, and Disciplinary Action of Sexual Harassment at Workplace for Academic and Administrative Staff”, and “NPUST Instructions for Prevention of Campus Sexual Assault, Sexual Harassment, and Sexual Bullying” to **build a safe, discrimination-free friendly campus space.**

Statistics on Courses Relating to Gender Equality and Anti-Bullying

Course Type	Academic Year Number of Courses	Number of Participants		
		2019	2020	2021
Rule of Law	34	3,648	5,197	4,635
Workplace Ethics	37	1,566	2,604	2,766
Gender Equality	32	2,731	3,041	2,839

To maintain human rights and employment equality and ensure the employment rate of persons with disabilities of no less than 3% of all employees, **we have hired persons with disabilities at a rate higher than the statutory requirement over the past three years to create a workplace environment of equal rights in employment and without discrimination.**

Number of Academic and Administrative Staff with Disabilities in Past 3 Years (unit: persons)

Year	Number of employees with disabilities due to hire	Number of employees with disabilities actually hired		
		Male	Female	Total
2020	45	25	24	49
2021	46	24	24	48
2022	43	23	22	45

2. Valuing Employee Well-Being

We run the “NPUST Non-Profit Kindergarten for Employees’ Children” on-campus and accept the children

and grandchildren of academic and administrative staff in top priority for them to focus on work so as to create a parent-friendly workplace. Additionally, the Center for Teacher Education signed a contract with the National Experimental High School at Pingtung Science Park in 2022 to include the children of NPUST academic and administrative staff as “park students” to enjoy priority acceptance of the kindergarten, elementary school, junior high school, and senior school sections of the school.

NPUST academic and administrative staff are entitled to the benefits covering the allowances for marriage, funerals, birthday, birth, injury and illness; emergency assistance; emergency loan, continuing education allowance; children’s education scholarships and grants; group insurance; home loans for civil service and teachers; condolence money for retired academic and administrative staff; campus tuck shop visits, environmental education and training, and others. Academic and administrative staff within the complement are also entitled apply for accommodation in the Coconut Park and NPUST Guesthouse, and NPUST stakeholders and personnel engaging in short-term business exchange with NPUST are entitled to apply for accommodation in our any of our six practice lodges and our practice hotel. This whole section is extremely disorganized, can’t really understand what the real benefits are.



▲ Performance of the kindergarten students at the Lunver New Year reunion

● Career Development and Cultivation of Academic and Administration Staff

NTUST academic and administration staff are divided into academic staff (including full-time and part-time academic staff and research staff) and administrative staff (including staff, campus police, mechanics, school workers, drivers, and administrative assistants). By 2022 the rate academic staff holding a master’s or higher degree is 98.62%, including 88.48% holding a PhD degree. Academic staff within the complement are mostly professors, with a rate of over 40% in the past three years. We promote career development and cultivation to academic and administration staff, develop a flexible pay scheme to reward teachers with excellent performance, and fund teachers to strive for external research projects to realize the education for employment feature of TVET.

In accordance with Article 26 of the *Technical and Vocational Education Act*, a total of 294 TEVT academic staff should complete related professional field study or research. In AY2021 the completion rate of professional field study or research of TEVT academic staff was 100%. To improve teaching quality, we have organized 287 teacher growth training activities in the past three years for 10,093 academic staff. To encourage administrative staff to improve the quality and enhance the efficiency of service through e-learning, they are required to take the service-related training for 20 hours and training for 80 hours each academic year. Additionally, those completing service-related training for up to 40 hours and training for up to 100 hours through e-learning in an academic year will be rewarded.

Improvement Plans for Teacher Growth Training Activities with Unaccomplished Annual Targets (over AY2019)

Item/Academic Year	2020
Teacher growth and training activities	14 sessions less
Improvement Plan	The number of teacher growth training activities reduced due to COVID-19. However, additional activities have been held to improve the teaching quality of academic staff since AY2021 when the pandemic began to slow,

Statistics on Teacher Growth Training Activities in Past 3 Academic Years

Academic Year	Number of Activities	Number of Hours			Number of Participants		
		Physical	Virtual	Total Number of Hours (Physical + Virtual)	Male	Female	Subtotal
2019	84	181.0	12.0	193.0	1,495	1,174	2,669
2020	70	173.5	8.0	181.5	1,323	1,221	2,544
2021	133	137.5	160	297.5	2,458	2,422	4,880

*Each teacher must participate in at least six teaching-related training activities during each 3-year evaluation.

Education and Training for Staff in Past 3 Academic Years

Academic Year	Number of Hours			Number of Participants/Average Hours of Training			
	Physical	Virtual	Total Number of Hours (Physical + Virtual)	Male (Persons)	Average Training Hours	Female (Persons)	Average Training Hours
2019	2,205	3,925	6,130	555	20	1,110	21
2020	3,569	7,218	10,787	1,550	60	2,445	84
2021	3,048	5,126	8,174	1,534	55	1,839	62

*Administrative staff include civil service, administrative assistants, campus police.

Career Development and Cultivation of Academic and Administrative Staff in Part 3 Years

Cultivation Measures	Quantitative Performance
Flexible Pay Reward	Number of recipients: 1680 (male)/635 (female) Amount of reward: NT\$66.02 million
“Innovative Teaching” and “Social Responsibility Teaching” Distinguished Teacher Award	Number of recipients: 85 persons Amount of reward: NT\$5.6 million
R&D Capacity Cultivation for Academic Staff and Research Staff	Funding: NT\$90.34 million Amount of projects won: NT\$2,905,220,000
R&D Capacity Cultivation for New Academic Staff	Number of recipients: 47 persons Funding: NT\$7.84 million Amount of projects won: NT\$34.28 million
Research Team Funding Policy	Number of new academic staff participated: 78 persons Percentage in overall new academic staff: 53% Amount of projects won: NT\$95.04 million
Faculty Field Engagement for Enhancement of University-Industry Link	Number of academic staff due to training: 294 persons Actual number of academic staff completing training: 294 persons Training completion rate: 100%
Teacher Growth Seminar Series	Number of seminars: 287 Number of hours: 672 Number of participants: Male: 5,276/Female: 4,817
Teacher Professional Learning Communities	PBL instruction: 137 projects Innovative instruction: 99 projects
Employee Learning Mechanism	Number of hours: 25,091 Number of participants: Male: 3,639/Female: 5,394



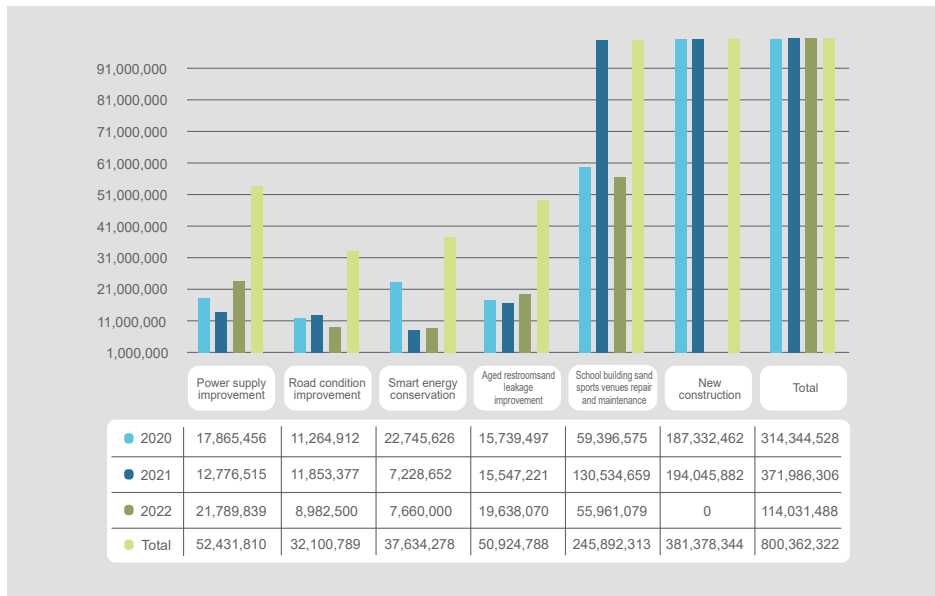
◀ In 2018 we co-established the “Economic Animal International Technical Talents Cultivation” academy with Dalum Academy of Agricultural Business of Denmark, and nine academic staff completed training in Denmark in 2022.

► 2-2 Campus Infrastructure and Hardware/Software Facilities 4.7 GRI2-4,G101 | Material Issue G06

● Optimizing Teaching Space and Facilities

We have relocated the main campus to the Neipu Campus for 30 years, and many campus facilities are aged. To optimize campus infrastructure and hardware/software facilities and provide an excellent teaching, research, and learning environment, we increase the investment of university endowment fund in teaching quality and facility improvement every year to fully support teaching, R&D, university-industry collaboration, and campus maintenance and updating.

Construction and Repair Funds in Past 3 Years (unit: NT\$)



(Information restatement: The actual amount of repair expenses for 2020 has changed: The amounts for aged restrooms and leakage improvement, school buildings and sports venues repair and maintenance, and new construction were updated.)

Improvement Plans for Infrastructure and Hardware/Software Facilities with Unaccomplished Annual Targets (over 2020)

Item/Year	2022
Expenditure on hardware and software facilities	Reduced by 63.7%
Improvement Plan	The new construction projects for promoting key feature development were all completed in 2021. In the future we will actively strive for self-raised funds and government subsidization for promoting the teaching space and facilities for campus sustainable development.

● Optimizing interdisciplinary teaching equipment and buildings

The rise of AI, IoT, and big data technologies have started an intelligent revolution in traditional agriculture. Starting out as a professional school of agriculture, we have incorporated the spirit of Industry 4.0 into agriculture in recent years. To promote our four feature development themes, we have engaged in the talents development, R&D, university-industry collaboration, and need for social services in relation to “agricultural production”, “environment and ecology”, “elderly well-being”, and “social responsibility” in SDGs; and built the Intelligent Agricultural Machinery Center, the Sustainability R&D Center to incorporate renewables and digital trends into various construction projects and teaching, the Aquaculture and Conservation Center to develop novel and more competitive species, and the Fitness and Sports Industry Talents Development Base to develop the comprehensive expertise of students. Apart from offering students with comprehensive learning venues to connect with the industry, we also align with the SDGs, correspond to the global competition for net zero emissions, and implement sustainable school governance approaches to develop the hard power of students towards the future carbon credit world.

Intelligent Agricultural Machinery Center Sustainable Agriculture Research Base

The Sustainable Circular Economy R&D Center incorporates renewables and digital trends into various construction projects and instruction.

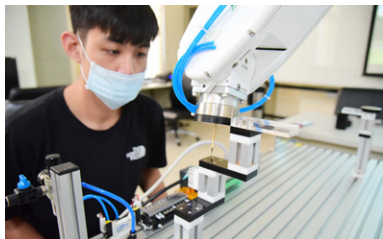
The Fitness and Sports Industry Talents Development Base develops the comprehensive expertise of students.

The Aquaculture and Conservation Center cultures quality aquatic seedlings.

● Building Industry-Grade Practice Venues

To improve the teaching infrastructure for the digital age, we have built related practice venues and improved various practice venues with the funds from the Higher Education SPROUT Project, subsidization of other MOE projects, and university endowment funds to develop students' practical experience in operations and management.

Venue name	Amount of Investment (NT\$10 thousands)	Description
Industrial Robot Interdisciplinary Teaching Laboratory	1,000	Apart from being Taiwan's first venue for the practical examination of robot engineers accredited by the Taiwan Automation Intelligence and Robotics Association (TAIROA), the lab is also the training base for students taking the license examination.
The venue of the practical examination for the iPAS Smart Production Engineer (SPE) license.	200	Develop "lean production" and "smart manufacturing" core technologies, including the manufacturing execution system (MES) and the programmable logic controller (PLC), to connect with the industry and deepen the employment competence of students.
AR/VR Digital Classroom	250	Improve students' capabilities in fundamental courses and practical operation with digital teaching materials and environments; purchase graphics workstations, LDC displays, and independent VR equipment, and the virtual environment and equipment for developing VR equipment; and enrich course teaching contents through VR.
Wood Processing Factory	255	Prepare and plan a practice and operation site with seven qualified testing areas to help students pass the carpentry grades B and C licenses.
iPAS 3D Printing Examination Venue	137	Build the professional examination venue for the iPAS 3D Printing (Additive Manufacturing, AM) engineer license for students to engage in interdisciplinary skill integration together with professional 3D printing.



▲ Industrial Robot Interdisciplinary Teaching Laboratory



▲ The venue of the practical examination for the iPAS Smart Production Engineer (SPE) license.



▲ AR/VR digital equipment



▲ Remodeling of the Department of Wood Science and Design workshop

● Quality Library Resources

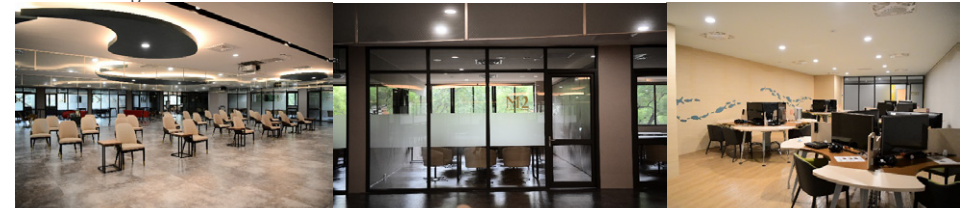
Based on the Knowledge Tree concept, the NPUST Library and Exhibition Hall organize big cultural and art events through spatial planning to create the "knowledge forest" living space.

Spatial planning: In AY 2021 we opened the "Happiness, Intelligence, and Freedom Idea Development Center" to optimize the venue to facilitate the role change and interdisciplinary learning of students. Lagoon Bookstore, and Lagoon Florist were sponsored by businesses through in-kind donation to fuse the "aquaponics" and "horticultural therapy" features of our smart agriculture to create a comfortable and great reading environment and atmosphere.

In addition of hardware modification, we also actively empower new space with "soft power". Every month the library purchases new books according to the "Choice of elite" for teachers and students to enjoy the same reading sources in pace with the urban areas so as to "home elite Bookstore in NTUST Library". As a result, the student book borrowing rate has increased significantly. We increase the digital library collection and digitize library resources through database expansion. In AY2021 the digital collection (e-books) was 1,219,640 volumes. By actively increasing the channels for resource use, the e-resource clicks increased to 1,446,041 times, enhancing the e-library resource service. Additionally, we have organized events, including the "Southerly Reading Season" and "Jingshihu Literature Award", to remind teachers, students, and readers of the charm of reading.



▲ Remodeled the reading room on the first floor into Hong Pu Reading Room, Lagoon Bookstore, and Lamigo Florist



▲ Remodeled the reading room on the first floor into Hong Pu Reading Room, Lagoon Bookstore, and Lamigo Florist



NPUST Library and Exhibition Hall website



SDGs e-Book Corner



NPUST Library and Exhibition Hall news report: GVM

● Software Facilities for Empowering Foreign Language Proficiency

The Foreign Language Teaching Division, Language Test & Equipment Division, and Chinese Division are established in the NPUST Language Center to plan the general English and foreign languages courses for the whole school.

The Center is equipped with seven language laboratories. Apart from being the venue for English courses and second foreign language courses, these labs are also the language test venues from time to time. In the past three years, these labs have trained 12,882 students and persons. The language labs are planned by course into the language test lab, multilingual lab, professional foreign language lab, and foreign language self-learning area. The Center also purchases the online test learning platforms, including the online question bases for TOEIC, GEPT, IELTS, and iBT. In addition to the English-related language test resources, the Center has been enriching the book resources for second foreign languages (e.g., Japanese, Korean, and Southeast Asian languages) in recent years.

The Language Center also signed an agreement on Southeast Asia language tests and teaching collaboration with Wenzao Ursuline University of Languages to encourage more NTUST students studying Southeast Asia languages to take the language test to facilitate the overseas internships, career development in those countries, and pursue further study in the future of NPUST students.



▲ Students use equipment in the Language Center



▲ The Language Center signed a MOC for language test with Wenzao Ursuline University. [Further reading](#)



▲ The Language Center organized the “2022 Quick Language Exchange & Xmas Present” event to increase the opportunities for learning and exchange between domestic and international students. [Further reading](#)



▲ The Language Center organized the “Tanzaku Wish Campus Festival + Monster Mask Painting” for students to experience the Japanese culture. [Further reading](#)

● Sports Facilities

At NPUST, there are 26 indoor and outdoor ballgame facilities in total. In addition to the ballgame learning venues for students and the ballgame training sites for sports majors, they are also opened to the public, senior high schools and vocational high schools, and groups for booking. The 2022 University Basketball Association Competition was also held in NPUST. By sharing our quality sports venues with others, we achieve the goal of resource sharing.

In addition to developing excellent talents, we emphasize more on the health of students. With well-planned campus sports facilities, we motivate teachers and students to exercise. With the subsidization of the Sports Administration, MOE, and our matching fund, we spent a total of NT\$9 million on upgrading the grade D baseball field into a safer, more professional grade C baseball field where competitions can be held. To fulfill USR, we team up with the nearby elementary, junior high, and senior high schools for sports talents to receive integrated, uninterrupted training so as to make records for Taiwan’s sports. In 2022 our “slow pitch softball” and “fast pitch softball” teams won the university championships, particularly the former, we have been the champion for five consecutive years.

List of NPUST Indoor and Outdoor Sports Facilities

Indoor Sports Facilities		Outdoor Sports Facilities	
Facility Name	Quantity	Facility Name	Quantity
Basketball Site	3	Basketball Court	8
Badminton Court	9	Volleyball Court	8
Physical Fitness Center	1	Tennis Court	8
Table-Tennis Classroom	1	Soccer Field	1
Spinning Bike Field	1	Softball/Baseball Field	1
Martial Arts Classroom	1	Swimming Pool	1
Multifunctional Classroom	1	Track and Field Stadium	1
Physical Fitness Center	1	Woodball Course	1
		Golf Practice Course	1
		Outdoor Adventure Education Site	1

▼ 2020 University Academic and Administrative Staff Slow-Pitch Softball Championship [Further reading](#)

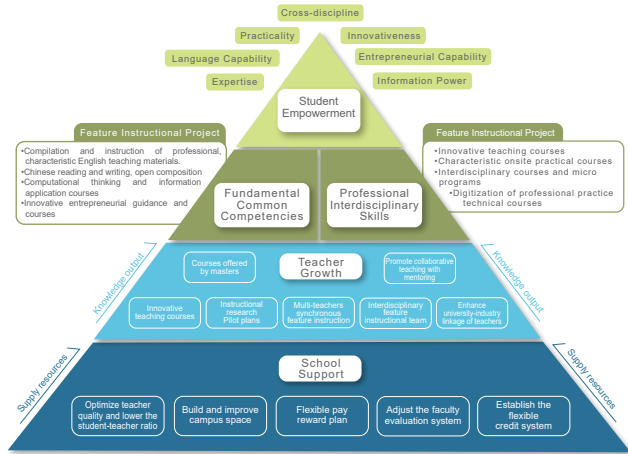


▼ Academic staff joined the opening ceremony of the grade C baseball field. [Further reading](#)



► 2-3 Teaching Innovation and Teaching Quality 2.1 4.3 4.5 4.7 4.b G102 | Material Issue G07

To realize teaching innovation and improve teaching quality, our strategies cover three aspects: school support, teaching growth, and student empowerment to broaden the learning freedom and horizons of students and develop multidisciplinary and professional “pi-shaped” talents integrated with humanistic qualities, social care, and leadership.



We implement the execution strategy for the innovation and quality improvement of teaching.

● Efficacy in Teaching and Learning Capacity Enhancement

In the past three years, we have implemented a total of 424 projects progressively for teaching innovation and teaching quality improvement by teaching feature team, with excellent performance in teaching capacity enhancement and student learning empowerment.

Efficacy of Teaching Innovation and Teaching Quality in Past 3 Years (1/2)

Aspect	Teaching Innovation Item	Efficacy
School Support	Optimize academic staff quality by reducing the student-teacher ratio.	Annually Reducing Student-Teacher Ratio 23.04 on AY2020 and 21.81 in AY2021.
	Campus Space Construction and Improvement	The number of projects in 2022 increased by 40% over 2020.
	Flexible Pay Reward Plan	Teacher of excellence in innovative teaching: 42 persons Teachers with distinguished performance in USR education promotion: 43 persons
	Grade promotion diversification for academic staff	Promotion by instruction report: 4 persons; promotion by technical report: 1 person; promotion by works: 2 persons.
	Flexible credit policy	Education-employment integration rate 78%

Efficacy of Teaching Innovation and Teaching Quality in Past 3 Years (2/2)

Teacher Growth	Innovative teaching courses Solving industry problems	Number of courses in 2022 over 2020 ▲43%, number of students in 2022 over 2020 ▲43%
	Teaching research pilot project	MOE-subsidized teaching practice research projects: 6 projects
	Multi-teachers synchronous feature instruction	Learning satisfaction: 92.24 marks (out of 100)
	Interdisciplinary feature teaching team	Interdisciplinary professional TVET courses: Before 3.68 marks, After 4.01 marks
	Professional field study or research of TEVT academic staff	Completion rate 100%
	Instruction of distinguished professors	Winners of Taiwan Top Ten Agricultural Experts: No. 1 among USTs National Award for Distinguished Contribution to Industry-Academic Cooperation Number of winners in agricultural science, biotechnology, nursing: No. 1 in Taiwan
	Promotion of practice-based instruction Mentoring collaborative teaching	AY2021 over AY2019 Number of courses ▲27%, number of mentors ▲25%, student satisfaction 87%
	Feature onsite practical courses	Education-employment integration rate 78%
	Increasing facilities for practical teaching Building industry-grade practice venues	Developed 2 winners of the Outstanding Award of Technological and Vocational Education
	Student Empowerment	Establishment of the College of Professionals Cultivate multifaceted practical skills
University-industry collaborative teaching Pass on workplace practical skills		Number of courses in 2022 over AY2020 ▲6%
Enhancement of TA training Improve the teaching and learning efficacy of practical courses		Courses with TA: Higher GPA for students
Flexible credit scheme Encourage cross-disciplinary course selection		Number of students selecting course across disciplines: 3,570 persons
Innovation and entrepreneurship courses		Number of awards from competitions: 26 awards, entrepreneurial reward: NT\$5.963 million
Systemic development of innovation and entrepreneurship talents through the Innovation and Entrepreneurship Academy		Received monetary rewards NT\$5.963 million
Programming courses for non-IT disciplines Digital value addition of professional knowledge		Innovation and Creativity Competition Honorable Mention, Hackathon Best Technology Award
Develop fundamental program application capability with the Computational and Logical Thinking course		Programming competition for non-IT (EEng) students: No. 1
Design and development competitions and activities		The Department of Management Information Systems won No. 1 in the AIoT Application category; students of the Department of Mechanical Engineering won the Professional Application Award in the “Smart Factory Management System”.
Enhancement of Chinese narration, reading, and compositional abilities.		Rate of students with progress in Chinese reading and writing abilities ▲98%
School Support	Art and cultural activities and competitions Enrich the cultural literacy of students	Awards: Prose 24 students, Diagram text: 24 students Total amount of rewards: NT\$51,000
	Improvement of proficiency of professional foreign languages	Rate of students with improvement 92%
	Interdisciplinary professional license training courses	Number of licenses: 6,091 Rate of upper intermediate and single-level certificates in all certificates: 88%

● Increasing access to higher education and optimizing student assistance mechanisms

We began receiving funding from the MOE Higher Education SPROUT Project in 2018 to develop learning assistance mechanisms for economically and culturally disadvantaged students. In addition to diversifying admission channels to provide discounts for economically disadvantaged students, we also implement well-planned study assistance measures to help economically disadvantaged students admission test aid and test assistance to enhance their willingness to take admission tests and attend school. We also arrange study-at-ease guidance and assistance for them after admission and build the learning grant and multi-disciplinary skill learning mechanisms to improve their interdisciplinary capability and employability.

– Complete Assistance for Study at Ease

1. Discount for registration fee

The right to education is protected for economically or culturally disadvantaged students by expanding from economic aid to admission opportunity protection. We offer registration fee discounts for admissions to the undergraduate and graduate programs to students from low-income and medium-low income families, including free registration to the former group and 60% off to the latter group. During AY2019-2021 we funded a total of 734 students with a total of NT\$412,360.

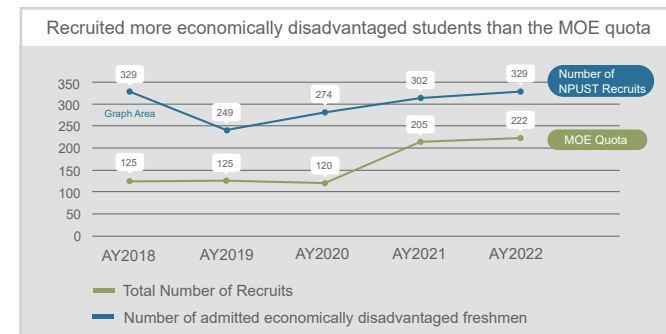
Statistics on Fundings of Registration Fees for Economically Disadvantaged Students in Past 3 Academic Years (unit: NT\$)

Examination/Number of Students and Amount of Funding	AY2019		AY2020		AY2021	
	Persons	Total Amount	Persons	Total Amount	Persons	Total Amount
Registration Fee for School Transfer Examination	35	17,400	37	17,400	32	16,080
Registration Fee for Stage 2 Selection Test of Four-Year Technical Programs	61	33,750	193	120,750	237	95,700
Registration Fee for Stage 2 Admission Test of Four-Year Technical Programs	13	9,520	8	600	15	1,180
Registration Fee for Special Talents Selection and Sports Talents	9	5,900	3	440	11	1,880
Registration Fee for Selection Test of Master's Programs	22	20,640	19	17,520	15	14,640
Registration Fee for General Entrance Examination of Graduate Programs	14	18,520	9	9,240	10	11,200
Total	154	105,730	269	165,950	320	140,680

*Economically or culturally disadvantaged students in this table do not include students from low-income and medium-low income families, students from families in hardship, indigenous students, and students with disabilities.

2. Protection of admission opportunities with preferential measures

In consideration of the lack of extracurricular learning resources of economically or culturally disadvantaged students, in the prospectus we reserve guaranteed quota for students with disabilities, indigenous students, students from medium-low income families, vision in-service program, and extra points for the total score of new-resident students to increase the admission opportunity of these students. During AY2019-2021, a total of 825 economically or culturally disadvantaged students were admitted to NPUST. The acceptance rate increases each year to **even higher than the MOE-approved quota**.



3. Implementing the Vision Project for economically or culturally disadvantaged students to flip their life

We offer the Smart Mechatronics Bachelor's Vision Project Program to provide diversified admission channels and opportunities for studying at national universities. Reinforced teaching, such as group academic reinforcement, digital-assisted learning, individual academic tutoring, and student career guidance, is arranged for students enrolled on the program, and various reward and funding measures are offered. In AY2021 the Vision Project was implemented in the Department of Biomechanics Engineering and accepted nine economically or culturally disadvantaged students. In AY2022 the Smart Mechatronics Bachelor's Vision Project Program began recruiting students and accepted 24 students, including three economically or culturally disadvantaged students.

4. Meal tickets for student assistance

To reduce the food expense burden of economically disadvantaged students and encourage them to study, every year the contractor of our First Restaurant sponsors meal tickets (NT\$50 each) for economically disadvantaged students with a total of NT\$20,000, offers them scholarships amounting to NT\$100,000, and introduces the point collection activity with prizes including free meal tickets of NT\$100,000. The campus convenience stores also sponsor a total of NT\$52,000 each year for students to apply.

5. Multi-channel funding for economically or culturally disadvantaged students

We offer multi-channel funding, including tuition and fee funding, student hall discount, grants for students from low-income families, and various scholarships and grants, to support economically or culturally disadvantaged students to study at ease. Every year we appropriate 8% of balance of the total tuition and fees deducting the exempted tuition and fees as student scholarships and grants and reduce or exempt the tuition and fees of students from low-income families, indigenous students, and students with disabilities. The total amount is much higher than the 3% MOE contribution. During AY2018-2021, we funded a total of 41,324 students through various channels with total amount of scholarships and grants of over NT\$31 million. We also actively raised funds from society as the exclusive scholarships for students with excellent performance or from low-income families to fund a total of 388 students with a total amount of NT\$5.58 million.

Multi-Channel Funding for Economically or Culturally Disadvantaged Students in Past 3 Academic Years

Fund Source	Funding Item	Number of Recipients	Amount of Funding (NT\$ 10 thousands)
Self-Raised Funds	Tuition and Fees Funding	6,262	11,357
	Grants	11,553	10,217
	Scholarships	17,357	6,648
Government Subsidization	Grants	5,764	3,039
Donation	Exclusive Scholarship	388	558



▲ Chair Professor Academician Chang-Hung Chou Scholarship for Students from Low-Income Family



▲ NPUST Alumni Culture and Education Foundation Scholarship



▲ La New Scholarship for Students with Excellent Performance in Agriculture or Culturally Disadvantaged Students



▲ Hong Pu Construction Corporation--Alumnus Chin-Hua Tun Scholarship

– Academic Tutoring

1. Multifaceted capability learning

Study groups, academic tutoring, TAs, and various talents development courses under the MOE Higher Education SPROUT Project are prioritized for economically and culturally disadvantaged students. Since the study group was introduced in AY2018, over 60% of departments and institutes have applied for study group establishment to eliminate the leaning divide of economically or culturally disadvantaged students.

Number of Applicants by College in Past 3 Academic Years

Academic Year	College of Agriculture	College of Engineering	College of Management	College of Humanities and Social Sciences	College of Veterinary Medicine	Number of Applicants
2019	78	67	62	52	13	272
2020	80	75	72	54	14	295
2021	108	96	116	81	3	404
Total	266	238	250	187	30	971

2. Alert system for students with poor learning efficacy

Alert, guidance, and follow-up measures are implemented on students with poor learning efficacy. Over 95% of students with poor learning efficacy have made improvement after the guidance in the past three academic years. These measures also help lower the suspension rate.

Alert, Guidance, and Follow-up Measures for Students with Poor Learning Efficacy

Academic Year	Students Number of Students (Undergraduate) (A)	Number of Alerted Students (B)	Number of Students with Improvement After Guidance (C)	Improvement Rate (C/B)%	Suspension Number of Students (D)	Suspension Rate Suspension
2019	7,749	2,763	2,597	93.99	209	2.69
2020	7,712	3,176	3,019	95.06	213	2.76
2021	7,626	3,064	2,924	95.43	174	2.28

– Guidance and Care

The Office of Student Affairs has established responsible units, including the Student Counseling Center (including the Students with Disabilities Resource Classroom), Indigenous Students Resource Center, Guidance and Counseling Section, Health Promotion Consultation Center, and Extracurricular Activity Section, to help students with life adaptation and economically or culturally disadvantaged students complete higher education smoothly.

■ Guidance for students with disabilities

In consideration of the specificity of guidance and intervention for students with disabilities, the Office of Student Affairs has established the Students with Disabilities Resource Classroom to take charge of the guidance for students with disabilities (identified by the identification and guidance board). The Classroom proactively understand the needs in the daily life and learning of students with disabilities upon admission to individualize the supportive services and plans. During AY2019-2021, the Students with Disabilities Resource Classroom has provided academic guidance for a total of 70 students with disabilities through teaching by 108 persons over 1,470 hours. The classroom also arranged individual interviews, assist matching, and aid resource linkage services and planned daily life assistance activities and comprehensive learning workshops to provide guidance for 5,914 times to help students complete higher education smoothly.



▲ Guidance Handbook Further reading

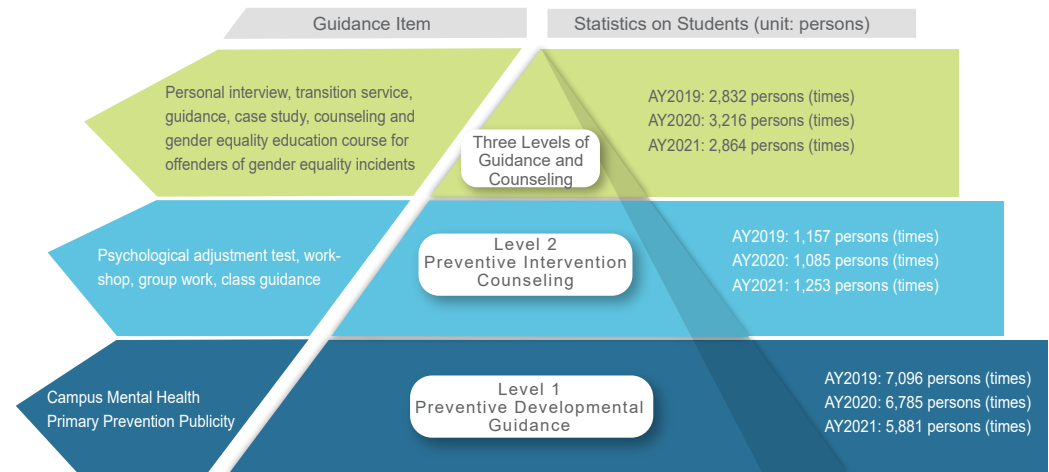
Statistics on Guidance for Students with Disabilities over Past 3 Academic Years (unit: persons)

Service Item/AY	2019	2020	2021
Individual Interview	989	759	973
Assistant Matching	44	1,290	1,245
Aid Resource Linkage	4	4	6
Graduation Transition Guidance Seminars and Career Guidance Activities	78	16	22
Growth Group and Learning Diversity Workshops	190	87	207
Total	1,305	2,156	2,453

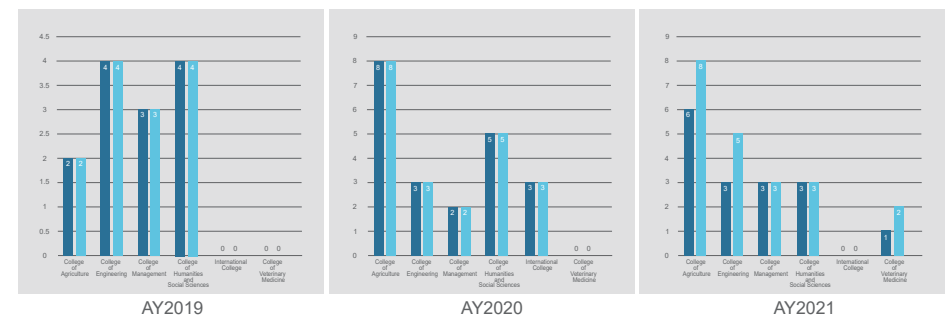
■ Maintaining physical and mental health through counseling and guidance

The professional guidance team of our Student Counseling Center has five full-time social workers, four full-time psychologist, three part-time psychologists, and one part-time psychiatrist to provide different types of guidance. In August 2021 the center published a new guidance handbook for the guidance reference of student advisors. The handbook is published on the help resource list on and off campus for use by teachers and students when seeking help and consultation.

Statistics on Related Guidance Services and Service Recipients in Past 3 Academic Years (unit: persons)



Statistics on Counseling Referral by Student Advisors in Past 3 Academic Years



Number of advisors referring students to counseling

Number of students referred to counseling

■ Guidance for indigenous students

At NPUST, there are 209 indigenous students from 14 ethnic groups. We have established the Indigenous Student Resource Center to provide indigenous students with one-stop guidance service, promote indigenous culture, enhance awareness and identification, and organize discussion activities at the beginning of each semester to provide students with study and daily guide so as to enforce life and study care. Over the past three academic years, over 3,000 indigenous students have sought assistance for academic guidance, daily life guidance, and career guidance from the center, and the number is increasing every year. The suspension of indigenous students was also reduced from 8.09% in AY2019 to 6.36% in AY2021. We have also established an interschool indigenous culture sharing system with schools in the southern region and expand the space for learning and exchange of indigenous students to thrive indigenous cultures and expand the creation of a learning environment for indigenous students.

Statistics on Indigenous Students by Ethnicity in AY 2021

Program/ Ethnicity	Amis	Atayal	Paiwan	Bunun	Puyuma	Rukai	Tsou	Saisiyat	Tao	Thao	Truku	Sakizaya	Sediq	Kanakanavu
Bachelor's Program	41	19	34	10	2	5	2	1	2	1	5	1	3	0
Continuing Education Bachelor's Program	5	1	23	7	0	4	0	0	0	0	1	0	0	0
Master's Program	5	2	10	4	1	2	0	0	0	0	1	0	0	1
In-Service Master's Program	3	0	9	0	0	1	0	0	0	0	0	0	0	0
PhD Program	0	0	3	0	0	0	0	0	0	0	0	0	0	0
Total	54	22	79	21	3	12	2	1	2	1	7	1	3	1

*Data is subject to the October data of the Database of Higher Technological and Vocational Education.

Statistics on Indigenous Students Receiving Guidance in Past 3 Academic Years (unit: persons)

Item/Academic Year	Activity Name	2019	2020	2021
Academic Guidance	English Seminar and Academic Guidance	35	48	67
Daily Life Guidance	Student life care and guidance, birthday celebration, and discussion	426	232	355
Career Guidance	Employment Guidance and Seminar and Hometown Service Learning	5	250	236
	Computer License Course	32	15	21
	Food art and craft art experience activities, traditional gourmet food experience	84	97	24
	Wilderness survival experience camp and tribal culture tour and African drums	195	204	122
	Indigenous culture seminars and dance teaching, southern region indigenous song singing competition, and interschool student club exchange	180	71	304
Total		957	917	1,129



- ◀ Encouraged students to learn their own language and sing their own songs through the 2021 Southern Region Collegiate Indigenous Song Singing Competition
- ▶ Further reading



▶ 2-4 Student Career Development and University-Industry Collaboration 8.6 SV-ED-260a.1~3

We promote off-campus internship to improve student competence, help students to experience the workplace earlier, put theory into practice, develop a correct work attitude, and improve the employment competitiveness of students.

● Comprehensive domestic and overseas internship opportunities

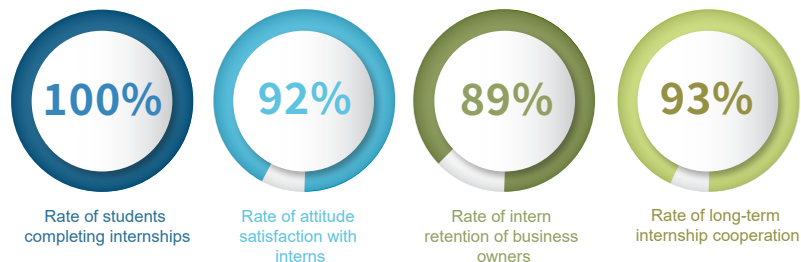
To provide students of different colleges with the opportunities to practice and develop skills, in addition to arranging internship at 29 on-campus internship factories with a total area of 120 hectares, we also promote off-campus internships in collaboration with businesses. During AY2019-2020, we collaborated with 1,788 domestic and overseas businesses to provide internship opportunities for 4,913 students. The internship completion rate of students before graduation is 100%

Statistics on Domestic and Overseas Internships in Past 3 Academic Years

Academic Year	Number of Partner Businesses	Number of Interns
2019	710	1,874
2020	583	1,672
2021	495	1,385
Total	1,788	4,931

To broaden the international vision and enrich the practical experience of students; promote cultural, academic, and industrial exchange; fund all NPUST departments and institutes to select outstanding students to pursue dual-degree study or professional internship or participate in international competition, we have also established the overseas study funding section for students to apply for funding and consultation.

Efficacy of Student Learning Diversification in Past 3 Years



During AY2019-2021, we funded a total of 125 students for overseas internships to develop talents with an international perspective. Due to COVID-19, only one student was approved for the professional technological study at Texas A&M University in AY 2020.

Statistics on Students Approved for Overseas Internships in Past 3 Academic Years (units: persons, NT\$10 thousands)

Academic Year	Country of Internship	Number of Students for Internship	Amount of Funding
2019	Vietnam, China, Japan, Canada, Denmark, Vietnam, Germany, Thailand, Malaysia, the USA, Cambodia, the UK, Indonesia, Brazil, Poland, Australia, Singapore, Czech Republic, Mauritius, Palau, Saint Vincent and the Grenadines, Eswatini, Republic of Fiji	90 Female 48/ Male 42	1,760
2020	USA	Male 1	90
2021	USA, Germany, Japan, Canada, Thailand, Saint Lucia, Nauru, Kingdom of Eswatini	34 Male 13/ Female 21	319

Improvement Plans for Students of Overseas Internships with Unaccomplished Annual Targets (over AY2019)

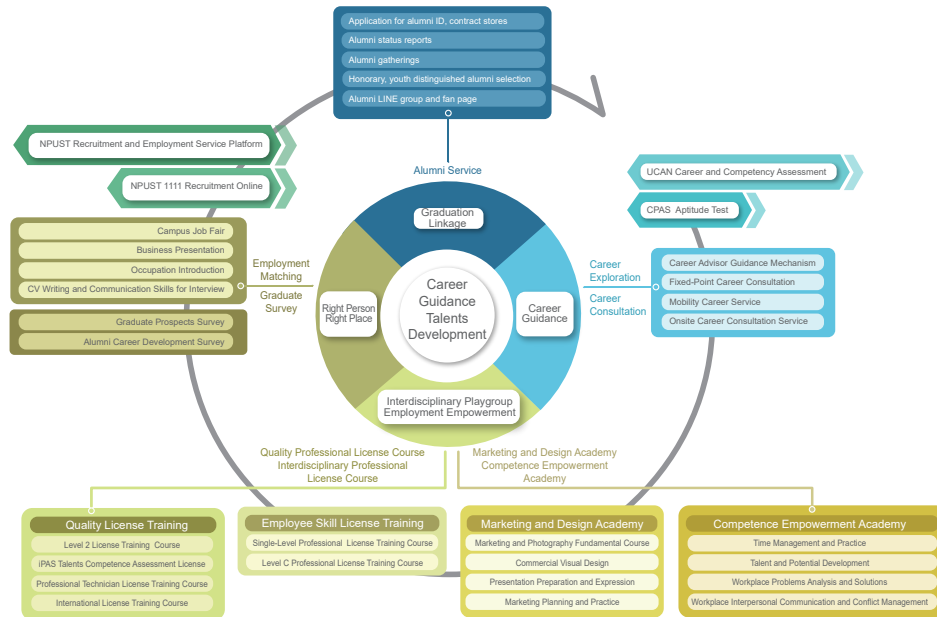
Item/Academic Year	2020	2021
Overseas internship	89 persons less	56 persons less
Improvement Plan	Actively strive for government funding, business donations, and university endowment fund contribution to fund students in overseas internships so as to expand their international vision and enrich their practical experience.	

▼ Students of the Department of Tropical Agriculture and International Cooperation engaged in internship in the Kingdom of Eswatini with funding from the Collegiate Youth Overseas Internship Program of the overseas technical mission of the International Cooperation and Development Fund. (Source: Taiwan ICDF Facebook)



● Career Guidance Implementation

The Office of Career Development has the Career Guidance Section, Employment Guidance Section, and Alumni Service Center to implement career guidance, help students with self-evaluation to understand own personality traits and understand the job market, guide students to find the suitable occupation to demonstrate own potential, match the continuity of student learning and career development, help students find the direction of career and make early career planning for students to work or continue study smoothly after graduation.



▲ Career guidance and talents development mechanisms

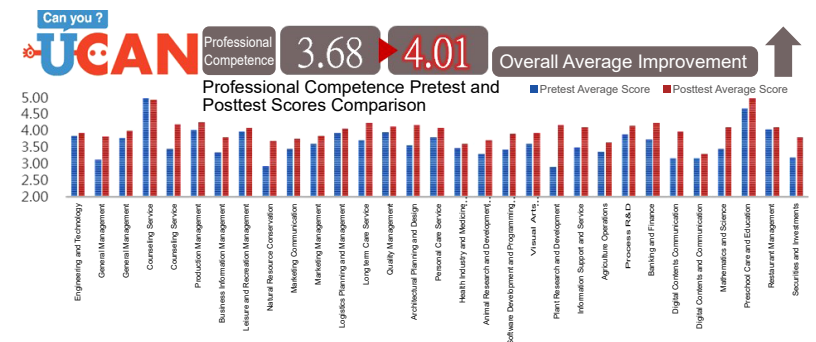
- 1. Developing career guidance staff:** Currently at NPUST, there are 11 full-time guidance staff holding the career personality aptitude system (CPAS) certificate, three iPAS-accredited color planning and managing specialists (color planning), two iPAS-accredited color planning and managing specialists (color engineering), and two level B technicians for employment service,
- 2. Augmented career consultation and guidance advisors:** Academic and administrative staff holding certificates or licenses relating to career guidance will be the career consultants and advisors. During AY2019-2021, career guidance was provided for 2,713 times, and the AY2021 number of guidance increased by 41.3% over AY2019.

- 3. Recruiting career volunteers:** Students are recruited to be career volunteers. Apart from maintaining self-growth, students can also get in contact with employment issues earlier during the service.
- 4. Enhancing exploration of competence and career aptitude:** During AY2019-2021, a total of 186 interdisciplinary professional certificate/license training courses were offered, with over 50% of certificates/licenses complying with the priority employment or prerequisite requirements. In the past three years, we have funded over NT\$6.62 million for the certificate/license training courses, the AY2021 amount increased by 13.6% over AY2019, and the number certificates/licenses obtained by students also increased by 10.4%.
- 5. Alumni Career Sharing Seminar Series:** Alumni with outstanding career performance were invited to share their experience to help students understand the workplace and explore own career aptitude. During AY2019-2021, a total of 44 seminars were held for 2,084 persons.
- 6. Enhancing professional competence:** Various interdisciplinary programs are offered, the number of students taking and completing such courses is top of all colleges and universities in Taiwan, and the rate is rising every year. The professional competence score analysis of the University Career and Competency Assessment Network (UCAN) was conducted before and after program completion on 1,198 students completing interdisciplinary programs among 33 interdisciplinary programs with 31 professional competencies. **The pretest and posttest scores were 3.68 marks and 4.01 marks respectively**, suggesting a significant improvement in professional competencies of students.

Statistics on Professional Certificate/License Training Courses in Past 3 Academic Years

Item/Academic Year	2019	2020	2021	Total
Amount of funding (NT\$ thousands)	2,025	2,300	2,300	6,625
Number of interdisciplinary professional certificate/license training courses	71	56	59	186
Number of certificates/licenses obtained	1,836	2,230	2,025	6,091

Professional Competence Pretest and Posttest Scores Comparison



– Career Fair

To enhance employment matching and workplace connection for students, we hold the campus career fair in every graduation season. Due to COVID-19, the fair was held online in 2020. We also set up the “Employment Service Platform” on the Office of Career Development website to provide a job-seeking channel exclusive for NPUSK students. We re-opened the physical career fair in 2021 to help graduates capture the industry trends and latest workplace movements so as to make preparation for employment and smoothly connect with the workplace. Active students could understand the industry trends in advance through the event so as to enrich their skills and knowledge before graduation.

Talents Recruitment Events in Past 3 Years

Year/Item	Activity Name	Employer	Job Openings	Number of Participants	Matching Success Rate
2020	1111 NPUST Online Recruitment Platform--Online Career Fair	80	-	Online	-
2021	“New Year with Employment, Fortune from Jobs” Campus Career Fair	110	11,875 (including 8,943 job openings from the Armed Forces)	1,448	66%
2022	“Employment for the Year of the Tiger, A Bright Future with Jobs” Online Campus Career Fair	140	22,641 (including 8,000 job openings from TSMC and 10,541 job openings from the Armed Forces)	1,302	54%



▼ 2021 Campus Career Fair [Further reading](#)



▲ 2021 MOE College and University Career Guidance Achievement Evaluation Silver Award for Outstanding Guidance Personnel (Administrative). [List of Winners](#)

– Career Guidance Performance

To enhance the employability of students, we actively offer professional certificate/license training courses, reward students to participate in international or national competitions, and take on-campus and off-campus internships, creating an employment rate after graduation of over 94%. The achievements are as follows:

Statistics on Performance in Student Employability Development in Past 3 Academic Years

Item/AY	2019	2020	2021
Number of students (times) obtaining certificates/licenses	1,836	2,230	2,025
Rate of students (times) obtaining certificates/licenses	16.9%	20.61%	18.95%
Number of students (times) winning awards in international or national competitions	525	1031	786
Rate of students (times) winning awards in international or national competitions	4.8%	9.5%	7.4%
Rate of graduating students taking off- and on-campus internships before graduation	100%	100%	100%
Graduation rate of students of four-year technical programs of the day school	70.35%	72.10%	71.88%
Rate of students graduating in the current year of four-year technical programs of the day school	87.02%	86.32%	86.33%
Employment rate of graduates	94.6%	96.2%	96.7%

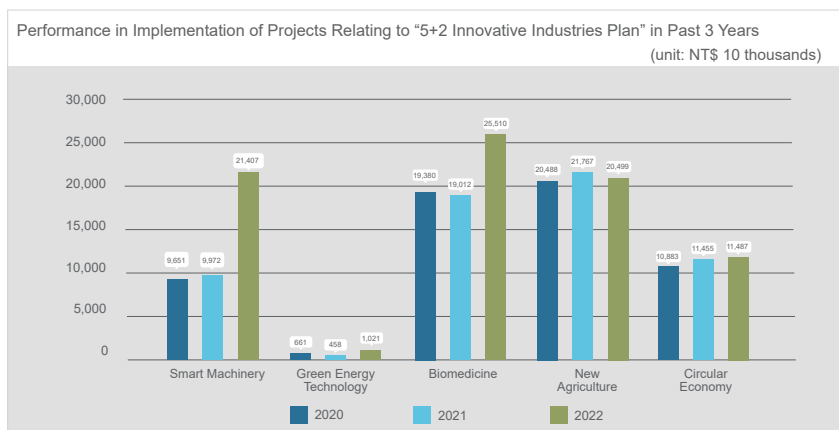
● Performance in University-Industry Collaboration

In response to the government’s “5+2 Innovative Industries Plan”, covering “green energy technology”, “smart machinery”, “biomedicine (bio-agriculture)”, “new agriculture”, and “circular-economy”, proposed in recent years, we address them in terms of four development themes: “agro-technology”, “eco-technology”, “platinum society”, and “sustainable economy”.

Additionally, we actively promote the achievements in feature development to industry talents development, urge interdisciplinary research teams under the MOE Higher Education SPROUT Project to offer micro programs, integrate research outcomes into courses, and encourage new academic staff and research staff to engage in cross-disciplinary collaboration. In response to “Taiwan 2030 Health for All Ages Vision” lately planned by the Executive Yuan, MOE sets developing talents for the following six areas: precision medicine, AI/ML medical devices, health and well-being, food innovation, prevision agriculture, and diversified health as the focus of the Training Program for Interdisciplinary Talents for Precision Health. Many academic staff from different colleges have applied for the projects under the program, and NPUST has become the partner school for projects in “precision agriculture” and “food innovation”.

– Performance of implementation of industry policies and projects

In response to the “5+2 Innovative Industries Plan”, we have implemented the following university-industry or university-government collaboration projects over the past three years: “smart machinery”, “green energy technology”, “biomedicine”, “new agriculture”, and “circular economy”, with a total amount of over NT\$2 billion. We have also linked many university-industry collaboration projects to talents development to develop talents for innovative industries at the same time. Additionally, the total amount from technology transfer was over NT\$37 million, including the technology transfer of the research outcomes in the past three years and related to the “5+2 Innovative Industries Plan”.



Performance in Technology Transfer in Past 3 Years (unit: NT\$10 thousands)

Year/Amount	2020	2021	2022	Total
Technology Transfer	982	1,637	1,152	3,771

Performance in Interdisciplinary University-Industry Collaboration of Academic Staff in Past 3 Years

Aspect	Description	Quantitative Performance	Efficacy
Interdisciplinary Research Team	Strengthen the interdisciplinary research and university-industry collaboration capacity of academic staff	Strengthening university-industry collaboration: 9 projects University-industry collaboration: 37 projects Experience inheritance: 6 projects Strengthening interdisciplinary practice of students: 18 projects Participating academic staff: 8,190 persons (times)	Amount created through university-industry collaboration: NT\$1.99 billion
Collaborative development of interschool research teams	Expand R & D capacity through complementation with the expertise of other schools or businesses (e.g., Kaohsiung Medical University, Chang Gung Memorial Hospital)	Partner schools: 63 Partner businesses: 73 Team formation: 73 teams Participating academic staff: 106 persons (times) NPUST students: 271 persons (times) Non-NPUST students: 122 persons (times)	Derivative amount of university-industry collaboration: NT\$24.75 million
Engagement in interdisciplinary industrial R&D of new academic staff	A cross-industry, cross-disciplinary industrial strategic alliance platform has been established to help new academic staff to form R&D teams to extend research capacity to nearby schools and businesses	Partner schools: 48 Partner businesses: 55 Teachers' teams: 55 Participating academic staff: 172 persons (times) Number of new academic staff: 78 persons NPUST students: 190 persons (times)	Derivative amount of university-industry collaboration fund: NT\$21.94 million
Commodification of patents or technologies	Encourage academic staff to commodify research outcomes and patents	Number of technology transfer or licensing cases: 95 Patents: 66	Technology transfer royalty: NT\$37 million Commodified outcomes: 12

Examples of Success in University-Industry Collaborative Projects of Teachers and Students

Link to SDGs

2.3 2.4



Professor Yung-Chuan Chen of the Department of Vehicle Engineering formed an interdisciplinary R&D team with 10 academic staff for university-industry collaboration with 11 partner businesses to guide 24 students to join the project to promote independent manufacture to the track industry and develop intelligent railroad cars and electric agricultural vehicles. The team has completed the R&D of five smart vehicles and derived 17 university-industry collaboration projects with a total amount of NT\$7.58 million, the application for three Taiwan invention patents and three foreign invention patents, and technology transfer royalties of NT\$1.5 million. Professor Chen also earned the Outstanding Advisor Award at the 1st Taiwan E-Intelligent Vehicle & Green Energy Technology Conference. (2021/07/23) [Further reading](#)

Link to SDGs

2.4 2.5 12.8



Professor Ching-Hsiang Hsieh, Assistant Professor Tzu-Che Lin let students to conduct the interspecific hybridization and selection of quinoa (*Chenopodium quinoa*) and Formosan Chenopodium (*Chenopodium formosanum*). After six years of efforts, they successfully developed the new hybrid of Formosan Chenopodium codenamed "NPUST No. 1". It is a new breed with not-easy to fall large millets and high yield to contribute to food shortages and promote food security. (2022/06/22) [Further reading](#)

Link to SDGs

7.2



The team of Professor Chang-Hsien Tai of the Department of Vehicle Engineering developed the "Compound Generation System Using Compressed Air Energy Storage" to replace battery with air for energy storage to significantly reduce the cost of energy consumption and extend the life of use. This invention can also convert wind power, solar energy, and biomass energy into compressed air for storage, bringing an important breakthrough to renewables application. (2021/10/5) [Further reading](#)

Link to SDGs

1.4 2.3 2.4 2.a 8.2
8.5 10.2 10.6 12.5

Professors Wen-Ling Shih and Chi-I Chang of the Department of Biotechnology and the USR team of Professor Mei-hui Chen of the Department of Forestry co-developed biotech products including probiotics, health-nourishing tea bags, and anti-aging facial cream through the under-forest cultured marbled jewel orchid (*Anoectochilus formosanus*). In the witness of the Forestry Bureau, they signed MOCs with many communities to continuously provide professional technology and assistance for talents development. (2022/7/18) [Further reading](#)

Link to SDGs

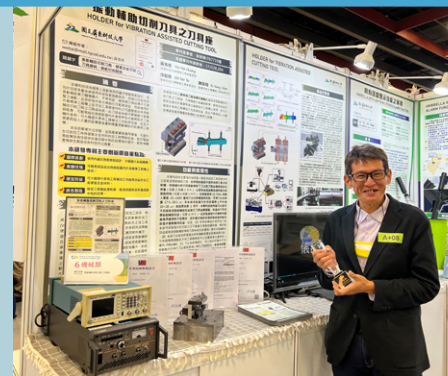
8.3 12.5



Professor Earl-Juei Wang of the Department of Industrial Management supervised students to develop the innovative cold-chain process and green energy high-valued eco-friendly "No smell Aquatic Product Processing Method and Device Capable of Directly Cooking Without Washing and Thawing". This method and device won the gold medal in the invention competition of the 2021 Taiwan Innotech Expo. Professor Wang also won the FutureTech Award with the "Deep Processing for Frozen Aquatic Meal Products High-Valued Utilization for Byproducts" (2021/11/30) [Further reading](#)

Link to SDGs

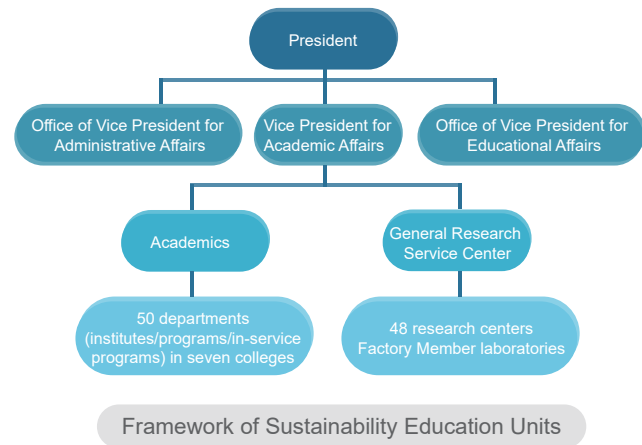
8.3



At the 2022 Taiwan Innotech Expo, Associate Professor Huang Wei-Tai of the Department of Mechanical Engineering won the Platinum Award, the highest honor of the Asia International Innovation Invention Exhibition, among 500 entrants with his "Holder for Vibration-Assisted Cutting Tool". Apart from enhancing work efficiency, this invention also reduce energy consumption and carbon emissions to facilitate industries to implement green manufacturing. (2022/10/15) [Further reading](#)

► 2-5 Sustainability education 4.7 12.a

In addition to 50 departments (institutes/programs/in-service programs) in seven colleges, we also have 48 research centers and various laboratories established based on the areas of specialization of academic staff to engage in sustainability teaching, R&D, and promotion in coordination with the school’s sustainable development plan.

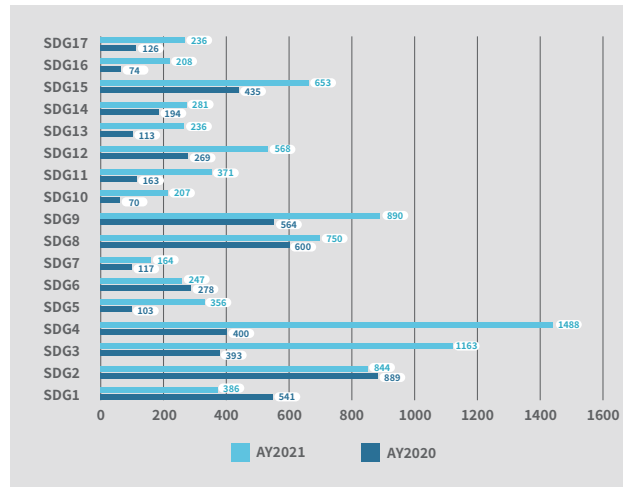


● Sustainability Teaching

In sustainability “education”, academic staff offer sustainability-related professional courses. Apart from budding sustainability education in the four-year undergraduate programs, we also offer the “Sustainable Science Lecture”, “Local Placemaking and Sustainable Development Interdisciplinary Credit Program”, “Sustainability

Concept Development-Innovative and Creative Ideas Course”, and “Sustainable Development Lecture” at the College of Professionals for more students to take sustainability-related courses across disciplines.

In AY 2020 we began encouraging academic staff to fill in coherence between courses and SDGs over the e-learning platform. Apart from linking courses to SDGs, we also maintain high coherence with SDGs 2, 3, 8, and 9.



▲ AY202-2021 Statistics on Course-SDG Coherence

– Case 1

Professor Wen-Tien Tsai of the Graduate Institute of Bioresources (GIB) enthusiastically engages in the development of energy and environmental protection talents and devotes himself to biomass energy R&D to practice the green chemistry belief, making him a promoter of environmental and energy education

enhancement. In 2021 he was awarded the Green Chemistry Joint Awards for the green chemistry education.



▲ Source: Green Chemistry Joint Awards, Chemicals Administration, Ministry of Environment, Executive Yuan

– Case 2

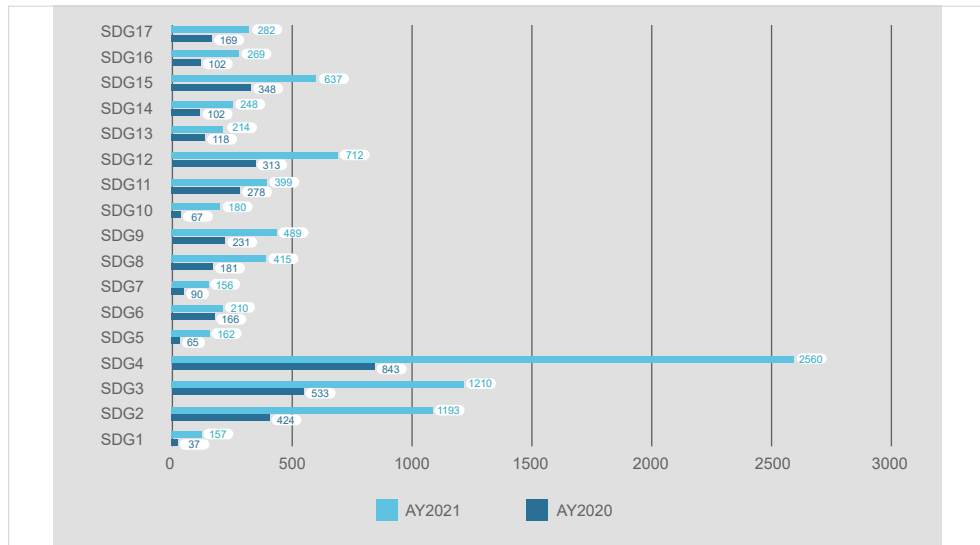
Associate Professor Herlin Chien of the Center for General Education and Deputy CEO of the NPUST Sustainable Development Office and GIB Professor Wen-Tien Tsai integrated SDGs into the course core. They won the champion and a honorable mention with the teaching outcomes at the “2022 Excellence in Teaching Sustainability” co-organized by TAISE and CTCI Education Foundation. [TSISE List of Winners](#)



▲ No. 1 at the O22 Excellence in Teaching Sustainability

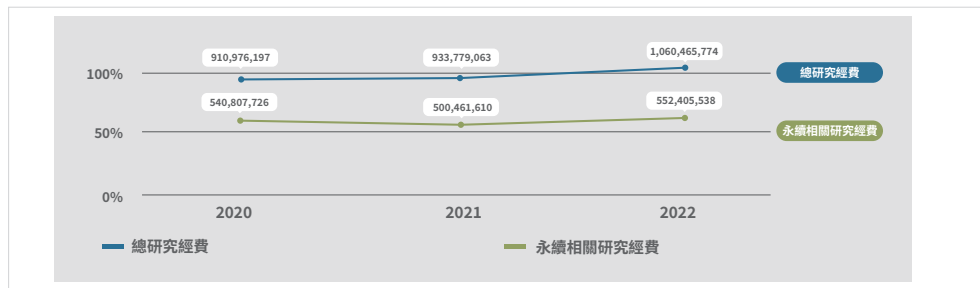
● Sustainability R&D

Our research centers and laboratories engage in the research of agrotechnology, daily life applications, humanities and society, commerce, and information management and engineering and focus on the R&D of agriculture, environmental protection, economic development, and social development in coherence with the 17 SDGs. In AY2020 we began encouraging academic staff to fill in the coherence between R&D outcomes and SDGs on the R&D performance platform, and higher coherence with SDGs 2, 3, and 4 is noted. During 2020-2022, the funding for research relating to sustainable development was about NT\$1.6 billion, accounting for nearly 50% of the total amount of R&D funds.



*Data included journals, conferences, monographs, technical reports, awards, professional academic activities, and off-campus professional sources.
*Each R&D performance item may cover many SDGs.

▲ AY 2020-2021 R&D Performance of Academic Staff and Coherence with SDGs



▲ Sustainability-Related R&D Funds in Past 3 Years

— Case 1

In view of needs of industries, we established the “Sustainable Circular Economy R&D Center” in 2022 with the advanced green technology, agriculture circular economy value creation, biomass energy circulation, and animal husbandry environmental sustainability technology teams to develop innovative technologies and integrate into green energy application across disciplines for waste materials from agriculture, forestry, fisheries, and animal husbandry; waste recycling and reuse; energy conservation; and carbon reduction to fuel up the “circular economy” and “sustainable environment” and contribute to mitigating the impact of climate change and energy sustainable development.



▲ Energy monitoring system of the Green Energy Light House



▲ The Agriculture Circular Economy Value Creation Laboratory turns forestry byproducts into fuels.

— Case 2

The team of Professor Pi-Jen Tsai of the Department of Food Science and the academic staff team of the Department of Vehicle Engineering co-developed the High Voltage Electrostatic Field (HVEF) Fruit and Vegetable Preservation System. Preventing profligacy is increasing income: The HVEF preservation technology can reduce fruit and vegetable loss by 10% to save over NT\$2 billion (induced by the Taiwan food loss and waste based on the “Cabbage Index” by *CommonWealth Magazine* (519)). Won the 2022 National Innovation Award. Awarded the 2022 NSTC Germination Program Phase II.



▲ HVEF Fruit and Vegetable Preservation System

傳統冷藏包裝法	本技術
3-5天	42天
3-5天	40天

▲ Food Loss Comparison Chart

● Sustainability Promotion

To practice the SDGs and continuously promote and deepen the sustainability consciousness of stakeholders, we actively implement various activities for promoting sustainability education.

– Building Websites

To promote sustainable campus development in collaboration with other schools, we set up bilingual websites for the [Sustainable Development Office](#) and the [Green NPUST](#). In addition to communicating to stakeholders, we also proactively disclose experience relating to the promotion of sustainable campus, with contents covering energy use strategy, waste disposal, water use, transportation planning, and sustainable environmental education.

– Forming Social Media

Through the [Sustainable Development Office Facebook](#) fan page, we upload various sustainable development activities and information of NPUST, exchange opinions and share experience with fans, shape the new-styled public governance thinking and innovation economics, and change the social and sustainable culture.

– Releasing the NPUST SDO e-Newsletter

SDO began releasing the [SDO e-Newsletter](#) each month in March 2021 by reporting new insights into the four NPUST sustainable development themes: “agro-technology”, “eco-technology”, “platinum society”, and “sustainable economy” to actively match domestic and overseas technology information for sustainable development and industry needs. By 2022 there were 580 subscribers.

– Promoting sustainable library resources

The NPUST Library and Exhibition Hall organized the “SDGs e-Book Zone” special exhibition to exhibit 1,889 e-books relating to the 17 SDGs for readers to explore and understand more about sustainability issues. To enhance the subscription rate, we recommend books on the SDO e-Newsletter and over the SDO Facebook fan page, and there were up to 65,657 clicks over the past three years.

– Promoting activities

1. As the director school of the Green University Union of Taiwan (GUUT), we organized the 8th International Workshop on UI GreenMetric (IWGM) in 2022 to link global colleges and universities and share and investigate the sustainable development of green universities for the sustainable development of worldwide green universities.

2. NPUST President and CEO and Deputy CEO of SDO were invited to give speeches in various units and schools and to radio and magazine interviews to share our experience and achievements in green university and campus sustainable development, hoping to realize the environmental, economic, and social SDGs together.

Date	Activity Name	Speech Topic
5/6/2021	Rethinking High Education Towards Sustainable Development	Building Green Universities and Sustainable Development
6/22/2022	University Social Influence Lifting Conference	Experience Sharing for University Sustainability Report Preparation
9/6/2022	Interview by the National Education Radio	Experience Sharing for Participation in UI GreenMetric World University Rankings
9/27/2022	8th International Workshop on UI GreenMetric (IWGM)	Investigation of Sustainable Development for Green Universities

3. Co-organizing various activities for promoting and ingraining education for sustainable development with external units



▲ President Chin-Lung Chang shared the experience in practicing green university at TAISE.
Related Report: [Taiwan Institute for Sustainable Energy](#)



▲ We co-organized the “TWSGI x Seeds of Hope and Action” exhibition with Taiwan Soka Association to attract more stakeholders to care about the hope and future of sustainable development.
Further reading



▲ We implemented the “Longjing River Revitalization Project” in collaboration with the Blue Donggang Creek Conservation Association of Taiwan through the “Intergovernmental Organization” general education course, hoping to enhance the waste-to-resource execution rate of animal excrements of livestock farms along the Longjing River to help solve the severe contamination of the Donggang River by the Longjing River. [Further reading](#)



▲ In the general education course, we co-organized the “2022 Youth Sustainability Ingraining Program-SDGs Empowerment Workshop” with President Chain Store Corporation and Unity Sustainability Services for students to understand sustainability trends and SDG contents and fulfill Earth sustainability from the daily life. [Further reading](#)

► 2-6 COVID-19 Counteractions 3.3 G103 | Material Issue G13

COVID-19 broke out in Taiwan in 2020. In response to the changing condition of the pandemic over the past three years, we have established various campus countermeasures to provide teachers and students with a safe and worry-free environment for teaching and learning.

The implementation of epidemic controls requires the combined efforts of all NPUST members. The epidemic control team held meetings with all units to establish epidemic control measures and coordinate and integrate all school resources to implement these epidemic control measures. Additionally, to enhance the horizontal connection of all campus units, we have also established the department-based LINE groups to unfailingly communicate all established epidemic control measures to each department/institute. The focus epidemic control measures during the pandemic are as follows:

Development of Campus Epidemic Control App

Developed the "NPUST Epidemic Control App" for mobile to record the "health condition" and campus trace of personnel.

Campus Event Epidemic Control Mechanism

Developed the "Non-NPUST Personnel Contact Tracing System" to capture the health condition of event participants.

Study-at-ease measures

- Students received no record of absence and examination ban and their marks were not deducted for absence from school due to epidemic control.
- Students on suspension may extend the term of suspension for confirmed COVID-19.
- Coordinative and supportive measures were designed for off-campus internships to help students complete study as planned.
- School lockdown without class shutdown
- Distance learning: 2,087 courses

Guidance and care for students with disabilities

- Set up the epidemic control site to outreach correct epidemic control measures.
- Promoted the student advisor care and guidance mechanisms
- Guidance provision: 161 times (persons)
- Video interview: 74 times (persons)
- Telephone care: 190 times (persons)
- SMS/email care: 74 times (persons)
- Group guidance: 9 times (persons)

Countermeasures for Negative Impacts of COVID-19 in Past 3 Years

Established the care and isolation sectors.

- Care sector: 25 rooms for accommodating 50 persons.
- Isolation sector: 35 rooms for accommodating 126 persons.

Reporting and handling mechanisms for confirmed cases

- Established the "COVID-19 Confirmed Cases and Contacts Reporting System"
- Confirmed cases: 667 persons
- Home isolation: 428 persons

Environmental cleaning and epidemic control materials preparation

- Activated various epidemic control education and training activities and environmental cleaning.
- Enhanced cleaning and disinfection of all classrooms and restrooms.
- Epidemic control materials: Stock for 3 months

Home quarantine management for international students

- Trace and control health condition
- Isolation sector with one room for each person.
- Students: 172, teachers: 5

Student Hall Management

- Full-scale body temperature measurement for all 8 student halls and 4 guesthouses.
- Formed the student hall care teams.
- Established the isolation quarantine room

Statistics on Applications for Distance Learning Courses in Past 3 Semesters (unit: courses)

Category	AY2020S2		AY2021S1		AY2021S2	
	Number of Courses	Percentage in all courses	Number of Courses	Percentage in all courses	Number of Courses	Percentage in all courses
Total number of courses	2,726	-	2,895	-	2,778	
Synchronous distance learning	2,726	100%	69	2.38%	50	1.80%
Synchronous and asynchronous distance learning at the same time	-	-	63	2.18%	9	0.32%
Asynchronous distance learning	-	-	14	0.48%	8	0.29%
Total	2,726	100%	146	5.04%	67	2.41%

*Statistics of AY2021S2 were produced before the implementation of full-scale distance learning on 9 May 2022 on courses by application.



▲ Epidemic Control Site



▲ Distance Learning Site

▲ The NPUST huts and guesthouses became the isolation and quarantine facilities.



▲ During the pandemic, we designed the "alcohol pen" that allowed teacher and students to carry and use it ubiquitously to care for the health of teachers and students. (Staff Reporter Yen-Ting Chen, *The Liberty Times*)

► 2-7 Performance of Sustainability Governance

Through the concerted efforts of all teachers and students, we were recognized by the UI GreenMetric World University Rankings in all six categories: Energy and Climate Change (CE), Waste (WS), Water (WR), Transportation (TR), Settings and Infrastructure (SI), and Education and Research (ED). During 2014-2022, **we were ranked No. 1 in Taiwan for nine consecutive years**. The Impact Rankings by *Times Higher Education* is based on the 17 SDGs, and we were ranked **among the world's top 201-300** among a total of 1,524 universities from 11 countries in 2022, more than 100 places higher than in 2021. Additionally, we were ranked No. 4 among 45 universities and **No. 1 among USTs** in Taiwan. In seven SDGs, including end poverty (SDG 1); end hunger (SDG 2); industry, innovation, and infrastructure (SDG 9); responsible consumption and production (SDG 12), climate action (SDG 13), life below water (SDG 14), and life on land (SDG 15), we were ranked among the world's top 101-200, suggesting that our excellent performance in talents cultivation, R&D, university-industry collaboration, and social service relating to the "agricultural production", "environment and ecology", "elderly well-being", and "social responsibility" in the 17 SDGs has been recognized. In 2022 we run for the first-time "integrated performance" rating at the USR Awards by *Global View Monthly*. The rating criteria were based on related international ratings to rate the performance in sustainability implementation in terms of four aspects: sustainability governance, green campus, USR plan, and SDGs research. We were ranked **No. 1**, suggesting that our performance in sustainability governance and implementation was recognized at home and abroad. The related awards are tabulated below.



03

Compliance and Reward

► Sustainability Governance

- Impact Rankings by *Times Higher Education*
World's top 301-400 and No. 1 of USTs in Taiwan in 2021
World's top 201-300 and No. 1 of USTs in Taiwan in 2022
- **Platinum Award** for University Sustainability Report at the 2021 Taiwan Corporate Sustainability Awards (TCSA)
- **No. 1 for Integrated Performance in the TVET category** at the 2022 USR Awards by *Global View Monthly*.
- University Education Performance Review by *Cheers* magazine
No. 19 in the 2022 "University Education Performance Improvement Top 20"
No. 29 in the 2022 "Most Favorite University Graduates Ranking Top 30 of the Top 2000 Enterprises"
No. 7 in the 2022 "Most Favorite Public TVET Systems Top 10"

► R&D and Innovation

- A professor was awarded the **Order of Propitious Clouds with Grand Cordon** and won the 17th **International Inventor Prize** in 2021
- Earned 1 gold, 4 silver, and 1 bronze medals at the Taiwan Innotech Expo Invention Competition 2021.
- A professor was awarded the Excellence in Technology Transfer Award by the NSTC in 2021.
- Academic staff were awarded the FutureTech Award in 2021.
- Professors were awarded the Lifetime Contribution Award by the Plant Protection Society of the Republic of China in 2021.
- A professor won the **Platinum Award, the highest honor** of the Asia International Innovation Invention Exhibition in 2022.
- Students won the **Gold Medal** for door and window carpentry at the 46th World Skills Competition in 2022.
- Students won the **Excellence Award** in competition and **Outstanding Award** in TVET at the 18th Outstanding Award of Technological and Vocational Education in 2022.
- In 2022 the "Nan Formosa Agriculture" and "Talk About Plants" projects won from the Youth Development Administration, Ministry of Education, the stage 1 **Innovation and Entrepreneurship Prize of NT\$350,000**

► Social Responsibility

- A professor was awarded the 4th **National Award for Distinguished Contribution to Industry-Academic Cooperation** in 2021
- A professor was awarded the 45th **Top 10 Taiwan Outstanding Agriculturalists** in 2021.
- A student team won the first place at the "National SDGs Presentation Competition" with "Nesting@Wusui Drainage".
- A professor won the first place at the "Excellence in Teaching Sustainability Award" in 2022.



▪ Nicknamed "Taichi King of Owls", Professor Yuan-Hsun Sun of the Institute of Wildlife Conservation was awarded the "2022 Merit of Forestry and Nature Conservation" from the Forestry Bureau (now Forestry and Nature Conservation Agency), Council of Agriculture (now Ministry of Agriculture) for protecting rare birds in Taiwan through USR x CSR in collaboration with wpd Taiwan. ([Further reading](#))

► 3-1 Compliance with Laws and Regulations 10.3 GRI 2-27

We establish complete personnel systems and regulations in accordance with the University Act and other MOE regulations to achieve the goals of academic research, talents development, culture enhancement, social service, and promotion of national development.

● Compliance with laws and regulations

In personnel systems, based on the legal basis and nature of appointment, we have established complete personnel systems and regulations for academic and administrative staff, including academic staff (including general teachers, teaching assistants, rare technical staff, and technical specialists), staff holding the civil service status, staff hired with the university endowment fund (including teaching staff, research staff, and administrative assistants), military training instructors, mechanics and school workers, and assistants and temporary workforces of all commissioned projects. We have also established management regulations by law and by regulation for personnel administration.

● Keeping personnel management and evaluation up with the times

To improve institutional operations and development, we have been making rolling revision of related personnel regulations based on the institutional development needs in recent years to keep the personnel management, evaluation, and reward systems up with the times.

Revision of Personnel Regulations in Past 3 Years

Name of Regulation	Date of Revision	Number of Revisions
NPUST Organizational Charter	2019.02.12, 2019.04.29, 2020.03.18, 2020.08.17, 2021.11.23, 2022.05.05	6
Regulations for Organization and Operation of President Election Committee	2021.01.25, 2021.04.19	2
Regulations for Establishment of Faculty Evaluation Committee	2021.01.23, 2021.04.27	2
Regulations for Appointment and Promotion Evaluation of Full-Time Academic Staff	2019.10.07, 2020.06.22, 2021.12.27, 2022.06.06, 2022.12.26	5
Instructions for Selection of Full-Time Academic Staff	2019.11.28, 2021.05.13	2
Full-Time Academic Staff Employment Contract	2021.12.27	1
Enforcement Rules of Regulations for Evaluation of Full-Time Academic Staff & Form "Regulations for Evaluation of Full-Time Academic Staff and Instruction, Research, Guidance, and Service Evaluation Criteria Form"	2019.12.23, 2020.06.22, 2021.12.27, 2022.12.01	4
Regulations for Appointment and Promotion of Academic Staff Hired with University Endowment Funds	2019.10.07, 2020.06.22, 2021.12.27, 2022.06.06, 2022.12.26	5
Regulations for Evaluation of Full-Time Academic Staff Hired with University Endowment Funds & Form "Regulations for Evaluation of Full-Time Academic Staff Hired with University Endowment Funds and Evaluation Criteria Form"	2019.11.28, 2021.12.27, 2022.12.01	3

Name of Regulation	Date of Revision	Number of Revisions
Regulations for Appointment of Research Staff Hired with University Endowment Funds	2019.12.23, 2020.06.22, 2021.06.07, 2021.12.27, 2022.06.06	5
Instructions for Attending PhD Programs During Working Hours of Research Staff Hired with University Endowment Funds	2021.05.06	1
Instructions for Appointment of Yushan Fellows and Youshan Young Fellows	2022.06.06	1
Regulations for Non-Renewal of Appointment of Academic Staff	2020.12.28	1
Instructions for Evaluation of Appointment, Promotion, and Eligibility of Full-Time Technical Staff	2019.12.23	1
Instructions for Evaluation of Performance in Instruction, Guidance, and Service of Academic Staff	2019.11.28, 2021.05.13	2
Instructions for Handling Violations of Evaluation Qualifications of Academic Staff	2022.12.26	1
Instructions for Organization and Review of Faculty Grievance Review Committee	2020.12.28, 2021.12.27	2
Regulations for Evaluation of Service Extension of President and Professors	2022.12.01	1
Regulations for Selection, Recommendation, Appointment Renewal, and Dismissal of College Deans and Directors of Departments, Institutes, Programs, and Centers	2022.06.06	1
Regulations for Management and Self-Discipline of Academic Integrity	2017.03.16, 2022.09.08	2
Principles for Handling Sideline Jobs of Full-Time Academic Staff	2019.12.23, 2020.06.22, 2021.06.07	3
Instructions for Evaluation of Professional Achievements of Academic Staff	2019.11.28, 2021.12.01	2
Instructions for Granting Incentives to Academic Staff with Excellent Performance in Functional Missions	2021.09.29	1
Regulations for Appointment and Dismissal of Professors Emeritus	2021.11.27, 2022.06.06, 2022.12.26	3
Instructions for Secondment of Academic Staff	2021.12.02, 2022.12.01	2
Regulations for Appointment and Qualification Evaluation of Part-Time Academic Staff	2019.11.28, 2021.05.12	2
Rules for Contract Staff	2020.02.17, 2021.08.25	2
Wages and Rates for Contract Personnel	2022.03.10, 2022.05.26	2
Instructions for Selection, Promotion, and Transfer of Contract Personnel	2019.08.01, 2021.01.14	2
Instructions for Evaluation of Contract Personnel	2019.01.03, 2021.09.29	2
Principles and Standard Operating Procedures for Handling Staff Performance	2019.01.03, 2022.09.08	2
List of Reward and Discipline Principles for Regular Staff Evaluation	2019.03.22	1
Instructions for Implementation of Recreational Activities of Academic and Administrative Staff	2022.05.05	1

► 3-2 Academic and Administrative Integrity 10.3 16.4

We have established the “Code of Ethics for Teachers” based on the spirit of the *University Act* and *Teachers’ Act* to set principle-based regulations for governing teaching ethics, academic ethics, interpersonal ethics, and social ethics. To unflinchingly manage the academic ethics of academic staff, we have established the “Regulations for Academic Integrity Management and Self-Discipline” and appointed the Personnel Office and Office of Research and Development as the responsible units to manage academic integrity at NPUST and establish the mechanism for academic integrity education.

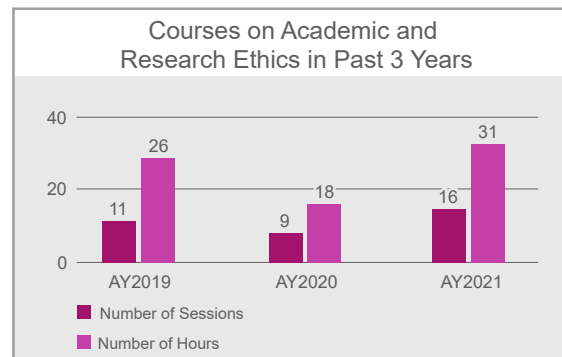
During AY2019-2021, we offered 36 sessions of the academic integrity and research ethics course for 75 hours as education and training for new academic staff and in-service academic and administrative staff. We have also established the operating procedures for handling non-compliance with academic integrity to ensure the legitimacy and legality of academic activities.

To handle cases in relation to violations of evaluation qualifications of academic staff, we have established the “Instructions for Handling Violations of Evaluation Qualifications of Academic Staff” to regulate the ethics and morality of professional self-discipline of academic staff. We have also set up the “Team for Handling Violations of Teacher Ethics” to handle the suspected violation of the Code of Ethics for Teachers or the appointment contract of teachers in an impartial and objective manner. NPUST academic and administrative staff must also maintain integrity and impartiality when carrying out duties in accordance with the *Ethics Guidelines for Civil Servants and Teachers of MOE and MOE Agencies and Schools* and the *Civil Service Act* and ensure law-based administration. **There was no non-compliance with academic integrity of academic staff during 2021-2022.**

We joined the “Southern Region Alliance for Research Ethics” planned and formed by National Cheng

Kung University in 2012. Through the alliance’s operation, NPUST academic staff and research staff can enjoy the services, such as ethics review, education and outreach, and ethics consultation, offered by the alliance to ensure compliance with academic integrity and research ethics when engaging in research and maintain the suitability of research behavior.

We have also published the Code of Ethics for Teachers and related regulations on the Personnel Office’s website and outreach relevant laws and regulations over the [NPUST Ethics Outreach Section](#) for the reference of academic and administrative staff.



● Promoting Intellectual Property Rights Protection

To actively outreach and promote campus protection of intellectual property (IP) rights, we have established the IP Rights Protection Outreach and Promotion Team to organize related outreach activities.

To develop professional management personnel for technology innovation, we offer required and elective courses relating to IP management to ingrain the correct IP right concept in students. Courses on IP rights offered through general education are as follows:

Item/ Academic Year	Rate of IP right courses through general education (Number of IP right courses in general education/ All courses at NPUAT)		Percentage of students taking IP right courses through general education (Number of students taking IP right courses through general education/ Total number of students)	
2019	0.85%	(49/5,780)	8.44%	(1,767/20,947)
2020	0.88%	(50/5,711)	10.6%	(2,241/21,142)
2021	0.76%	(42/5,535)	9.20%	(1,950/21,204)

Our measures for education and promotion of IP rights protection are as follows:

Outreach to students	<ol style="list-style-type: none"> 1. Outreach in class and assemblies and post slogans across the campus 2. Offer the “Patent and IP Management Training Course” to strengthen the concept of IP rights and respect for academic integrity.
Outreach to academic staff	<ol style="list-style-type: none"> 1. Hold the “New Academic Staff Conference”, “Grade Promotion Presentation”, and “Grade Promotion Experience Sharing” to enhance the outreach of the <i>Copyright Act</i> and academic integrity. 2. In the grade promotion evaluation of academic staff, the plagiarism check (paper comparison) should be implemented on the representative work presented by the applicant to ensure if there is plagiarism or inappropriate citation.
Administrative measures	<ol style="list-style-type: none"> 1. The Library has purchased the Turnitin Original Comparison System to enhance comparison efficiency and ensure work originality. 2. Design and print slogans for all units to post. 3. We began auditing photocopy service shops near the school in AY2011. 4. The Library has set up the Southern Region Resource Center Library Resource Sharing Platform to offer the used book service to encourage academic staff to exchange or trade used books on campus to reduce illegal photocopying.
Campus Network Management	<ol style="list-style-type: none"> 1. Hold the Information System Management Committee meeting every academic year to review information security periodically. 2. Suspend IP addresses involving cyberattacks and assist in elimination of rights infringement. 3. Periodically check software legality.
Implement guidance, evaluation, and reward.	<ol style="list-style-type: none"> 1. Include IP right self-assessment in the internal self-evaluation implemented once each academic year on principle. 2. Include IP right self-assessment in the faculty evaluation. 3. The Office of Academic Affairs offer funding each year to encourage school-wide clubs to promote information relating to IP rights.

► 3-3 Educational Performance

To build a better environment for TVET development in Taiwan, apart from “engaging in university-industry collaboration”, we also “cultivate professional areas” to build a research and professional learning environment for teachers and students to lay a solid professional foundation for students and improve the R&D performance of teachers.

We were ranked **No. 19** at the 2022 University Education Performance Rankings Top 20, **No. 29** in the “2022 Most Favorite University Graduates Rankings Top 30 of the Top 2000 Enterprises”, and **No. 7** in the “2022 Most Favorite Public TVET Systems Top 10” by *Cheers* magazine.

● Academic and Research Performance of Teachers and Students

Academic staff make continuous development and improvement in their area of specialization. Apart from integrating the research outcomes into teaching to equip students with professional knowledge in theory and practice, they also engage in university-industry collaboration to improve industrial technology with businesses. Academic staff also actively support the four institutional development themes with outstanding performance in both instruction and research. Students also make outstanding performance when participating in academic research, skill competitions, innovation and

▼ No. 19 at the “2022 University Education Performance Rankings Top 20” [Further reading](#)

大學辦學績效卓越



entrepreneurship competitions at home and abroad. During 2021-2022, a total 1,817 students won awards in competitions at home and abroad, and academic staff also earned recognition for their academic and research achievements.

2021

- Professor Yi-Chaio Huang of the Department of Industrial Management earned the excellence award at the MOE Teaching Practice Research Program.
- Professor Yung-Chuan Chen of the Department of Vehicle Engineering earned the Outstanding Advisor Award at the 1st Taiwan E-Intelligent Vehicle & Green Energy Technology Conference.
- Students won the honorable mention at the “e-System Creative Application Competition” under the supervision of Associate Professor Wen-Hsi Hsu of the Department of Business Administration.
- Associate Professor Jia-Hsin Guo of the Department of Food Science earned the “Talent Cultivation for the Nation” trophy from MOE.
- Professor Uzu-Kuei Hsu was awarded the “Order of Propitious Clouds with Grand Cordon” and the “International Membership” by the Chinese Innovation & Invention Society & IAIA and won the 17th International Inventor Prize by the World Invention Intellectual Property Associations.
- Professor Ho-Hsien Chen of the College of Agriculture was awarded membership by the Institution of Engineering and Technology.
- Professor Tsai Wen-Tien of the Bioresource PhD Program, College of Agriculture, and Professor Chi-Wan Hsieh of the Department of Civil Engineering were awarded the Outstanding Engineering Professor Award by the Chinese Society of Engineers.
- Five professors were ranked the global top 2% scientists at the Impact Rankings.
- Ten professors were ranked the global top 2% scientists at the Impact Rankings
- Professors Emeritus Chang Niann-Tai and Wen-Jinn Liang earned the “Lifetime Contribution Award” from the Plant Protection Society of the Republic of China.
- Earned 1 gold, 4 silver, and 1 bronze medals at the Taiwan Innotech Expo--Invention Competition.
- Professor Kuang-Hung Tseng of the Department of Materials Engineering was awarded the Excellence in Technology Transfer Award by the NSTC.
- FutureTeck Award
 - › Professor Earl-Juei Wang of the Department of Industrial Management
 - › Associate Professor Rank Specialist Huang Wei-Tai of the Department of Mechanical Engineering

2022

- Associate Professor Chia-Hung Yen of the Department of Biological Science and Technology was awarded the International Inventor Prize for Academic Contribution.
- Associate Professor Huang Wei-Tai of the Department of Mechanical Engineering won the Platinum Award, the highest honor of the Asia International Innovation Invention Exhibition.
- Assistant Professor Mohsen Gavahian of the Department of Food Science was awarded the IUFoST Young Scientist Award.
- Professor Kwei-Bin Kuo of the Department of Recreational Sports and Health Promotion was awarded the excellence award at the MOE Sports Sciences Research Works Award.
- University-Industry Collaboration Achievement Presentation Award, Department of Engineering and Technologies, National Science and Technology Council.
 - › Professor Wen-Tien Tsai earned the distinguished award for posters.
 - › Professor Chia-Yen Lee earned the excellence award for presentation.
 - › Professor Earl-Juei Wang earned the excellence award for presentation.
- Associate Professor Yong-Hong Lin of the Department of Plant Industry was awarded the Pride of the Nation Academic Award at the International Inventor Prize and won the gold medal at the 13th International Innovation and Invention Competition (IIIC).

● Learning Efficacy and Awards from Domestic and International Competitions of Students

2021

- 2021 National Student Practical Project Competition
 - › The Department of Wood Science and Design won the second place in the Biotechnology, Medicine, and Agriculture Category with the “Research on Preventing Mites in Wood with Salt Treatment.”
 - › The Department of Industrial Management won the second place in the Animation Interactive Media Category with the “Application of VR in Developing Astronomic Teaching Materials: The Case of Exploring the Eight Planets”
 - › The Department of Mechanical Engineering won the second place with the “Research on Optimizing Multiple Quality Characteristics of Turn-Million Compound Machining by Using Smart Modeling Method”.
 - › The Department of Wood Science and Design won the second place with “Developing Cat Litter Products by Mixing White Popinac (*Leucaena leucocephala*) with Granulated Branch Debris”.
 - › The Department of Biotechnology won the honorable mention with “Improving the Spatial Memory and Exercise Performance of Aged Fancy Rat (*Rattus norvegicus f. domestica*) by Combining the Oil of Chinese Softshell Turtle (*Pelodiscus sinensis*) with Swimming Training”.
- The interdisciplinary team across departments for the Southern Region Competition of the MOE 2021 Zero Hunger: TVET Cup National Competition
 - › The team formed by the Graduate Institute of Management and Technology, the Bachelor of Program in Scientific Agriculture, and the Department of Biomechanical Engineering won the Best Technology Award.
 - › The team formed by the Graduate Institute of Bioresources, the Department of Industrial Management, and the Department of Mechanical Engineering won the Best Creativity Award.
 - › The team formed by the Department of Biological Science and Technology, the Department of Biomechanical Engineering, and the Department of Wood Science and Design won the Best Design Award.
 - › The team formed by the Department of Wood Science and Design and the Department of Food Science won the Best Value Creation Award.
 - › The team formed by the Department of Agribusiness Management and the Department of Plant Industry won the Best Popularity Award.
 - › The team formed by the Department of Biological Science and Technology, the Department of Wood Science and Design, and Bachelor’s Program for Advanced Materials Science won the Best Popularity Award and Honorable Mention.
- A student of the Department of Recreational Sports and Health Promotion won the first place in the men’s over 90kg category at the AY2021 ROC Collegiate Bodybuilding Competition
- organized by the Sports Administration, MOE.
- A student of the Department of Recreational Sports and Health Promotion won the distinguished award in women’s around the leg racing and distinguished award in women’s single at the AY2021 National Diablo Folk Sports Competition for Schools of All Levels.
- The softball school team won the men’s national champion for the fifth time at the AY2021 University Slow-Pitch Software Championship Competition.
- The men’s volleyball school team won the men’s national champion at the AY2021 University Volleyball League Competition.
- A student of the Department of Hotel and Restaurant Management won the gold medal for boulangerie at the 51st National Skill Competition.
- A student of the Department of Hotel and Restaurant Management won the first place for pâtisserie and confectionery at the 51st National Skill Competition.
- The team of the Department of Business Administration won the first place for OU-DEAN at the 2nd Taiwan Can Food Creative Design Competition.
- A team formed by six students of the Department of Business Administration won the fifth place and maker funding of NT\$100,000 at the AY2020 SOS-IPO (3rd Session) of the MOE...
- A master’s student of the Department of Industrial Management won the 2021 Excellent Thesis Award of the Chinese Association for Energy Economics (CAEE).
- A student of the Department of Fashion Design and Management won the Winning Prize at the 10th International Digital Fashion Contest in South Korea.
- The 8th International Cultural Creative Cup World Skills Competition in 2021
 - › A student of the Department of Fashion Design and Management won the first place for Creative Relief High Heels Static Work and Fashion Product Creative Design Static Work of the university category.
 - › A student of the Department of Fashion Design and Management won the first place for the Style Creative Design Static Work (Corsage) of the open category.

- › A student of the Department of Fashion Design and Management won the second place for Eco-Friendly Clothing Creative Design Static Work and the honorable mention for the Découpage Static Work (Cloth Bag) of the university category.
- A team formed by two students of the Department of Wood Science and Design won the honorable mention for 3D Style & Product Design at the 2022 Youth Innovative Design Festival.
- 2021 U-Start Innovation and Entrepreneurship Program of the Youth Development Administration, Ministry of Education.
 - › The startup team formed by two students of the master’s program at the Graduate Institute of Animal Vaccine Technology and students of the Department of Animal Science, the Department of Veterinary Medicine, the Department of Tropical Agriculture and International Cooperation earned the phase I innovation and entrepreneurship prize of NT\$350,000 and school funding of NT\$150,000 of the Youth Development Administration, Ministry of Education, for the “Columba Gene Workshop”.
 - › The startup team formed by two students of the PhD program of the Graduate Institute of Bioresources and two students of the Department of Environmental Engineering and Science earned the phase I innovation and entrepreneurship prize of NT\$350,000 and school funding of NT\$150,000 of the Youth Development Administration, Ministry of Education, for the “Carbon Wrapping Innovation”.
- The team formed by 12 students of the Department of Plant Industry won the bronze medal of the Landscape Design Competition at the 2022 Taiwan International Orchid Show with the “Rabbit Hole”.

2021

- 2022 U-Start Innovation and Entrepreneurship Program of the Youth Development Administration, Ministry of Education.
 - › The entrepreneurship team formed by four students of the Department of Tropical Agriculture and International Cooperation and Bachelor of Program in Scientific Agriculture won from the Youth Development Administration, Ministry of Education, the stage 1 Innovation and Entrepreneurship Prize of NT\$350,000 and school funding of NT\$150,000 with the “Nan Formosa Agriculture” project.
 - › The entrepreneurship team formed by two graduates and the active student Hsuan-Huei Li of the Department of Forestry won from the Youth Development Administration, Ministry of Education, the stage 1 Innovation and Entrepreneurship Prize of NT\$350,000 and school funding of NT\$150,000 with the “Nan Formosa Agriculture” project.
- Students of the Department of Fashion Design and Management won the champion for Modeling Clay Creative Design Completed Work (static) and the third place for Diamond Art Beads (static) at the Taiwan Asia Pacific Beauty Industry Exchange Conference & Creative Cooking Competition.
- Students of the Department of Fashion Design and Management won the internet popularity award at the Taitung Hotspring Robe Design Contest.
- The innovation and entrepreneurship team won the first place and best potential award at the 2022 Youth Agricultural Makerathon: Agricultural Landscape Innovation and Entrepreneurship Proposal Competition”.
- Teachers and students of the Department of Industrial Management won the best paper award at the Chinese Institute of Industrial Engineers Annual Conference (CIIE).
- Students of the Department of Wood Science and Design won the gold medal for door and window carpentry at the 46th World Skills Competition.
- The 18th Outstanding Award of Technological and Vocational Education: Student Shih-Kai Chen of the Department of Wood Science and Design won the award of excellence, and student Chi-Hao Lee of the Department of Food Science won the excellence in TEVT award-license professional (TEVT schools).

- ▶ The 18th Outstanding Award of Technological and Vocational Education: Student Shih-Kai Chen of the Department of Wood Science and Design won the award of excellence, and student Chi-Hao Lee of the Department of Food Science won the excellence in TEVT award-license professional (TEVT schools).

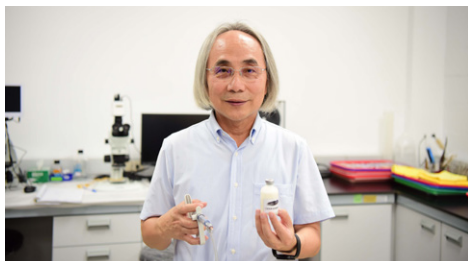


● Performance in Environmental Sustainability Promotion

SDGs Linkage	Awards for Environmental Sustainability
15.5	Professor Yuan-Hsun Sun of the Institute of Wildlife Conservation was awarded the "Merit of Forestry and Nature Conservation" by the Forestry Bureau (now Forestry and Nature Conservation Agency), Council of Agriculture (now Ministry of Agriculture), with <i>Hawk Eagle Heroes</i> for the protection of the habitats of in numerous lives.
15.5	Professor Mei-Hsiu Hwang of the Institute of Wildlife Conservation earned the first prize for "Ecology Co-Benefit" after 25 years of efforts in Formosan black bear conservation at the 2nd USR Awards 2021 by <i>Global Views Monthly</i> .
2.4 12.8	Distinguished Research Fellow Yu-Ming Wang and his team of the International Irrigation R&D Service Center earned the model prize for "Ecology Co-Benefit" at the 3rd USR Awards 2022 by <i>Global Views Monthly</i> with the eco-friendly farming method.
7.2	Professors Chang-Hsien Tai, Yao-Nan Wang, and Chin-Lung Chang of the Department of Vehicle Engineering; Professor Uzu-Kuei Hsu of the College of Professionals; and Professor Ming-Shen Hu of the Air Force Institute of Technology won the gold medal at the 2021 All American DAVINCI International Innovation and Invention Expo with the invention "Compound Generation System Using Compressed Air Energy Storage".
12.4	Professor Tsai Wen-Tien of the Bioresource PhD Program, College of Agriculture won the "2022 Excellence in Teaching Sustainability Award" and a prize of NT\$20,000 for "Renewal Energy and Sustainable Development".
6.4 13.3 14.1	Three students from the MBA program and the Department of Biomechanical Engineering won the honorable mention and a prize of NT\$10,000 at the 6th Climate Change Innovation Competition 2021 of the Ministry of Education with "Cleaning Equipment by the Method based on Low-Frequency Drives Bubbles".
2.4 6.4 7.2 8.10 12.8 13.3	Three students of the Department of Animal Science won the honorable mention and a prize of NT\$10,000 at the 6th Climate Change Innovation Competition 2021 of the Ministry of Education with "Zoumei" (de-carbonization).
2.a 12.a	The 11th National College Competition in Business Ethics 2021 › The "Environmental Protection A-Team" formed by five students of the Department of Business Administration won the honorable mention in the Chinese Case Analysis category. › The "Hidden Environmental Problems of Fast Fashion" team formed by five students of the Department of Business Administration won the honorable mention in the Chinese Case Analysis category. › The "Eco-Unfriendly of Eco-Friendly Products" team formed by five students of the Department of Business Administration won the honorable mention in the Microfilms category. › The "Ending Farmland with Agro-Photovoltaics" team formed by four students of the Department of Business Administration won the honorable mention in the Microfilms category.
12.4	Students of the Department of Fashion Design and Management won the first place for eco-friendly apparel creative design (static) of the university category, fashionable clothes creative design (statics) of the university category, and stage costume creative design (static) of the university category at the 8th International Cultural Creative Cup World Skills Competition in 2021.

● Performance in USR Promotion

Link to SDGs	Awards for USR
17.9	Associate Professor Herlin Chien of the Center for General Education won the first place and a prize of NT\$100,000 for "Intergovernmental Organization" at the "2022 Excellence in Teaching Sustainability Award".
14.2	Professor Shih-Chu Chen was awarded the 4th National Award for Distinguished Contribution to Industry-Academia Cooperation
2.3 8.2 12.3	Professor Pao-Chuan Hsieh earned the 45th Taiwan Top Ten Agricultural Experts
8.8 11.3	The team of the Department of Wood Science and Design won the Spatial Revitalization Award at the 11th University Rural-Up Competition 2021 with the "Bao-Lai Way".
6.3 11.3	The team "Youngsters' Group" formed by two students of the Bachelor's Program for Advanced Materials Science and Department of Food Science won the first place at the "2021 National SDGs Presentation Competition" with "Nesting@Wusui Drainage".



▲ Dean Shih-Chu Chen of the College of Veterinary Medicine was awarded the 4th National Award for Distinguished Contribution to Industry-Academia Cooperation 2021. [Further reading](#)



▲ Professor Pao-Chuan Hsieh earned the 45th Taiwan Top Ten Agricultural Experts. [Further reading](#)



▲ Professor Uzu-Kuei Hsu awarded the "Order of Propitious Clouds with Grand Cordon" and elected as the winner of the "16th International Inventor Prize" by the World Invention Intellectual Property Associations was summoned by President Ing-Wen Tsai at the Office of the President. [Further reading](#)



▲ Associate Professor Huang Wei-Tai of the Department of Mechanical Engineering won the Platinum Award, the highest honor of the Asia International Innovation Invention Exhibition. [Further reading](#)

► 3-4 Disclosure of Negative Information and Improvement Mechanisms

GRI2-25, GRI413-2

Traffic safety was the most frequently reported negative information and greater impact on local communities of NPUST during 2019-2020. The number of campus traffic accidents and the safety impact on residents in local communities have been reduced significantly after our intensive promotion of traffic safety, encouragement of using public transport for teachers and students, and improvement of traffic safety facilities and traffic flow planning.

Students' mistaking of our concealment of the number of COVID-19 conformed cases and lack of positive actions were most frequently reported negative information during 2021-2022. We communicated our epidemic control measures to the public and eased the worries of stakeholders through the media.

Negative News Reports and Responses

Category	News Headline	NPUST Response	Explicit Improvement and Counteraction
Students	Students' accusation of downplaying COVID-19 condition, NPUST: Misinformation (TIVT News) Reactive response to cluster infection crisis in student halls at NPUST (TTV News)	In a media interview, NPUST Dean of Student Affairs announced the number of confirmed cases and explained various epidemic control measures: 1. After the outbreak, the school has immediately organized the epidemic control committee with the heads of all units and taken stringent management of epidemic controls in accordance with MOE's epidemic control instructions. 2. After receiving a confirmed case report, the Office of Academic Affairs immediately arranged distance learning, the Office of General Affairs assisted with the cleaning and disinfection of the reported locations, and the Office of Student Affairs offered care service, isolation venues, and accommodation for epidemic control. Response to the press: Higher Education Evaluation & Accreditation Council of Taiwan. (2021). Road to sustainability: NPUST's epidemic control and anti-epidemic measures and scientific agriculture education. <i>Evaluation Bimonthly</i> , 86.(Higher Education Evaluation & Accreditation Council of Taiwan)	1. The school security center and health center have established the campus confirmed case reporting mechanism within the shortest time and updated and announced the confirmed cases information immediately in accordance with the regulations of the Central Epidemic Control Command and MOE. 2. The "the isolation dorm" has been arranged for residential students tested positive with home test kits or lab tests (confirmed cases), and cleaning and disinfection were enhanced of their original rooms. The single entrance/exist with policy with the body temperature station was implemented on all campus buildings, and health caring team was formed in each class. 3. Distance learning is planned rapidly for students unable to attend the physical class. Full-scale distance learning was implemented at the request of the Central Epidemic Control Command and MOE. 4. The Student Counseling Center has established the "COVID-19 Anxiety Counseling Plan" to provide support for students with emotional stress and impact. 5. The campus epidemic control app was designed to record the campus traces of all individuals to perfectly capture the health management and related contacts of academic and administrative staff and students.
Students	UST remains reactive for homosexual students surrounded and bullied in campus bathroom: Students complain. (<i>The Liberty Times</i>) No action from school against UST "homosexual student" incident: Fan Yuen exposed (<i>Now News</i>)	1. The incident has been reported within the time-limit in accordance with the "Instruction for Reporting Campus Security Incidents and Accidents", and an investigation team was formed in accordance with the "Code of Prevention for Campus Sex-Related Assault, Harassment, and Bullying" to investigate the incident. 2. Student hall crisis handling mechanism (1) Immediate personal safety protection and privacy maintenance of students. (2) Establishing care and guidance mechanisms and informing students of the resources from the counseling center through publicity. 3. Case guidance (1) Verified the contact information of probable victims (students), implemented physical and mental health evaluation and assistance, and offered various guidance measures and implement follow-up and and guidance. (2) Arranged telephone care for students posting videos on social media and reminded them of the legal responsibilities for making speeches on social media so as to prevent breaking the law. (3) The counseling center arranged professional counseling service on Monday evenings and Wednesday and Tuesday mornings for the psychological issues of students, including suspected perpetrators, onlookers, and social media users.	1. Explicit Action (1) Outreach of gender equality and the rule of law. (2) Holding meetings for face-to-face communication 2. Short-term publicity and prevention strategies (1) Outreached and educated the code of ethics through real-time information broadcast. (2) Developed the awareness of issues relating to cyber-sexual violence (sexual harassment and sexual bullying) over the school network and established the Gender Equality Outreach Section . 3. Long- and medium term publicity and prevention strategies (1) Offered in-class guidance service for the publicity and education of gender equality. (2) Held seminars on issues relating to gender equality and the rule of law and planned the education and publicity of gender equality and the rule of law in the required courses of each semester.
Illegal sideline jobs and seizure of gravy trains for double pay of	academic and administrative staff exposed (<i>The Liberty Times</i>)	1. The teacher involved applied for "industrial training" at the Metal Industries Research & Development Centre (MIRDC). After the approval of the NPUST president, the application has been passed by the faculty evaluation committee at three levels. The process and procedures were complete and stringent. That teacher resigned after the training completion. 2. The story reported by the news was untrue, and that teacher did not receive double pay. We have already explained the matter to MOE and the Control Yuan. 3. This matter involved the need to notify the school when a teacher must engage in a sideline job during the secondment at other agencies. As the agency offering the secondment did not notify the school, and the sideline job engaged was not allowed by law, we have requested the sideline job charge for violating the sideline job regulations from that teacher, and the charge has been paid to the university endowment fund.	Corrective and preventive action: (1) Reiterated in the approval for secondment of teachers and included this in the principles and regulations handling the sideline job engagement of full-time academic staff. (2) Included the related regulations in the revision of the school's Instructions for Academic Staff Engaging in Industry Training or Research (3) Notified the secondment agencies and reiterated the need to notify the school of any changes in the secondment.

04

Performance in Environmental Sustainability (E)

► Highlights:

- UI GreenMetric World University Rankings **No. 1 of Taiwan for nine consecutive years during 2014-2022; world's top 2%, No. 3 in Asia, and No. 27 in the world in 2022.**
- Grew over 5,000 seedlings during 2020-2022, with over a survival rate of over 90%.
- The 2nd USR Awards 2021 by *Global Views Monthly*: **No. 1 in "Ecology Co-Benefit"**.
- The 3rd USR Awards 2022 by *Global Views Monthly*: **Model of "Ecology Co-Benefit"**.
- **EUI 87.1** in 2021, below the EUI standard of 90.
- **Total recycling with zero discharge** for domestic sewage purification and recycling. Reduce second water consumption by **about 180ML** each year, and reduce BOD load by **1,461kg** each year.
- Sheltered **105 species** with **over 1,400 heads** in the IUCN Red List species and national conservation list species during 2020-2022.
- Green procurement rate **over 99.53%** from **100%** local suppliers of Taiwan during 2020-2022.

- Distinguished Research Fellow Cheh-Shyh Ting, a water conservation expert and winner of the Dayu Award, built the Greater Chaozhou Groundwater Recharge Lake Project in collaboration with the Pingtung County Government to direct rich rainwater during the flood period into the artificial lake for storage to recharge groundwater for the sustainable development and recycling of water.

► 4-1 Low-Carbon Campus

6.d 7.1 7.2 9.1 11.6 11.7 12.4 12.8 13.2 15.1

GRI 2-4, GRI 302-1 and 302-3, GRI 306-1 to 306-4 | Material Issue E03 and E04

We comply with the *Talloires Declaration* and practice the green campus based on the role of universities in environmental protection and the pursuit of environmental sustainability. By implementing GHG inventory, promoting sustainable commuting, installing renewables, saving energy, recycling and reusing waste, and offering environmental sustainability education, we reach the sustainable campus consensus among all teachers and students to achieve the goal of low-carbon campus.

● Climate Change Governance and Action

In 2021 we joined the Green University Union of Taiwan (GUUT) and undertook to include “environmental sustainability” in institutional operations and comply with the relevant environmental laws and regulations. **So far no non-compliance relating to environmental laws and regulations has been reported.** Through the concerted efforts of all academic and administrative staff and students, we have earned recognitions for our performance in maintaining sustainable campus from home and abroad, including the

2022 No. 1 in Taiwan at the UI GreenMetric World University Ranking

NPUST

No. 1 in Taiwan for 9 consecutive years | No. 3 in Asia | No. 27 in the world

Year	Number of Participating Schools	Number of Participating Countries	Global Ranking
2021	956	80	29
2022	1050	85	27 ↑



excellence performance in the UI GreenMetric World University Rankings. Since 2014 we have been ranked **No. 1 of Taiwan for nine consecutive years and the world's top 2%, No. 3 in Asia, and No. 27 in the world in 2022.** Particularly in categories including Settings and Infrastructure (SI), Water (WR), Transportation (TR), and Education and Research (ED), we have made brilliant performance in the UI GreenMetric World University Rankings. In response to climate change, we regulate climate through growing trees. In 2019 we began collaborating green business with Ching Jing Lin (CJL) Education Foundation. Every year we pull a crowd of over 100 volunteers to grow trees on our Daren and Baoli agricultural stations and have grown over 5,000 seedlings so far, with a survival rate of over 90%. By growing these Earth-friendly seedlings, we aim to promote sustainable development for Taiwan and Earth.

Tree Growing Activities and Statistics in Past 3 Years

Year	Activity Name	Quantity (plants)
2020	Department for Forestry x CJL Education Foundation “Let’s go and grow some trees”	1,500
2021	Support Earth Day with Campus Plantation on April 22	26
	Beware of DoF and CJL! Department for Forestry x CJL Education Foundation grow thousands of trees for the future	1,500
2022	DoF and CJL Together Again! Department for Forestry x CJL Education Foundation rescue and restore rare species Hengchun camellia	1,000



▲ ◀ DoF and CJL call a crowd of over 100 people to rescue and restore the rare species Hengchun camellia (*Camellia hengchunensis*).

● GHG Reduction and Management

We have established the campus energy audit and management mechanism to save energy and reduce GHG emissions. With 2019 as the base year, we independently inventory GHGs every year for the actual control over GHG emissions and disclose the GHG emission information, with indirect Scope 2 being the major scope of disclosure, so as to reduce GHG emissions by reducing energy consumption for the effective reduction of campus GHG emissions.

– Increasing inventory items every year towards a carbon neutral university

Inventory shows that electricity use and transportation are the main sources of carbon emissions at NPUST. To immediately and effectively reduce GHG emissions, we have actively implemented electricity conservation plans and started the intelligent air-conditioning management system and intelligent energy conservation management system on all large buildings within NPUST.

On the main campus and student halls occupying an area of 298 hectares and about 30 hectares respectively, and in the Baoli and Daren (Taitung) agricultural stations occupying an area of 268 hectares and 576 hectares, we have grown about 1,382,778 trees. Based on the statistics of the Forestry Bureau (now Forestry and Nature Conservation Agency) that each tree can reduce emissions by 12 kgCO₂e/year on the Earth, the 2019 carbon removal of NPUST was up to 16,593.3 tCO₂e/year. As the emissions from electricity use and transportation is 14,981.94 tCO₂e/year, our carbon removal is greater than our carbon emissions. The 2019 scope of inventory covered electricity and transportation. In the future, we will increase more inventory items and continue to reduce carbon emissions through various energy-efficient facilities, green energy generation, and growing trees and greeneries, hoping to achieve 100% carbon neutral by 2049.

<p>2019 Carbon Removal Main campus about with 180,000 (plants) × 0.012t = 2,160 (t) Two agricultural stations about with 1,202,778 (plants) × 0.012t = 14,433.3 (t) Total: 16,593.3 tCO₂e. 2019 Emissions (electricity use + transportation exhaust) Electricity = (Total consumption - Green energy)/1000 × 0.509 (2019 electricity emission factor announced by the Bureau of Energy, Ministry of Economic Affairs) = (30,667,579-1,616,850)/1000 × 0.509 = 14,786.82 (t) Transportation (including: bus, private cars, and motorcycles) = 195.12 (t) Total: 14,981.94 (t)</p>
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*Data for calculating carbon emissions and carbon removal.
 (1) Forestry Bureau (now Forestry and Nature Conservation Agency): The per tree carbon removal is 12 kg/year (average)
 (2) The 2019 electricity emission factor announced by the Bureau of Energy, Ministry of Economic Affairs, was 0.509 (kgCO₂e/kWh).
 (3) UI Green Metric World University Rankings 2019 Guideline.
 (4) Carbon emissions at NPUST are based on the total electricity consumption and transportation volume each year.

Indirect Scope 2 GHG Emissions in 2019 (base year)

Year	Electricity Consumption (GJ)	Carbon Emissions from Electricity Use (tCO ₂ e/year)
2019	110,403.28	14,786.82
2020	109,600.67	12,824.63
2021	102,143.71	11,032.67
2022	105,146.03	11,088.49

*Calculations are based on the electricity emission factors announced by the Bureau of Energy, Ministry of Economic Affairs: 0.509 kgCO₂e/kWh for 2019, 0.502 kg/kWh for 2020, and 0.509 kg/kWh for 2021 and 2022.

(Information restatement: The 2020 carbon emission factor was 0.502 kg/kWh, thus updating the data of 2019 and 2020).

– Agricultural net-zero and carbon sink towards net-zero emissions

We have established the College of Agriculture Tropic Organic Agricultural Net Zero & Carbon Sink Promotion Office” to help reduce carbon emissions and enhance carbon sink in agricultural production. The International Irrigation R&D Service Center earned the model prize for Ecology Co-Benefit at the 3rd USR Awards 2022 by *Global Views Monthly* with the eco-friendly farming method. Additionally, the Sustainable Circular Economy R&D Center also actively engages in research relating to green energy applications and won the **gold medal at the 2021 All American DAVINCI International Innovation and Invention Expo** with the invention “Compound Generation System Using Compressed Air Energy Storage”.

– Carbon reduction for sustainable commuting

To reduce the number of motorcycles and scooters, improve air pollution, and reduce the number of traffic accidents to build a healthy and green campus, we established the Sustainable Commuting target in response to the Earth-friendly and campus green energy transportation policy.



▲ Green e-bus



▲ Campus pavement

Performance in Sustainable Commuting in Past 3 Years

Transportation Strategy	Quantitative Performance	Description
NPUST shuttle bus	298,558 persons 54 buses daily	In addition to traveling across all buildings on campus and the student halls off campus, and school bus also offers services between the campus and Pingtung city center, Shuimen, Wutai, and Fengshen outbound bus in collaboration with the Ministry of Transportation and Communications and Ping Tung Bus.
Green e-Bus	4 units	Collaborating with the green e-bus plan of transportation companies, we have established e-bus charging stations on campus to provide eco-friendly, low-carbon transportation on campus.
DRTS Smart NPUST shuttle bus Booking	19,590 persons	We offer the Demand Responsive Transit Service (DRTS) in collaboration with the Highway Bureau and Ping Tung Bus for students to book the bus and destination over the app to save waiting time and encourage carpool.
e-Bicycle and e-Scooter	2,247 units	We promote campus green transport using e-bicycles and e-scooters and establish numbers of free charging stations on campus in collaboration with China Motor Corporation (CMC).
Recycled bicycles	200 units	We apply for the C-Bike to the Kaohsiung Environmental Protection Bureau for free use by NPUST students.
e-Trolleys For school affairs	4 units	We team up with the departments and institutes to build e-trolleys to transport equipment for campus activities.
Campus Pavement	Total length 1,512.95m.	We began progressively building shaded pavement in all areas across the campus in 2019 to enhance road safety.

● Energy Management

We have formed the Energy Conservation Promotion Team chaired by the vice president for administrative affairs to draw up the targets and working plan for energy conservation each year so as to implement energy conservation and realize the consensus on energy conservation between all NPUST teachers and students without affecting teaching, research, and institutional development.

Due to the spacious campus, our electricity demand is high. To reduce electricity consumption and effectively capture the energy-consuming areas on the campus, we have built the smart energy monitoring system and smart air-conditioning management system in all large campus buildings to monitor the electricity and air-condition consumption of all campus buildings. After energy inventory, we can accurately locate campus buildings with higher electricity consumption, investigate the causes immediately, and make timely improvement to save energy.

We also progressively replace aged air-conditioners with the inverter models and install inverter air-conditioner smart meters to control electricity use; replace aged power transformers with amorphous metal transformers to reduce power loss; replace all lighting fixtures with the LED models; install heat pump water heaters, water-efficient taps, water-efficient flush, and other water-efficient equipment in student halls; and implement periodic maintenance to ensure normal equipment operation. In 2022 MOEA commissioned the Taiwan Green Productivity Foundation to audit this university. We have already promoted and implemented energy conservation management in accordance with the regulations relating to the *Energy Administration Act*, replaced the air-conditioners of all student halls and all campus buildings with the inverter models, and replaced all street lamps with the LED models. **During 2015-2021 the annual average energy conservation rate was 1.62%, meeting the requirements of the energy**



▲ Campus Smart Energy Management System



▲ Smart Electricity Control System

Based on the “Government Agencies and Schools Electricity Efficiency Rate (EER) Management Plan” of the Executive Yuan, we fall in Category 1 of UST in the categorization and grouping. The baseline values of the energy usage index (EUI) for 2019 (the base year) was 90 kWh/m²/year. Through active energy conservation, our electricity consumption in both 2021 and 2022 was below the EUI baseline value, demonstrating a great show in energy conservation and carbon reduction.

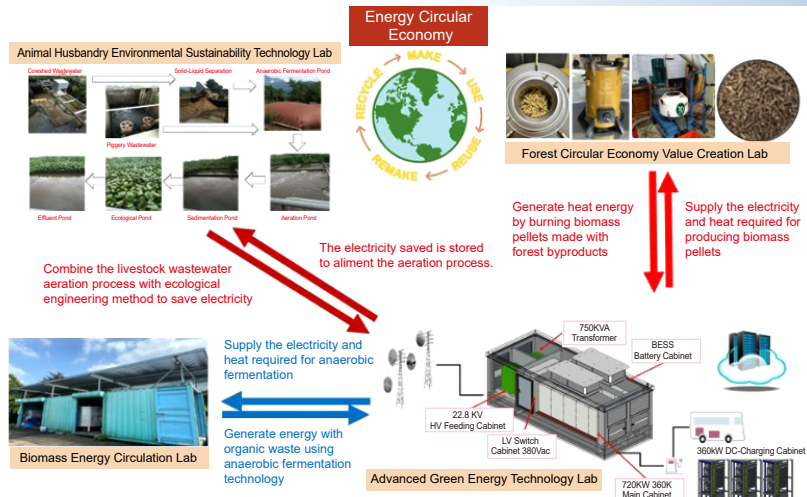
Statistics on Electricity Use in Past 3 Years

Item/Year	2020	2021	2022
Non-renewables (GJ)	91,969.4	78,030.6	78,425.5
Renewables (GJ)	17,631.2	24,113.1	26,720.6
Total Electricity Use (GJ)	109,600.7	102,143.7	105,146.0
Floor Area (m ²)	323,551	325,890	325,890
EUI	94.1	87.1	89.6

Renewables

By cooperating with the government's energy policy, we hope to raise the proportion of renewables use to 20% in 2025 through self-generation for self-use. The variety of renewables on campus include solar energy, wind power, biodiesel energy, and biomass energy. In 2022 we established the Sustainability R&D Center to continuously research, develop, and integrate resources to develop the collection, storage, and use of renewables.

The major sources of our renewables include the agro-photovoltaics of the Smart Agriculture Center, the fish and electricity symbiosis of fish farms and fishmeal factories, and the solar panels of the mushroom factories, fruit and vegetable greenhouses, the eight student halls, the new library and exhibition hall completed in 2021, and the common building. Based on the daily average sunshine duration in Taiwan, the daily average sunshine hours in specific areas on Neipu Campus are up to 4.5 hours, allowing PV systems to generate electricity of 7,173.5 (GJ) in 2020 and 13,215.5 (GJ) on average during 2021-2022. A small number of wind turbines installed at the plant factory and Sustainability R&D Center supply electricity for the plant factory. The biomass energy developed by the Biodiesel Energy Laboratory of the Department of Biomechanical Engineering supplies fuels for use by agricultural machinery. The Agricultural and Forestry Byproduct Recycling and Value Creation Development Center develops agricultural and forestry byproducts into various biomass pellets or biocarbon pellets to create higher value.



▲ The team of the NPUST Sustainability R&D Center develops the renewables circular economy map through mutual support.

Green Building

All new buildings are green buildings using natural lighting and equipped with related energy conservation equipment to meet the sustainability requirements. Currently, we have obtained five green building certificates, including the Tropical Agriculture Research Building, Working Dog Breeding Farm, Immunity Horse Breeding Farm, and the Intelligent Agricultural Machinery Center II (2020) of the College of Agriculture and the Sustainability R&D Center. All these buildings comply with the following four indicators: greening capacity, basic water conservation capacity, daily energy conservation, and water.

Additionally, our application for the Green Building Label Candidate Certificate has been approved for the following buildings under construction and about to be completed, including the Innovation and R&D Building of the Department of Wood Science and Design, the Scientific Agriculture Promotion Building, and Aquaculture and Conservation Center, also passed the candidate green building application, and eight buildings have passed the Green Building Label Candidate Label.



▲ Intelligent Agricultural Machinery Center II



▲ Sustainability R&D Center



▲ Tropical Agriculture Research Building of the College of Agriculture



▲ Working Dog Breeding Farm



▲ Immunity Horse Breeding Farm

● Waste Management

The Environment, Safety, and Health (ESH) Center plans and implements the campus environmental maintenance, promotes the ESH management system, and establishes the campus waste management policy to realize campus waste reduction and resource recycling and reuse.

At NPUST, waste is divided into two categories: non-hazardous waste and hazardous waste. Hazardous waste is mainly produced by the medical consumables from teaching and research and waste chemical liquids from laboratories. The Center for Environmental Protection, Safety, and Health gathers them every week for temporary storage before hiring legal transporters to transport them to qualified disposal sites for disposal to prevent environmental pollution. The whole disposal process complies with the sorting, storage, and clean-up processes as stipulated in the *Waste Disposal Act*.

Total Weight of Campus Non-Hazardous Waste and Hazardous Waste in Past 3 Years (unit: t/year)

	Disposal Method	Waste Category	2020	2021	2022
Non-Hazardous Waste	Incineration	General Waste	334.2	362.5	310.4
	Recycling Reuse	Paper	75.5	84.9	80.6
		Metal Can	1.2	1.4	1.7
		Other Metals	13.4	76.6	18.1
		Aluminum Can	0.4	0.7	0.9
		PE Bottle	2.3	4.4	1.5
		Plastics	7.3	14.7	10.5
		Waste Batteries and Waste Fluorescent Tubes	0.7	0.5	0.2
		Waste DVDs and Waste Cells	0.3	0.8	0.3
		Waste Home Appliances/Waste Computers/Waste Toner Cartridges/Waste Bicycles	12.3	0.4	2.8
Kitchen Leftover	30.0	17.7	18.0		
Total			477.5	564.5	444.9
Hazardous Waste	Incineration	Corrosive Mixed Waste	0.3	0.5	0.3
		Hexavalent Chromium	0.6	0.3	0.5
		Mixed Waste Containing Toxic Metals and Exceeding the Leaching Limit	1.0	0.6	1.0
		Waste Liquids with pH ≥ 12.5	1.5	1.6	2.0
		Waste Liquids with pH ≤ 2	2.6	2.7	3.2
	Chemical Treatment	Mixed Waste Containing Organic Pollutants and Exceeding the Leaching Limit	1.0	1.1	1.3
		Mixed Waste Containing Organic Chemicals and Exceeding the Leaching Limit	5.9	5.7	7.6
		Scrapped Oil Mixtures	1.6	0.3	2.7
		Flammable Mixed Waste	1.1	1.2	1.3
Total			15.5	13.8	19.7

Waste Reduction and Waste Recycling and Disposal Practices

Item	Description
Sorting and Recycling	Each building is equipped with litter boxes for general waste, paper, and resource recycling. The student hall area is also equipped with the clothing donation dropbox. The campus restaurants are equipped with the kitchen leftover box. All these are meant to practice waste sorting.
Paper Reduction	1.Reduction of unnecessary packages. 2. Using the e-document system; printing conference data on both sides of the paper or used paper; displaying conference data with electronic devices.
Plastics Reduction	1. Use reusable foodware and ban single-use foodware. 2. Use reusable cups in conferences. 3. Currently there are 381 water dispensers on the campus to supply free drinking water for teachers, students, and visitors. 4. Replace large bin liners with reusable plastic mesh bags for collecting fallen leaves.
Donation	Donate reusable scrap equipment to social groups or elementary schools in remote townships for reuse. During 2020-2022, a total of 61 computers and 1,026 reusable tables, chairs, and cabinets were donated.
Exchange	Waste dry cell and DVD recycling redemption and pre-owned item exchange and marketplace are organized to reduce waste production.
Resale	Reusable scrap equipment is resold according to the relevant procedures for resource reuse. The income from scrap resale in the past three years was NT\$6,516,093.



▲ Clothing donation dropbox and litter boxes for waste sorting



▲ Publicity event for waste sorting and recycling

– Waste Recycling and Reuse

We recycle organic waste by nature for reuse. Through interdisciplinary research, we gather, transport, store, and reuse organic waste. Through technology innovation and R&D, we create new value for green gold.

Category	Recycling and Reuse
Kitchen Leftover	<ol style="list-style-type: none"> 1.Add 5% of enzymes to liquid kitchen leftovers to enhance fermentation efficiency to transform them into odorless liquid fertilizers. 2.Mix solid cooked kitchen leftovers, unprocessed kitchen leftovers, and tree leaves for composting into plant fertilizers. 3.Transform kitchen leftovers into biomass energy to generate electricity. 4.Produce safe and non-toxic carbonated organic fertilizers with silicon-containing agricultural waste through hydrothermal carbonization.
Fallen Leaves	Crush fallen leaves for composting to solve the fallen leaf problem and improve soil.
Wood Waste	<ol style="list-style-type: none"> 1.The Department of Wood Science and Design produces BBQ pellets, charcoals, and cat litters with tree leaves and other wood waste using the granulation machine and carbonization machine. 2.Establish the reusable waste exchange platform to manage the reuse and reduction of campus organic waste. 3.Wood waste can become the ingredient for biomass energy on campus.
Livestock Waste	<ol style="list-style-type: none"> 1.After separating the urine from manure of animals on the livestock farm with the solid-liquid separator, biogas (propane and CH4) is generated with the the organic waste water of cow dung for use as green biomass energy. In addition to increasing its added value, this also prevent direct discharge of animal excretions from eutrophication and contaminating the waterbody of rivers and near waters. 2.After treating livestock waste with the activated sludge process, the leachate can be used for irrigation to nourish crops, and the solid waste can be used as fertilizers are drying.
Others	Lemon peels, waste from the local lemon processing industry, are developed into the additive that is beneficial to the intestinal track function of groupers. Cocoa fruit pods, waste from the local cocoa processing industry, are developed into the immunity stimulant for aquaculture animals.

Example 1 Fallen Leaves Composting



We have a spacious campus with over 180,000 trees. Fallen leaves are crushed for composting and reuse.

Example 2 Circular Economy in Agriculture



To promote the circular economy in agriculture, the Department of Wood Science and Design has established the “Agricultural and Forestry Byproduct Recycling and Reuse and Value Creation Development Center” to develop wooden agricultural waste into biomass pellets or biocarbon pellets. The department has also established the “Southern Taiwan Agricultural and Forestry Residual Materials Industry Platform” to coordinate the academia with the industry. Currently, factories have been built in Pingtung, Yunlin, and Nantou to help farmers engage in recycling and reuse to transform large amounts of fruit tree waste branches into valuable products. [Further reading](#)
Source: [China Times Online](#)/Photo by Hsiu-Fan Liu

► 4-2 Water Sustainable Management 6.3 GRI 303-1 to 303-3 Material Issue E06

The Department of Civil Engineering and Water Resources Education and Research Center develop water resource diversity in southern Taiwan to contribute to technology development research of water resources through interdisciplinary collaboration better teachers and students from related areas of specialization. Our water sustainable development policy mainly includes the promotion of water conservation facilities, education, and research, and enhance water conservation and domestic sewage recycling and reuse.

● Water Sources and Consumption Estimation

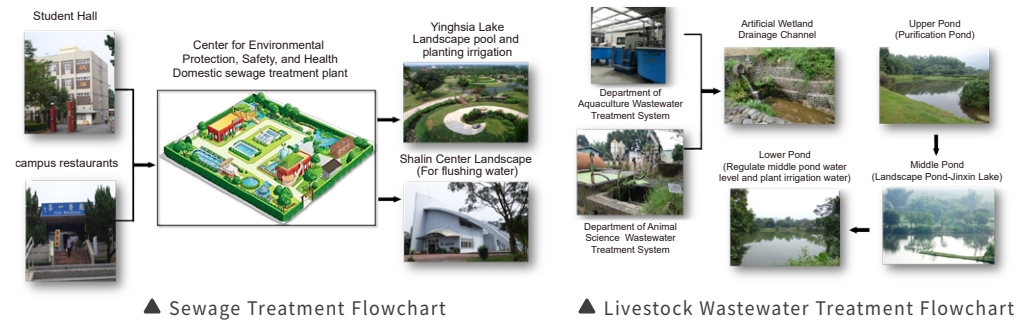
Pingtung has abundant groundwater which is the major source of public water supply. As there is no public tap water pipeline passing through the main campus, groundwater pumping wells with legal water rights are the campus' only water sources. The daily average groundwater withdraw is 209,988m3 (approx. 210ML), and no seawater or other third-party water is withdrawn.

Drinking water (eight student halls, two restaurants, and campus activities of academic and administrative staff) and water used by the culture practice factory, practice farm, and irrigation roadside trees are the major waster demand at NPUST, with drinking water demand being the highest.

● Zero Discharge of Sewage

At NPUST, sewage management is implement in terms of flood control, water facilitation, water conservation, water cherishment, and water revitalization to achieve the goals of consumption and "total reclamation and zero discharge". We build artificial wetlands and grow vegetation on campus for water purification, sewage treatment and recycling for reuse. The related facilities include the Life Garden sewage treatment plant, Chingshih Lake, environmental protection park, and Yingshia Lake. Ecological engineering methods are applied to achieve water purification, water storage, water reuse, and ecological conservation.

Life Garden sewage treatment plant treats about 600CMD of sewage from the student halls, restaurants, and campus buildings. Then, treated water is purified with the ecological engineering method to become effluents for reuse by the toilet flush in the Shalin Center for Life Education, landscape water in the Yingshia Lake Park, and irrigation at the practice workshop in the botanical garden. Campus sewage is fully recycled for reuse to ensure zero discharge to reduce secondary (irrigation) water use by about 180MI/year. Apart from causing no impact on receiving water bodies, this practice also reduces BOD discharge by about 1,4612 kg/year in the pollution burden of off-campus receiving water bodies.



● Water Sustainability Management Approaches

Groundwater is the main water source for the main campus, Daren Agricultural Station, and Baoli Agricultural Station. For the sustainable use of valuable water resource, the following management approaches are implemented:

Water Conservation	<ul style="list-style-type: none"> Recharging groundwater by means of water infiltration through permeable paving surfaces: Permeable paving surfaces are installed in the car parks, pavements, and roads on the campus to increase rainwater infiltration to recharge groundwater. Groundwater conservation and rainwater reuse with artificial lakes: The two campus artificial lakes: Chingshih Lake and Yingshia Lake and the rainwater storage lake at the Daren Agricultural Station in Taitung County are used for water purification, vegetation irrigation, and groundwater recharge.
Water Saving	<ul style="list-style-type: none"> Drought-tolerant trees are used for campus greening and beautification to save irrigation water consumption. Water storage tanks are washed and water quality are checked periodically, water-saving concept is promoted, and water-efficient devices are used. Smart farms are developed and drip irrigation is applied to save water.
Reuse	<ul style="list-style-type: none"> Campus sewage is purified and reclaimed for use in tree irrigation and toilet flush. Water discharged from swimming pools is purified and reclaimed for irrigation use of the practice orchards. Rainwater harvesting and recycling systems are installed for green-wall irrigation.

► Rainwater Harvesting System



► 4-3 Biodiversity Protection and Restoration 14.1 14.2 15.1 15.5 GRI 304-1 to GRI 304-4 | Material Issue E07

The Department of Plant Medicine, Department of Aquaculture, and Taiwan's unique Institute of Wildlife Conservation and Pingtung Rescue Center spare no efforts in the protection and restoration of terrestrial and aquatic ecology.

● Aquatic Ecology Protection and Restoration

In view of the decreasing population of the wild mutated red swamp crawfish, (*Procambarus clarkii*) and Australian freshwater crayfish (*Cherax quadricarinatus*) due to overfishing, to protect the species' population and maintain the resources of freshwater ecosystems, we study and culture the mutated red swamp crawfish and develop the seed production of the Australian freshwater crayfish, with an incubation rate of over 70%.

Academic staff of the Department of Aquaculture assist Southeast Asian countries in developing skin saver cream, skin relief cream, massage cream, and personal cleaning products with economic seaweed in their near waters. Apart from facilitating the reasonable development and use of marine resources, this can also help protecting marine resources towards sustainable use.

We co-organized the "In-Depth Exploration of Taiwan Aquaculture" special exhibition with the National Museum of Marine Biology and Aquarium to promote the sustainable development of Taiwan aquaculture. We also organized aquaculture exploration and experiential TVET courses and offered educational

courses on water resource protection and aquaculture sustainable operations to elementary, junior high, and senior high schools and vocational high schools to advocate the concepts including no overfishing; no Illegal, unreported and unregulated (IUU) fishing; and no destructive fishing to ingrain sustainable marine ecology protection.



▲ Mutated red swamp crawfish



▲ Developing skin saver cream and personal cleaning products with economic seaweed.



▲ Opening of the "In-Depth Exploration of Taiwan Aquaculture" permanent exhibition.



▲ Poster of the "In-Depth Exploration of Taiwan Aquaculture".



▼ Exploration and experiential TVET courses for aquaculture.



● Terrestrial Ecology Protection and Restoration

The **NPUST Pingtung Rescue Center** (the “Center”) is an important shelter and rescue center for endangered species at home and abroad. In addition to sheltering international indicative endangered species, it also provides rescue, recovery, release, and population rebuilding of domestic native protected species over time. The center engages in active international cooperation to build the extraterritorial conservation and propagation population for endangered species and establish the regional contact network. In 1995 the center began to establish exchange channels with national wildlife conservation or shelter organizations in Australia, Cambodia, France, Hong Kong, India, Indonesia, South Korean, Malaysia, the Netherlands, Pakistan, the Philippines, Singapore, Thailand, the UK, and the USA. We also established subsequent cooperation mechanisms with eight related organizations.

Currently, we have sheltered 105 IUCN Red List species and national conservation list species (critically endangered (CR), endangered (EN), vulnerable (VU), and near threatened (NT)) with over 140 heads. In the past three years, the center has rescued domestic endangered and protected species, rare and valuable species, other conservation-deserving species, and general wildlife with a population under 992 heads. Up to 371 heads have been released after recovery.

In addition to the annual operating fund subsidization of the Forestry Bureau (now Forestry and Nature Conservation Agency), Council of Agriculture (now Ministry of Agriculture), Executive Yuan, other fund sources included the university endowment fund and **small-amount donation** from the public.

Total Number of IUCN Red List Species and National Conservation List Species Sheltered by NPUST

Risk of Extinction	Critically Endangered (CR)	Endangered (EN)	Vulnerable (VU)	Near Threatened (NT)	Least Concern (LC)	Total
Total Number of Species	9	15	21	10	50	105

Statistics on Domestic Wildlife Rescued by the Center in Past 3 Years

Domestic Wildlife/Year	Endangered and Protected Species		Rare and Valuable Species		Other Conservation-Deserving Species		General Wildlife		Release after Recovery
	Species	Quantity (head)	Species	Quantity (head)	Species	Quantity (head)	Species	Quantity (head)	Quantity (head)
2020	3	12	14	87	3	7	16	35	60
2021	4	569	17	70	3	9	22	54	52
2022	4	11	16	78	4	4	21	59	259

Example

International Orangutan Day: The center prepared the fruit tapioca ball as the dessert for the orangutan to ease heat in summer to express care for animals. [Further reading](#)



The center celebrated the 12th birthday for Bill, a liger sheltered by the center. [Further reading](#)



The center also organized the “Xmas Present Pack” event to publicize the animal protection concept to practice its education mission. [Further reading: Pingtung Rescue Center Facebook](#)



Center staff also build more comfortable activity space for sheltered animals during the free time. [Further reading: Pingtung Rescue Center Facebook](#)



A wounded eastern grass owl (*Tyto longimembris*), endangered and protected species, was transferred to the center, and center veterinarians treated this lovely apple-faced eastern grass owl. The eastern grass owl recovered well and was released to the wild. [Further reading](#)





The snake-eating turtle (*Cuora flavomarginata*) and the yellow pond turtle (*Mauremys mutica*) have been IUCN-listed as EN and CR species respectively. The research team of Director Tien-Hsi Chen of the center has been studying both species in Feicui Reservoir Snake-Eating Turtle Protected Area for over one decade. The study included ecological study, population monitoring and fortification, habitat improvement and building, protect area patrol and conservation. The center also collaborated with the competent authorities, local communities, and tribal communities for the ex situ release, reconstruction, and fortification of the endangered freshwater turtle wild population.

Related report: Subsistence: Dangers in the wild of endangered snake-eating turtle and yellow pond turtle



Assistant Processor Ching-Min Sun of the Institute of Wildlife Preservation has been studying and promoting the preservation of the endangered Chinese pangolin (*Manis pentadactyla*) for a dozen years. In 2022 he became the chair of the IUCN Pangolin Expert Group in East Asia Region and has developed numbers of pangolin research and technology patents for use by worldwide pangolin preservation organizations. The team led by Dr. Sun and teachers and students of National Heng-Chun Industrial & Commercial Vocational High School implemented the education and promotion of “End Ants, Protect Crabs, and Feed Chinese Pangolin” to ingrain animal preservation in children. The project was funded by the Ecological Preservation Program at the “7Th UMC Eco Echo Award”

Related report: Pangolin expert Dr. Ching-Min Sun’s latest preservation program “End Ants, Protect Crabs, and Feed Pangolin” exposed



The NPUST Veterinary Teaching Hospital and Kaohsiung City Shoushan Zoo engage in long-term collaborative education. Veterinarians of the zoo and the team of NPUST Veterinary Teaching Hospital often work together to solve the health problems of wildlife captured in the zoo to safeguard the health of wildlife captured in the zoo together. The medical and care services for the zoo wildlife are very challenging. Although both caregivers and veterinary personnel are at risk of animal attacks, they still uphold the aim of maintaining animal well being and ecological education so as to fulfill USR. [Further reading](#)



► 4-4 Environmental Conservation and Disaster Prevention and Mitigation 13.3

Taiwan is located on the Ring of Fire and subtropic monsoon region. Due to climate change, natural disasters such as earthquakes, typhoons, and torrential rain have become more frequent. The government thus emphasize more on environmental conservation and disaster prevention and mitigation. The Soil and Water Conservation Technique Education Center (SoWaCTEC), Disaster Prevention and Mitigation Technology Research Center (DPC), and Compound Disaster Prevention Research Center (CDPRC) assist local governments in establishing the awareness of environmental conservation and disaster prevention and mitigation in community residents and enhancing the measures for disaster resilience, disaster prevention, and disaster mitigation of communities, and fulfilling USR.

● Status of Education and Promotion of Slopeland Conservation

SoWaCTEC promotes soil and water conservation, farmland soil and water conservation, and slopeland disaster prevention techniques. To promote exchange and cooperation on soil and water conservation with Southeast Asian countries and establish the “Soil and Water Conservation International Demonstration Site” on the rear mountain of NPUST together with the Agency of Rural Development and Soil and Water Conservation (ARDSWC) of the Executive Yuan to demonstrate drainage engineering methods, slope protection engineering methods, and farm pond and water storage system, irrigation system, and contour bunding so as to improve farmland soil and water conservation professional techniques. SoWaCTEC organizes disaster prevention publicity activities every year to help low-income and vulnerable groups in remote townships to build sustainable beautiful and happy homes.

● Status of Implementation of Disaster Prevention and Mitigation

1. Assist local governments and communities in implementing community disaster prevention drills, education, and publicity; and offer fundamental and special training for disaster relief volunteers and water conservation volunteers in times of normality.
2. Integrate and update disaster prevention and mitigation maps and information and disaster rescue resource database, with contents including the major disaster potential maps, disaster-prone facility maps, disaster shelter maps, and historical disaster maps of Pingtung County for the reference of disaster response and prevention.
3. Build the Backup Laboratory for Radioactive Analysis of Radiation Hazards with the assistance of the Atomic Energy Council (now Nuclear Safety Commission), Executive Yuan, to support the country's enhancement of radioactive analysis capacity and assist the nuclear power plant 3 (NPP3) in performing environmental radiation and food radiation tests.
4. Assist NPP3 in drawing up the emergency response plan to evacuate and accommodate community residents smoothly in emergency.
5. Engage in the academic and technological applied research of compound disasters covering the disaster investigation, assessment, prevention and protection planning, and arrange slopeland disaster education and publicity for the public to enrich their disaster prevention competence.

● Performance in Publicity and Research of Disaster Prevention and Mitigation

Statistics on Education and Publicity of Disaster Prevention and Mitigation and Training for Disaster Relief Volunteers and Water Conservation Volunteers in Past 3 Years

Year	Publicity and Education		of Disaster Prevention and Mitigation	
	Number of Sessions	Number of Participants	Number of Disaster Relief Volunteers (persons)	Number of Water Conservation Volunteers (persons)
2020	22	941	36	-
2021	33	1,225	45	18
2022	56	1,962	40	55

Statistics on University-Industry-Government Collaboration Projects on Disaster Prevention and Mitigation in Past 3 Years

Year	Number of University-Industry-Government Collaboration Projects	Amount (NT\$)
2020	24	41,304,000
2021	34	51,120,498
2022	25	43,161,402



▲ Soil and Water Conservation Education and Publicity Activities in 2022
[Further reading](#)



▲ DPC assists in the evacuation drills for the public: Earthquake



▲ Soil and Water Conservation Technique Education Center;



▲ Disaster Prevention and Mitigation Technology Research Center

▼ Soil and Water Conservation International Demonstration Site

► 4-5 Sustainable Supply Chain 12.7 GRI204-1

As a government agency, we have established the “NPUST Instructions for Implementation of (Construction, Property, Labor Service) Procurement” in accordance with the *Government Procurement Act* and the related bylaws and a procurement system to enhance procurement efficiency and function through fair and open procurement processes to ensure procurement quality.

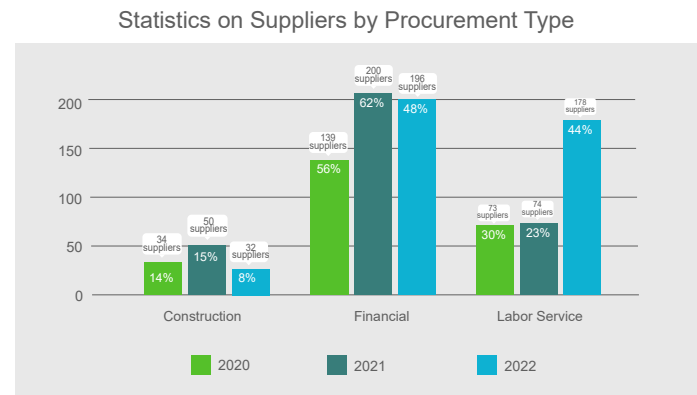
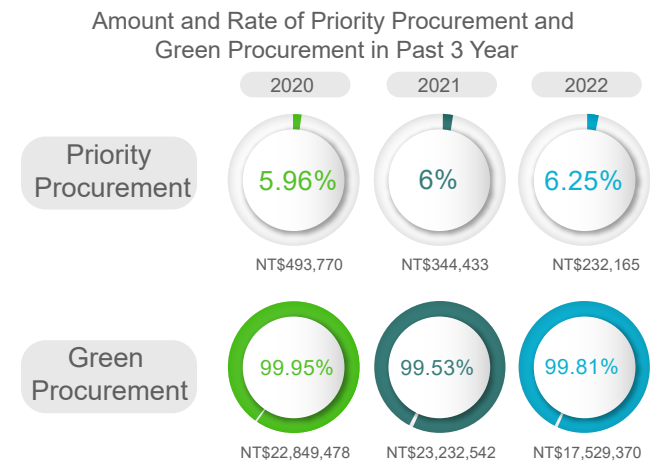
● Sustainable Supply Chain Policy and Objectives

Sustainable Supply Chain Policy	Goal	Performance
Enforcement of the Act of Gender Equality in Employment	Suppliers are requested to hire workers with disabilities and indigenous workers in accordance with the <i>People with Disabilities Rights Protection Act</i> and the <i>Indigenous Peoples Employment Rights Protection Act</i> and are not allowed to hire personnel without the right to work.	1. Stipulated relevant regulations in the procurement agreements. 2. During 2020-2022 all suppliers complied with the terms in the procurement agreements.
Enforcement of Priority Procurement	Merchandise and service procurement is prioritized for disability welfare organizations and sheltered workshops, over the 5% requirement of the Ministry of Health and Welfare.	The 2022 amount of priority procurement was NT\$232,165 or 6.25% , over the 5% requirement of the Ministry of Health and Welfare.
Enforcement of Green Procurement	Purchased water-efficient products, recycled products, and IT products at over 90% as requested by the Environmental Protection Administration, Executive Yuan.	The 2022 procurement amount of designated items was NT\$17,529,370, with a rate of up to 99.81% , higher than the over 90% requirement requested by the Environmental Protection Administration, Executive Yuan.

● Priority Procurement and Green Procurement

To promote all-out green life, the government encourages all institutions and governmental organizations to implement green procurement and specify the procurement contents, covering food, clothing, housing, transportation, education, and entertainment, based on the rate of priority procurement. To implement green procurement and fulfill social responsibilities and practice a fair and reasonable system, during 2020-2022 we prioritized procurement of merchandise and services from disability welfare organizations and sheltered

workshops at over **5.96%**, **6.00%**, and **6.25%** respectively, all over the 5% requirement of the Ministry of Health and Welfare. During 2020-2022 the rate of green procurement was **99.95%**, **99.53%**, and **99.81%** respectively, all higher than the over 90% requirement requested by the Environmental Protection Administration, Executive Yuan. **During 2020-2022 all construction, financial, and labor service were purchased from local suppliers, i.e. 100% local procurement.**



*All suppliers are based in Taiwan (100% local procurement).

● Environmental Sustainability-Highlights of Corresponding SDGs

Link to SDGs **13.3** **15.1**



The NPUST Yunus Social Business Centre and Green Hope Spring Social Enterprise co-organized the tree plantation activity in the NPUST botanical garden to support the 2021 Earth Day. (2021/4/22) [Further reading](#)

Link to SDGs **11.4**



The Department of Wood Science and Design held the wood and bamboo furniture exhibition in collaboration with the Department of Product Design of Shu-Te University, the Department of Material Arts and Design of the Tainan National University of the Arts, and the Department of Arts and Design of National Tsing Hua University. Apart from enhance the self-sufficiency of domestic materials, the exhibition has also redefined the use of domestic materials. (2021/11/22) [Further reading](#)

Link to SDGs **8.10** **12.4** **12.5**



To enhance the disaster resilience and economic efficiency of agriculture, the interdisciplinary team of the Department of Materials Engineering developed the recycled composite plastics primarily with spent vehicle bumpers and PE bottles to as the material for the screen-greenhouse for agriculture. (2021/4/30) [Further reading](#)

Link to SDGs **4.7** **13.3**



Teachers and students of the Department of Soil and Water Conservation organized the 2022 environmental education and disaster prevention and mitigation publicity event. In the event multimedia water conservation teaching materials were integrated into mobile technology to create a quality outdoor classroom learning environment for the public to receive environmental education and develop the awareness of disaster prevention and mitigation through experiential activities. (2022/3/3) [Further reading](#)

Link to SDGs **15.1** **15.5**



In support of the Council of Agriculture (now Ministry of Agriculture)'s abolition of the "Rodent Control Week" policy, Chaozhou Town Office stopped rodenticide distribution and promoted the "Black Kite Habitat" project in collaboration with the Bird Ecology Lab of the Institute of Wildlife Protection to build a toxin-free living circle for predatory birds and attract the mice-eating black-winged kite (*Elanus caeruleus*) to stay. Apart from forming a rodent squad in nature to help farmers solve the rodent problem, this can also help build a balanced, eco-friendly environment. (2021/07/23) [Further reading](#)

Link to SDGs **4.3** **12.4**



The Department of Wood Science and Design organized the "vocational senior high School DIY Camp" for 18 students from senior high schools and vocational high schools. The camp included environmental education and introduced the circular use of domestic wood materials and byproducts and the development of Taiwan's wood industry to develop a friendly environment for forestation, forest use, and reforestation. (2022/3/5) [Further reading](#)

Environmental Sustainability-Highlights of Corresponding SDGs

Link to SDGs

4.7 11.4 15.2



The Department of Forestry undertook the “Love for Trees Education Promotion Project” of the Ministry of Education and invited teachers and schoolchildren of Sheng-Li Elementary School to the Victory Star VIP Zone for the orienteering event based on the old tree in the district. The event aimed to let schoolchildren understand the knowledge of trees and the culture of local communities to pass on the correct concept of tree maintenance and history. (2022/3/15) [Further reading](#)

Link to SDGs

4.3 11.3 12.8



Assistant Professor Wan-Yu Chou of the Institute of Landscape Architecture and Recreation Management and Assistant Pei-Yi Weng of the Department of Plant Science led the interdisciplinary USR team formed by students to organize the “Elementary School Agronomic Education: Environmental Aesthetics and Therapy Course Project” at Rong Hua Elementary School in Pingtung County to show senior-year teachers and students to learn the knowledge of environmental beautification and plantation. (2022/5/25) [Further reading](#)

Link to SDGs

6.3 6.6 12.8



In collaboration with Wanluan Township Office and the Blue Donggang Creek Conservation Association of Taiwan, the Center for General Education took over 100 students from different departments to support the UN Decade on Ecosystem Restoration through the purposive matching of anaerobic digestion residues from farmers around the livestock farms investigated by the township office to achieve the goal of river ecology restoration. (2022/4/8) [Further reading](#)

Link to SDGs

15.4 15.5 15.9



In collaboration with the Pingtung Branch of the Forestry and Nature Conservation Agency and Guan Sheng Ecosystem Co., Ltd., the Department of Forestry held the online Secondary Ecological Conservation Workshop: 2021 Eastern Grass Owl Conservation Platform Exchange Meeting through the “Gaoping Region Ecology Map Building Project” to present a bigger picture for eastern grass owl (*Tyto longimembris*) conservation through the cross-agency collaboration platform with experts from the industry, government, academia, and research institutions. (2022/7/27) [Further reading](#)

Link to SDGs

2.4 8.2 12.3



The Department of Forestry organized the Forest Plain: Affordable Creative Dish Competition to encourage the creation of unlimited dishes by integrating products of the under-forest economy into local specialty ingredients so as to promote “local production and consumption”, “agri-food education”, and “low-carbon diet”. (2022/6/1) [Further reading](#)

Link to SDGs

2.4 12.8 13.2



Under the direction of the Agriculture and Food Agency, Council of Agriculture (now Ministry of Agriculture), the College of Agriculture and the Department of Plant Industry, the Agronomy Society of Taiwan, Agricultural Technology Park Preparatory Office, and Academia-Industry Consortium for Agricultural Biotechnology Park co-organized the Topical Agriculture Sustainable Carbon Management Conference to improve and value the policy development for carbon reduction and carbon sink enhancement in agriculture so as to facilitate the early achievement of net-zero emissions of Taiwan’s agriculture. (2022/11/15) [Further reading](#)

05

Social Co-Prosperity (S)

- ▶ A member of the **International Partnership for the Satoyama Initiative (IPSI)**, our professors are the director of the IPSI Southern Region and the in-charge for 2022-2023.
- ▶ Co-founded the **Taiwan University Alliance for Sustainable Governance (TUASG)** with nine national universities to promote sustainable development and USR.
- ▶ Offered USR community service to **24,048 persons** during 2020-2022.
- ▶ Shared university resources with **72,231 residents** from local communities during 2020-2022.
- ▶ Offered continuing and extension communication to **15,894 residents** from local communities during 2020-2022.
- ▶ Signed strategic alliance agreements with **113 businesses and hospitals** during 2020-2022.
- ▶ Signed sister school agreements with **283 universities** from 48 countries in five continents, with **six more universities** in 2021 over 2020 and international students from 56 countries and graduates accumulating to **3,010 students**.
- ▶ Funded **5,545 international students** with a total amount of **over NT\$6.276 million** during AY2019-2021, up by **6.4%** in AY2021 over AY2019.

■ We have international students from 56 countries. The 2022 Indonesian Culture Festival enabled campus cultural fusion and broadened the international vision of teachers and students. [Further reading](#)



► 5-1 Campus Safety 11.1 11.2 GRI 418-1, S102, S103 | Material Issue S06, S07, S08

In addition to being a place for teaching, research, and learning, the campus is also a place for teachers and students to live and to grow. Hence, providing teachers and students with a safe, sanitary, and healthy environment is the goal of sustainable campus management.

● Traffic Safety

As the campus is spacious and hilly, most students prefer motorcycling on the campus. Statistics show that traffic accidents are very common when traffic is heavy in the morning and during the school run, especially to freshmen who are unfamiliar with the local condition and motorcycling skills. To ensure student traffic safety, apart from requesting them to follow the traffic regulations and encouraging them to take the NPUST shuttle bus, we have also established the traffic safety management system to ensure the traffic safety of teachers and students.

Statistics on Traffic Accidents On and Off Campus in Past 3 Years

AY/ On/Off Campus	2019		2020		2021	
	On-Campus	Off-Campus	On-Campus	Off-Campus	On-Campus	Off-Campus
Number of Accidents	159	133	181	131	151	101

The traffic safety policy has help reducing the number of traffic accidents each year. During AY2019-2021, the NPUST shuttle bus ridership was up to 298,558 persons (times). Due to COVID-19, the NPUST shuttle bus ridership reduced slightly in AY2020 and continued to fall in AY2021 following the spread of COVID-19 and the implementation of distance learning.

Statistics of NPUST Shuttle Bus Ridership in Past 3 Years (unit: persons (times))

Academic Year	2019	2020	2021
NPUST shuttle bus	126,240	102,602	69,716
DRTS Smart NPUST shuttle bus Booking	5,377	9,296	4,917
Total	131,617	111,898	74,633

Improvement Plans for NPUST Shuttle Bus Ridership with Unaccomplished Annual Targets (over AY2019)

Target/AY	2020	2021
NPUST Shuttle Bus Ridership	Reduced by 15%	Reduced by 43%
Improvement Plan	1. Enhanced publicity of traffic safety, energy conservation, and carbon reduction through gatherings and social media to encourage teachers and students to take NPUST shuttle bus. 2. Increased the service frequency of public transport to attract academic and administrative staff to take NPUST shuttle bus.	

Countermeasures Against Negative Impacts on Campus Traffic Safety

Traffic Safety Management Approaches
Established the "Traffic Safety Education Committee"
Established the "Traffic Safety Education Implementation Plan"
Parental consent form
Established the Traffic Safety Website
Established the on-campus motorcycle license examination (practice) site.
Encouraged teachers and students to take NPUST shuttle bus
Offered bus allowance
Recycled bicycles



● Campus Environment and Safety

We have a spacious main campus, and campus safety is one of our key missions. To protect teachers and students, the following safety measures are implemented.

Countermeasures Against the Negative Impacts on Campus Environmental Maintenance and Safety in Past 3 Years

Key Task	Campus Safety Measures
Student Hall Safety Maintenance	5 security guards/ 4 full-time campus police officers
Campus Safety Measures	11 security guards
Campus Safety Incident Coordination and Handling	19 campus safety center personnel Coordination and handling of 2,099 incidents
Campus Safety Publicity	412 stories on campus safety 42 sessions/22,577 participants
Traffic Safety Publicity	163 sessions / 14,900 participants
Personal Safety Lecture	3 sessions/14,800 participants
Anti-Fraud Publicity	32 stories on campus safety 6 sessions/15,000 participants
No-Smoking and Anti-Drug Publicity	26 sessions/14,800 participants

● Student Hall Safety

At NPUST there are **8 student halls**: Shi, Ren, De, Zhi, Xin, Yong, Cheng, and Hui offering **3,237 beds (1,365 for boys and 1,872 for girls)**. The annual **occupancy** of student halls is **96%**. The Student Hall Self-Governance Committee is established. One “hall manager conference” is held weekly. The “hall staff beginning/ending conferences” are held each semester to help managing student halls and various hall activities to realize the spirit of student hall self-governance.



▲ Establish the emergency call systems across the campus



▲ Install fall prevention facilities on higher floors.

In recent years we have invested various hardware and software resources in student halls to significantly improve the housing quality of students. The investment included:

1. NT\$220 million for upgrading the facilities of student halls year by year.
2. Promote student hall internal assessment and implement safety guidance and disaster prevention and evacuation drills.
3. Build the “house rental website” and “off-campus house rental information” platforms. Currently, a total of **118 entries of safe housing rental data have been accumulated.**

4. Implement the “off-campus rental housing safety visit” every year, inform the military training officer to contact the landlords (or student advisors or parents) to make immediate improvement for any detected safety flaws, and build a safety net for students renting off-campus housing by combining with the student advisor guidance mechanism and the **24-hour emergency contact service** of the Campus Safety Center.



▲ Nighttime earthquake evacuation drill of student halls



▲ Care publicity of student halls
▼ Safety visit



● Food Safety and Hygiene

To build a friendly workplace and safe learning environment, we are committed to maintaining food safety and hygiene. Hence, we have two restaurants for academic and administrative staff and students, MOS Burger NPUST Store, and student practice restaurants. We have also established the Hygiene and Dining Service Committee to supply hygienic, safe, and eco-friendly food for teachers and students so as to fulfill USR and realize our green university paradigm commitment.

Additionally, we have the sustainable agriculture research farm, Smart Agriculture Center, livestock farm, and aquaculture farm on campus to promote sustainable agriculture and comply with the principle of circular and sustainable use of natural resources to achieve the production of natural and safe agricultural products and maintain a sustainable dietary culture for environmental maintenance and eco-balance.

The Hygiene and Dining Service Committee supervises food safety and hygiene on campus.

Periodic Food Inspection	Every week restaurant administrators conduct food hygiene inspection at the campus restaurant in collaboration with the personnel of the Center for Agricultural and Aquacultural Product Inspection and Certification (CAAPIC). During AY2019-2021, a total of 87 items were inspected, and the average inspection items were 20 items each semester. The pass rate of campus restaurants: 97% in AY2019, 99% in AY2020, and 100% in AY2021.
Health and Safety Education and Training	Every year we receive the university food hygiene guidance of the Ministry of Education and request restaurant administrators to make corrections for the defects audited by inspectors. 8 hours of kitchen staff hygiene training are arranged each year to raise the hygiene awareness of restaurant personnel. Each semester we hold the Hygiene and Dining Service Committee meeting to ensure food safety and improve food hygiene of campus restaurants to maintain the health of students and teachers.
Reduction of Food Waste Use of Reusable Foodware	Publicize the use of reusable foodware and no waste of food and promote less food waste and low-carbon diet.
Promotion of sustainable agricultural, livestock, and fishery products	CAAPIC promotes the agricultural product traceability system to safeguard “food safety” for consumers.



▲ CAAPIC inspects food periodically.



▲ The Sustainable Farm produces natural and safe agricultural products.

● Information Security

To ensure campus information security, we have established the “NPUST Regulations for Campus Network Use” to regulate the security of campus network and related network resources. We have also established the “NPUST Information Security Management Policy” to ensure the “confidentiality”, “integrity”, and “availability” of information. In response to the increasing global cybersecurity threats that double the information security risk in recent years, we comprehensively develop the cybersecurity awareness in academic and administrative staff and students to improve protection against cybersecurity so as to promote sustainable campus.

– Strengthening Campus Network Service

We plan to complete replacing the closed template network service (ePage) of all units with the open-source template system (WordPress) of the websites of all units by July 2023. Currently we have upgraded the education and training and website services of academic units. In the future we will progressively upgrade the website services of administrative units and update the contents periodically to prevent system loopholes (vulnerabilities) from threatening information security so as to enhance the security of our extranet.

– Enforcing Mobile Learning

We have established the “e-Learning Platform” to offer comprehensive course information and course materials, organize education and training periodically, and encourage teachers and students to use the platform. We have also established the “Knowledge Academy” to store the teaching materials relating to the training and teaching of various professional competencies to offer ubiquitous mobile learning.

The Computer Center introduced the Knowledge Management (KM) Platform in 2020. By the end of 2022, the center has collected the following frequently asked questions (FAQ) with answers (Q&A) in the platform, including 73 system FAQs, 12 instructional FAQs, and 18 network FAQs. Apart from collecting over 100 folders of internal knowledge achieves, 2500 folders of media files, and 25 folders of teaching and training materials for internal use, the center also offers education and training for the campus information systems and campus licensed software externally through portal connection with access control by privilege. During the pandemic, the center published the online instruction guide to improve the ICT knowledge, promote new knowledge of technology and popular science to all teachers and students to contribute to sustainable campus development.

– Countermeasures Against Information Security Impacts

We continuously deepen and implement various cybersecurity control measures up the existing information security management mechanism so as to build a safe and quality smart campus. In 2021 we began inventorying all campus ICT systems and ICT products (made-in-China products) threatening national security, reviewing common area outsourced operation contracts, and implementing the security check of IoT devices to ensure the information security strength of ICT equipment. The relevant control measures are as follows:

Control Measures	Description
Building information security equipment	Build a campus network using the software-defined networking (SDN) backbone and integrate the related information security protective equipment to produce analysis reports and alert messages regarding campus cyberattack incidents.
Enhancing cybersecurity awareness and competence	Offer information security courses every year. A total of 23 sessions of information security education and training and social engineering drills were offered during 2020-2022, including 6 sessions with for 240 participants in 2020, 8 sessions with 293 participants, and 9 sessions with 322 participants in 2022.
Reporting and responding to information security incidents	During 2020-2022 there were 104 reported information security (intelligence) incidents, included ransomware attacks, printer attacks, and email phishing. Apart from taking immediate response to the the reported information security (intelligence) incidents, we also reported them to the Ministry of Education Information and Communication Security Contingency Platform. Thanks to the appropriate handling, there was no leakage of personal information.
Information security related policies	We have established the Information Security Management Team. It holds a committee meeting each year to assess the effectiveness of implementation and establishes the “Information Security Management Policy”.

– Information Security Management System (ISMS)

To ensure information security and the protection and management of personal information, the Computer Center implemented the ISO 27001 Information Security Management System (ISMS) in 2008, and the Office of Academic Affairs, Personnel Office, and It-related support systems also implemented the BS10012 Personal Information Management System (PIMS) in 2018. These units also passed the third-party verification and certification for these international standards in 2009 and 2018 respectively. They also won the 2016 BSI Award for Information Security Management Leadership and the 2018 Information Security Quality Excellence Award from the BSI Group. By complying with the information security standard operating procedures, we reduce the risk in campus information security management. By conducting external audits on the ISMS and PIMS every year, we ensure the effectiveness of ISMS implementation.



▲ Information Security Management System (ISO 27001)



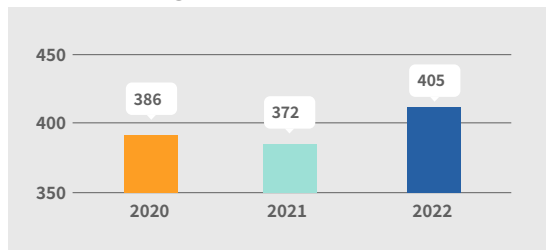
▲ Personal Information Management System (BS10012)

Occupational Safety and Health

At NPUST, the occupational health and safety (OH&S) policy is the highest guiding principle. The OH&S management systems cover both employees (academic and administrative staff on public service insurance and labor insurance) and non-employees (students on labor insurance). In addition to equipping the Center for Environmental Protection, Safety, and Health with one class-1 occupational safety and health affairs manager, one occupational safety and health management personnel, and one occupational safety and health nurse, we also hire occupational medicine specialists to offer on-campus service every two months to promote OH&S and biosafety management and services for campus workers.

The EHS Center holds one committee meeting quarterly. In AY2021, there were **27 labor representatives, accounting for 61.36%** of all members, to ensure full OH&S engagement, consultation, and communication of workers.

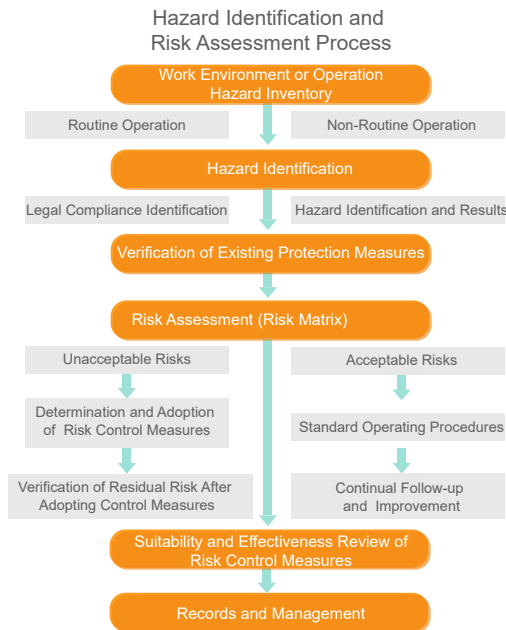
Statistics on Participation in OH&S Education and Training in Past 3 Years (unit: persons)



In accordance with Article 32 of the *Occupational Safety and Health Act*, we organize OH&S education and training courses for new and in-service academic and administrative staff every year.

In accordance with the provision of “concerns of a potential imminent danger” as stipulated in Article 18 of the *Occupational Safety and Health Act* and Article 25 of the

Enforcement Rules of the Occupational Safety and Health Act, apart from requesting staff to immediately report any imminent danger found during work, we also grant them the choice to evacuate to a safe place to ensure personal safety. In discovery of any potential danger, staff may immediately report to the Center for Environmental Protection, Safety, and Health or the Campus Safety Center. **Since the implementation of the OH&S management systems, there was no record of sanction for non-compliance with OH&S-related issues by October 2022.**



Work-Related Ill Health (Occupational Diseases)

Although the risk of work-related ill health is low at NPUST, we will provide laboratory workers having potential contacts with health hazards with the appropriate personal protective equipment (PPE) and arrange health checkups with specific items for them. Additionally, graded health management (grades I-IV) is implemented to prevent the incidence of work-related ill health.

Occupational Health Services

In accordance with the *Regulations Governing Labor Health Protection*, every year we organize periodic health checkups and other statutory labor health checkups and other health screening--free, anonymous infectious disease screening, CO tests, and AIDS prevention publicity activities to protect the occupational health of NPUST workers.



▲ Free, anonymous infectious disease screening



▲ Periodic health checkups

Workers Health Promotion

Every year we organize periodic and non-periodic publicity activities such as “OH&S and Labor Health Promotion” and “Occupational Health Plan” to practice the government’s disease prevention and health promotion policies and publicize them over the [Center for Environmental Protection, Safety, and Health](#) website.



▲ Health promotion activity



▲ Center for Environmental Protection, Safety, and Health

► 5-2 Social Linkage GRI2-28

- 2014 Joined the Green University Union of Taiwan (GUUT) to advocate and promote the interschool exchange and internationalization of green universities and actively practice the Talloires Declaration; and the president chaired the 3rd and 4th GUUT since 2017. 2017 Joined the UI Green Metric World University Global Chairpersons Group to actively practice the Talloires Declaration to fulfill the social responsibilities and missions of higher education.
- 2018 Became the member of the Institute for the Advanced Study of Sustainability of United Nations University (UNU-IAS) for promoting the **International Partnership for the Satoyama Initiative (IPSI)**. Professor Mei-hui Chen of the Department of Forestry became the director of IPSI Southern Region and the regional in-charge for 2022-2023 to engage in environmental protection under IPSI.
- 2021 Signed the **Co-Empowerment Agreement** with eight universities: National Chi Nan University, National Taiwan Ocean University, Providence University, National Taiwan University of Science and Technology, National Taipei University of Technology, Shu-Te University, and National Sun Yat-Sen University to promote successful USR experience and develop local interdisciplinary talents.
- 2022 Initiated the **Taiwan University Alliance for Sustainable Governance (TUASG)** with nine universities, National Taiwan University, National Taiwan Normal University, National Taiwan University of Science and Technology, National Central University, National Chung Hsing University, National Sun Yat-Sen University, National Taiwan Ocean University, and National Dong Hwa University to establish an exchange network for high education institutions to uphold university sustainable development and social responsibility towards sustainable development

List of NPUST Membership Associations

Association	Membership	Position of NPUST President
Academia-Industry Consortium for Agricultural Biotechnology Park	Permanent	Director, 2022.07.08-2024.07.07
Academia-Industry Consortium for Southern Taiwan Science Park	Permanent	Managing Director, 2018.03.20-2020.03.19
UI Green Metric World University Global Chairpersons Group	Permanent	Member, 2017.04.07-Present
Green University Union of Taiwan	Permanent	Chairperson of the 3rd and 4th GUUT 2017.09.22-2021.08.28 Managing Supervisor, 2021.08.26-2022.08.16 Supervisor, 2022.08.17-2023.08.25
Testing Center for Technological and Vocational Education	Permanent	Director, 2016.09.05-2024.09.04
Committee of Recruitment Policy for Technological Colleges and Universities	Permanent	Standing Committee Member 2022.01.01-2022.12.31
Taiwan Academia-Industry Consortium	Permanent	Supervisor, 2017.09.15-2022.09.14
Association of National Universities of Taiwan	Permanent	Supervisor, 2018.02.26-2020.02.26 Director, 2016.02.22-2018.02.23 2020.04.16-2022.04.15
Association of National Universities of Science and Technology of Taiwan	Permanent	Managing Director, 2018.09.11-2024.09.10
Association of Agricultural Education of ROC	Permanent	Director, 2019.12.5-2022.12.04
China Youth Corps Pingtung Branch	Steering Committee Member	Steering Committee Member 2019.01.01-2020.12.31 Education Consultation Committee Member 2021.08.01-2022.12.31
Chinese Taipei University Sports Federation	Chairperson	Chairperson of the 2nd Softball Committee, 9th Federation 2021.01.01-2022.12.31
Pingtung County Government: Pingtung County Science Park Consultation Committee	Consultation Committee Member	Pingtung County Science Park Consultation Committee 2022.03.01-2024.02.29
Overseas Community Affairs Council	Specialist	OCAC Affairs Specialist 2022.09.01-2024.08.31



▲ Member, International Partnership for the Satoyama Initiative (IPSI)
Source: The International Partnership for the Satoyama Initiative (IPSI)



▲ Member, Taiwan University Alliance for Sustainable Governance (TUASG)

► 5-3 Expanding Sustainability with Stakeholders 10.6 11.3 GRI 203-1, GRI 413-2 | Material Issue S04

In AY2015, we began including social responsibility promotion as item 9 (extend excellent achievements, fulfill social responsibilities) of the action plan of the Institutional Development Project; incorporated education into features; built the USR practice base with “professional service, local empowerment, interdisciplinary learning, and local practice”, and integrated the USR concept into the curriculum. Teachers and students also actively walked into communities to offer and learn professional services and practices and promote exchange and connections between the school and local region. Our efforts have earned community recognition.

To expand the power for promoting sustainable development, we collaborate with stakeholders (students, academic and administrative staff, parents, communities and the public, governmental and non-governmental organizations, suppliers, alumni, and senior high schools and vocational high schools) to practice sustainability actions to achieve social co-prosperity towards sustainable development.



● Care for Society Through Service Learning-Students

We encourage students to participate in student club activities and practice the “learning by doing and doing while learning” TVET spirit and stimulate innovation, creativity, potential, and execution power in students through services and student club activities.

NPUST has 16 service teams that help students develop capabilities to care about their homeland and repay society through services. School service clubs offer services to communities and remote townships on holidays. Through the training of various camps and community services, students realize their social concerns through action or help communities solve problems with their professional knowledge. For example, students of the Center for Teacher Education organized the Schweitzer Spirit Education Service and the team of the Department of Plant Medicine treated ill plants in the community.

List of Student Service Clubs

	Name of Club	Service Aims and Targets
1	NPUST Animal Caring Club	Promote education, reduce pet abandonment, love animals, promote animal preservation
2	NPUST Echinacea Anti-Drug Club	Publicize anti-drug in elementary, junior high, and senior high schools and vocational high schools and develop the anti-drug concept in schools and communities.
3	NPUST 4h Club	Promote lifelong learning, success in the daily life, care for the environment, and care for agriculture.
4	NPUST Social Work Volunteer Team	Promote mutual assistance and cooperation and resource linkage with neighboring communities, and help seniors, children in remote townships, and vulnerable and disadvantaged groups improve self-identification through volunteer service.
5	NPUST Chong De Youth Club	Promote vegetarian life, care about society, and serve people.
6	NPUST Acoustic Guitar Club	Offer services at elementary and junior high schools in remote townships and advocate campus folksong and songwriting.
7	NPUST Green Valley Club	Promote decent activities to elementary and junior high schools in remote townships, develop persistence and perseverance, demonstrate team spirit, learn survival skills, and love nature.
8	NPUST TWINI Club	Offer services at elementary and junior high schools in remote townships and develop creativity and visual narrative power in schoolchildren.
9	NPUST Chinese Music Club	Pass on Chinese culture and improve the understanding and literacy of Chinese music in students.
10	NPUST Hip Hop Street Dance Club	Serve society by guiding elementary and junior high school students with healthy sports.
11	NPUST Taekwondo Club	Promote Taekwondo, develop physical strength, and lead healthy leisure sports.
12	NPUST Bird Watching Club	Understand nature, observe the habits of birds in the wild, and advocate wildlife protection.
13	NPUST Japanese Club	Improve the Japanese proficiency of students, understand different cultures and customs, broaden international vision, and serve society.
14	NPUST Cycling Club	Promote healthy sports and develop suitable interest.
15	NPUST Table Tennis Club	Improve the fundamental table tennis skills and techniques of junior high school students in communities through table tennis training and physical strength building to improve the table tennis capability of elementary and junior high school students in Pingtung.
16	NPUST Polar Lights Club	Offer service in remote townships and promote marine debris reduction and social service.

Statistics on Student Club Activities in Past 3 Years

Year	Number of Clubs	Number of Activities	Total Number of Students
2020	7	211	12,778
2021	10	169	9,130
2022	12	106	7,016
Total	29	486	28,924



▲ NPUST Hip Hop Street Dance Club visited Yiliao Elementary School for elementary and high school activities



▲ The social work volunteer team offered animal bathing service at Hsu's Animal Protection Association



▲ NPUST TWINI Club offered service at Rong Hua Elementary School



▲ NPUST Green Valley Club engaged in mountain patrol.

● USR Fulfillment-Academic and Administrative Staff

We activated the University Social Responsibility Implementation Plan in 2017 and linked it to the MOE Higher Education SPROUT Project in 2018 to guide teachers and students to form interdisciplinary teams to play the role of the core think tank for regional development, proactively discover local needs, and solve local problems through the onsite inspection and division of labor between teachers and students to drive the innovation and development of local businesses, communities, and culture. In 2020 we further integrated USR into the curriculum and guided students taking the related courses to offer and learn professional services and practices through six projects to promote university-region exchange and linkage through the onsite practice of teachers and students in communities. We also established the USR Office to promote USR pilot projects, seed projects, and germination projects. During 2020-2022, we implemented a total of six projects to provide services for 300 locations through 132 teams formed by departments and institutes, 17 student clubs, 255 academic staff, and 3,562 students. Over the past three years, we have provided community services for 7,050 persons, 8,520 persons, and 8,478 persons respectively, with a total of 24,048 persons.

Number of USR Projects and Participants in Past 3 Years

Year	Project Type	Number of Projects	Student Club	Academic Staff	Students	Location	Number of Recipients
2020	USR Pilot Project	15	-	25	398	29	4512
	Seed Project	4	-	28	337	30	971
	Germination Project	2	-	10	567	34	1567
	Total	21	-	63	1,302	93	7,050
2021	USR Pilot Project	18	10	48	561	32	4398
	Micro Seed Project	2	0	5	42	6	321
	Seed Project	4	-	40	332	36	1915
	Germination Project	2	-	12	226	6	1886
	Total	26	10	105	1,161	80	8,520
2022	USR Pilot Project	21	7	35	537	54	4699
	Micro Seed Project	3	0	8	47	6	764
	Seed Project	4	-	39	415	32	2499
	Germination Project	1	-	5	100	35	516
	Total	29	7	87	1,099	127	8,478
Total		76	17	255	3,562	300	24,048

Content Marketing Assistance Plan for Mutai (Vudai) Indigenous Township in Pingtung



▲ Helped the Pingtung County Government and Dream World Workshop promote local industrial development by marketing the joyous and rich indigenous township culture.

Dungpian Village “Direct from Farm” Smallholders Platform Project



▲ Inventoried the smallholders and their products of Dungpian Village in Neipu Township, Pingtung County; planned and designed the “Direct from Farm” Smallholders Platform LINE@ or APP to increase marketing channels and income.

Let VuVu exercise for health and happiness.



▲ Integrated the resources of Health Promotion Administration, MOHW, and the Department of Social Affairs, Pingtung County Government, to provide Vu Vu (elders and elderly people) of Valjulu (Ma'er) Community of Tjimur (Sandimen) Township with more opportunities to exercise so as to maintain citizen health.

Teaching, Teaching Aids, Aesthetics, and Environmental Improvement Project for Non-Rural and Non-Urban Elementary Schools



▲ Re-planned the educational environment and optimized the teaching and learning environment based on the teaching venue needs of non-rural and non-urban elementary schools through discussion and cooperation.

Local Concerns and Community Inclusion - Communities and Citizens

Communities and citizens are our partners for promoting sustainable development. To flip the public consciousness of citizens and motivate them to join sustainable development with pleasure, apart from playing the role of a core think tank through the school's administrative team and teachers, by offering resource sharing, community care, health promotion, education promotion, and skill training through the campus space, we link with citizens and promote community inclusion and co-prosperity. Over the past three years, we have share resources with 72,231 persons.

Resource Sharing with Community Residents in Past 3 Years

Quantitative Performance	Activity Description
Sports Facilities Off-campus public and private sectors: 270 units NPUST service providers: 967 persons Number of citizens participated: 7,336 persons	For public and private sectors to organize the National Agriculture Government-Funding Athletic Games, tennis events of the Pingtung County Athletic Games, low-altitude experience and high altitude rope challenges, ROC University Academic and Administrative Staff Slow-Pitch Softball Championship, University Academic and Administrative Staff Slow-Pitch Softball Championship, National Elementary and Junior High School Soft Tennis Championship, "Culture Cup" New Southbound Countries Badminton Invitation Tournament; and for use by the public.
Downtown Campus Borrowing: 151 units Events: 221 sessions Number of citizens participated: 57,272 persons	In the building of the Office of Continuing and Extension Education on the Downtown Campus in Pingtung City, there is one large conference hall, one small conference hall, one classroom for 100 persons, two large classrooms, six medium-size classrooms, five small classrooms, two computer classrooms, and two multifunctional classrooms. In addition to the school's continuing and extension education courses, they are also for let by outsiders for organizing training, conference, and educational activities.
NPUST Library and Exhibition Hall Number of visitors: 21,013 persons Number of borrowers: 2,647 persons Number of borrowed books: Promotional activities: 133 sessions Number of participants: 7,623 persons	The Library and Exhibition Hall are opened for the public to visit and read and organize various arts and cultural exhibitions, seminars, and book clubs. Apart from enriching the cultural literacy of teachers and students, the library also promotes arts and culture to residents of local communities and partner senior high schools and vocational high schools.

Sports Facilities



▲ Water areas training of volunteer firemen, Long Cyuan Fire Branch, Pingtung County Fire Department

Downtown Campus



▲ Community seniors exercise in the multifunctional classroom

NPUST Library and Exhibition Hall



▲ Class held in the classroom of the Downtown Campus



▲ Community citizens in the activity held in the art and culture center.



▲ Elementary school students at an exhibition in the art and culture center

Community Care and Health Promotion

To take care of the health of community citizens, teachers and students strive for funding through external projects. During 2020-2022, a total of 86 projects with over NT\$31 million in total were implemented to raise funds for carrying out health promotion, welfare service, and research for community youth, elderly people, elderly people living alone, persons with disabilities, and delay of disability care so as to take care of and promote the physical and mental health of local citizens.

Statistics on Projects for Community Health Promotion in Past 3 Years

Year	Number of Projects	Amount of Project Funds (NT\$)
2020	25	9,514,810
2021	26	10,937,888
2022	35	10,576,200
Total	86	31,028,898



▲ “Intergenerational Learning: DIY Fun” enables students to interact and share with community elderly citizens. [Further reading](#)



▲ The NPUST Pingtung County Elderly Community Care Research and Development Center organizes a series of “Innovative Spa Service” for elderly citizens. [China News](#)

Education Promotion for Local Co-Prosperity

In response to the recurrent education need of the in-service and pre-service continuing education of the county government, the Office of Continuing and Extension Education develops courses that meet the needs of society and the job market to achieve the goal of lifelong learning. It also engages in

strategic alliance with businesses for education-employment integration through collaborative teaching that combines the academic literacy of professors with the practical experience of business executives to accomplish the training goals.

Statistics on Community Education Promotion in Past 3 Years

Quantitative Performance	Activity Description
Physical courses for extension education Number of courses: 481 courses Number of participants: 5,224 persons	Encourage community citizens to develop a second specialty and advocate lifelong learning.
Agricultural and ecological education guided tours Number of sessions: 37 sessions Number of participants: 2,723 persons	Open the practice factories and campus attractions for community citizens and schools to apply for field trips or agricultural and ecological education guided tours
Agricultural technology promotion Guidance and consultation service: 472 sessions Number of beneficiaries: 7,187 farmers Agriculture promotion handbooks: 1,300 volumes	We have established the Agriculture Promotion Committee and formed the annual agriculture promoter team to offer training courses, assistance, and consultation services. The team also publishes the promotion handbook for free collection by farmers to enrich their farming techniques and knowledge.



▲ Second specialty development: Indoor furniture renovation class



▲ Visit of the NPUST Pingtung Rescue Center of teachers and students from Mahidol University of Thailand



▲ Promotion of sustainable aquaculture technology

● Promotion of sustainable development brand: Alumni

The Ministry of the Interior approved the establishment of the “ROC Alumni Association of NPUST” in 2021. Currently, there are 20 department alumni associations, seven regional alumni associations, and the distinguished alumni association in Taiwan. Alumni have also established overseas alumni associations in Malaysia and mainland China. The number of members is increasing every year, and alumni also maintain close interaction with the alma mater. Apart from making outstanding achievements and performance in respective areas, domestic alumni also contribute what they have acquired from NPUST and promote and flourish NPUST’s sustainable development brand in different fields.

– Alumni Contact and Interaction

We established the Alumni Service Center in 2018. Apart from providing service for alumni, the center also cultivate alumni resources to facilitate industry linkage, exchange, and cooperation among alumni. In 2021 the Alumni Association of NPUST and the Department Alumni Associations of NPUST relocated their joint office to the third floor of the NPUST Library and Exhibition Hall to enhance alumni exchange and contact.

The Alumni Association of NPUST has also formed the “Distinguished Alumni Review Committee and recommends and commends every year alumni with specific achievements and contributions to the alma mater, the country, and society. Over the past three years, the committee has selected 63 distinguished alumni. Additionally, the “Outstanding Youth Alumni Selection Committee” has

also selected 29 outstanding youth alumni in the past three years and presented trophies to them during the school anniversary celebration to honor their achievements and encourage other alumni.

– Linkage with Alumni Businesses

We invite alumni businesses to share the job contents of different trades and ask alumni to mentor the competence lecture to enrich the area-specific competencies of junior students. Apart from arranging linkage between active students and alumni, this also provides the opportunity of talent matching between graduates and alumni businesses.

Statistics on Trade-Based Seminars in Past 3 Years

Academic Year	Number of Trade Talks	Number of Participants
2019	7	357
2020	15	862
2021	22	865
Total	44	2,084

Statistics on Visits of Alumni Businesses in Past 3 Years

Academic Year	Number of Business Visits	Number of Participants
2018	3	130
2019	2	74
2020	3	131
Total	8	335

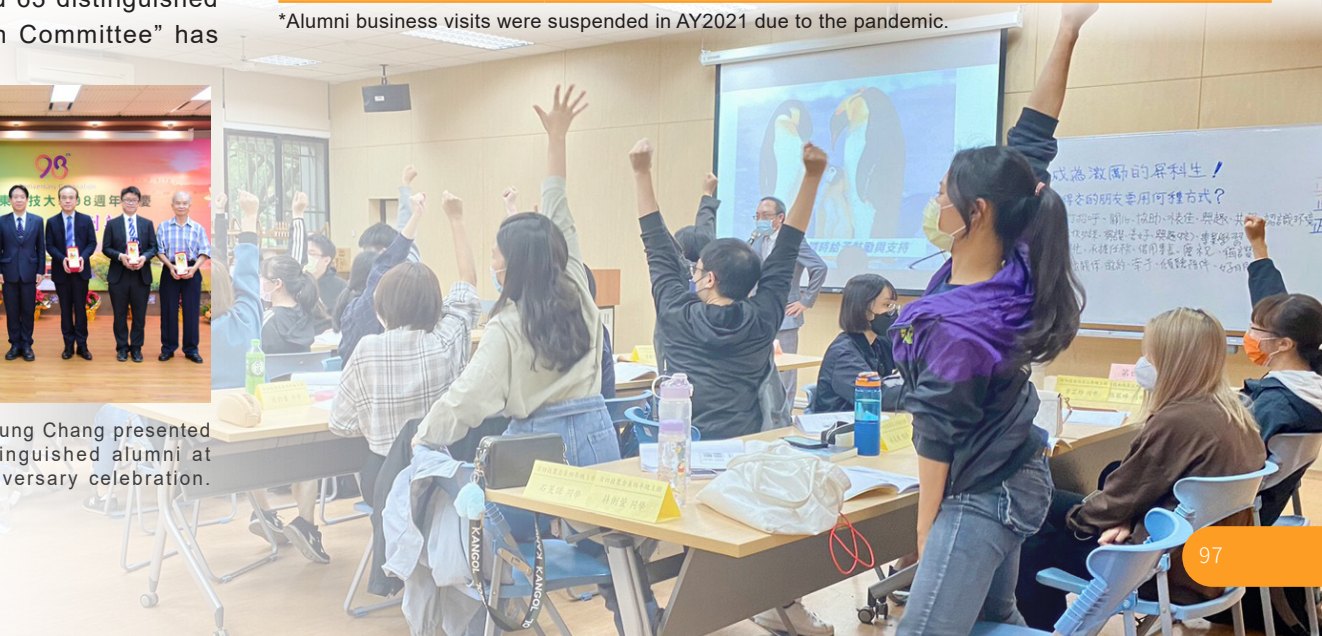
*Alumni business visits were suspended in AY2021 due to the pandemic.



▲ Opening ceremony of the Alumni Association of NPUST and the Department Alumni Associations of NPUST [Further reading](#)



▲ President Chin-Lung Chang presented trophies to distinguished alumni at the NPUST anniversary celebration. [Further reading](#)



– Sustainable Development Branding by Alumni

NPUST alumni at home and abroad have made outstanding achievements and performance in different areas. Inheriting NPUST's sustainable development spirit, they flourish our sustainable development brand in different trades and industries in terms of agricultural waste resource recycling; use of eco-friendly materials and sustainable and eco-friendly cultivation; preservation of Taiwan's indigenous traditions, characteristics, and architecture; forest, mountain, and environmental protection; and livestock biogas generation and low-carbon tourism and accommodation.



Dr. Odette Marie Varela Milla, the alumna of the PhD program of the Department of Tropical Agriculture and International Cooperation and the General Director of the National School of Agriculture in El Salvador, was awarded the 3rd Distinguished Taiwan Alumni Award in 2022. After returning to her home country, she promoted the professional knowledge in agricultural waste resource recycling and environmental protection that she has acquired from NPUST to El Salvador with distinguished contributions. [Further reading](#)



Alumnus I-Chen Lin of the Department of Plant Medicine, aka "fruit doctor", engages in integrated pest management (IPM) with his plant medicine expertise after graduation to minimize pesticide use as much as possible. He also promotes the use of eco-friendly materials and provides assistance for farmers in collaboration with the agricultural production and marketing group to sustain eco-friendly cultivation. In 2022 he was awarded the 2nd IPM Award for the onsite operation category and the Top 100 Youth Farmers Award by the Council of Agriculture (now Ministry of Agriculture). [Related report: The Economic Daily News](#)



Mr. Chia-Hung Chang, president of Taii Agricultural Co., Ltd. in Puli Town and alumnus of the Department of Plant Industry, enhances management efficiency with scientific methods and reduces prevention demand with preventive mechanisms and was awarded the "33rd Top 10 Farmers Award" in 2022 for "eco-friendly farming and common good with industry" that lead to eco-friendly and sustainable agriculture. [Source: Taii Agricultural Co., Ltd.](#)



Alumnus Jui-Ting Wei of AY2003 of the Department of Forestry was awarded the [2018 Merit of Forestry and Nature Conservation](#). Wei returned to his hometown farming in 2009, started up the own-branded Rice Valley Co., Ltd., and became the first farmer in history to implement block chain technology to farming, earning the fame of "Rice of God". Currently, his rice has been exported worldwide for the international community to see the rice from Taiwan. He was also awarded the [2022 Top 10 Outstanding Young Persons](#).



Alumni Cheng Su of the Department of Animal Science and Peng Su of the Department of Plant Industry co-established a famous livestock farm in Pingtung rearing over 26,000 pigs. Apart from introducing Taiwan's first livestock biogas generation set into the farm, they also transform the residual liquid digestate and solid digestate into fertilizers for crops and build the microalgae cultivation zone to make green energy innovation for the livestock industry to set a best-practice example for sustainable development. [Related report: TVBS](#)



Alumnus Huai-Jen Fan runs Taiwan's first LCBA-certified diamond-grade guesthouse: Roaming Cloud-Sun Moon Lake Ecological Guesthouse in Yuchi Township, Nantou. In 2019 Roaming Cloud passed the CU-GSTC accreditation for sustainable tourism. In 2022 Roaming Cloud passed the Green Mark for Hotel-Silver certification. In 2023 it further passed the GTS Mark certification. Aiming to build low-carbon, eco-friendly, and sustainable accommodation, Fan collaborates with local industries to promote a "common good" circular economy to get ahead of the international trends and set an example for sustainable guesthouses. [Related report: Smile Taiwan](#)

● Co-Promotion of Sustainability - Parents

Parents are one of the important promoters of NPUST's sustainable development. Through activities such as the Parents' Day, achievement presentation, school anniversary, and graduation ceremony, we invite parents to school, communicate with them, and let them understand our teaching philosophy, objectives, policy, and practice that cover sustainable governance, common good with the environment, and social co-prosperity. These activities also enable us to establish close partnership with parents so as to encourage and support students to engage in the learning and activities for sustainable education and fulfill the social responsibilities of university students through collaboration with parents.

Case 1

Each year we organize Parents' Day in northern central, and southern regions to communicate with parents. In the event, we also encourage students to take the campus shuttle bus or off-campus rental housing shuttle bus, use free campus bicycles or e-scooters, or walk for the school run. Then, we invite them to join the campus traffic safety publicity so as to build a green university and sustainable campus in collaboration with parents.



▲ Parents' Day in northern central, and southern regions.



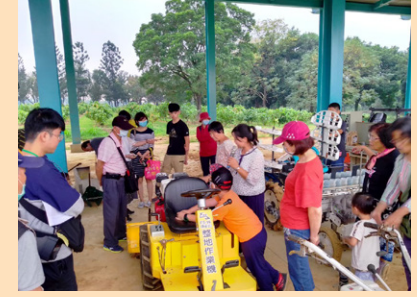
▲ Encourage students to take the free campus shuttle bus together with parents.



▲ Use e-scooters on the campus.

Case 2

During the school anniversary, we invited parents to visit the 10-hectare demonstration site subsidized by the Ministry of Education and Taiwan's unique on-campus wildlife rescue center. The demonstration site is a quasi-industrial-grade area for crop cultivation and circular agriculture teaching. They allow parents to further understand our achievements in promoting eco-friendly agriculture and nature conservation and deepen their recognition with our efforts in sustainable agriculture and animal conservation and our practice of sustainable campus and sustainable development.



▲ Parents visit the crop cultivation and circular agriculture demonstration site to understand smart agriculture and eco-friendly cultivation.



▲ Parents visit the NPUST Pingtung Rescue Center to understand the importance of ecological balance and environmental sustainability.

● Co-Creation with Industry Through Business Alliance-Suppliers

Through university-industry collaboration, we share our fruitful results from agricultural technology research with stakeholders (suppliers) to help them make successful transformation, thus earning their deep recognition. Many businesses generously donate equipment to help us upgrade and deepen educational expertise. During 2020-2022 we signed strategic alliance agreements with 113 businesses and hospitals to continuously upgrade Taiwan's agricultural and industrial technology through university-industry collaboration and create a win-win situation for both sides.

University-Industry Collaboration Partners in Past 3 Years



Example



Link to SDGs **2.1** **8.4** **12.2** **12.5**

The Department of Veterinary Medicine and Creation Food Co., Ltd. co-promoted the "Complete Dairy Cow Ranch Total Health Checkup Program" to control the quality of fresh milk and enhance the competitiveness of Taiwan's dairy farm industry. [Further reading](#)

Link to SDGs **2.4** **12.3** **12.5**

Taiwan HiPoint Corporation donated one set of climatic testing chamber (CTC) and temperature testing chamber (TTC) amounting to NT\$1 million to the College of Agriculture for plant cultivation research. [Related report: The Economic Daily News/ Photo by Chen-Chou Yang](#)



Link to SDGs **8.6**

Mazda Motor Taiwan donated one CX-5 to the Department of Vehicle Engineering for use in teaching, practice, and research. [Further reading](#)

Link to SDGs **3.4** **8.6**

O-TA Precision Industry Co., Ltd. donated carbon fiber bicycles and NT\$600,000 to upgrade the equipment of cyclists. [Further reading](#)

– CSR x USR

The Bird Ecology Lab led by Professor Yuan-Hsun Sun of the Institute of Wildlife Conservation specializes in the ecology and conservation of large predatory birds. Additionally, their outstanding achievements in water bird ecology, bird migration pattern, bird hazard prevention, pesticide and rodenticide toxin ecology, and eco-friendly agricultural ecosystems have caught the attention of and earned the university-industry collaboration contracts from CHUAN LIAN Enterprise Co., Ltd. (PX Mart), wpd Taiwan Energy Co. Ltd., and Farglory Life Insurance to protect ecosystems and extend and expand the power of sustainable development together.



The Bird Ecology Lab initiated the black kite (*Milvus migrans*) and pheasant-tailed jacana (*Hydrophasianus chirurgus*) research and conservation project and promoted the eco-friendly farming of red mung bean (*Vigna angularis*) and water caltrop (*Trapa natans*) to prevent the improper use of pesticides that causes bird hazards. CHUAN LIAN adopted the "black kite red mung bean" and "Guantian pheasant water caltrop" to set an example of business engagement in animal conservation and consumer education for environmental sustainability. [Related report: Global Vision Monthly](#)

In 2020 Professor Yuan-Hsun Sun collaborated with wpd Taiwan Energy in the "Black-Faced Spoonbill Satellite Tracking Project". Tracking the black-faced spoonbill with satellite can help rangers and volunteers to locate and rescue wounded black-faced spoonbills more quickly. So far a total of 32 black-faced spoonbills have been ringed before release to facilitate the friendly protection of rare birds in Taiwan through university-industry collaboration.

The collaboration repeated in 2021, marking the first Taiwan rare bird conservation funded by an overseas wind power company.

[Related report: China Times](#)



● Linkage with Organizations for Social Common Good--Governmental and Non-Governmental Organizations

To strengthen the regional linkage and cooperation of universities, apart from organizing various recurrent education courses through cooperation with governmental and non-governmental organizations, we also co-develop quality processed agricultural products with them to help farmers increase income and co-organize nursery homes with local features to pass on local languages and cultures.

Cooperation with Governmental and Non-Governmental Organizations in Past 3 Years

Item	Partner	Quantitative Performance	Description
University for Seniors	Ministry of Education	Number of Years: 13 Number of Courses: 127 Number of Participants: 224 persons	Provide a platform for interaction between seniors and university students, increase the lifelong learning opportunities for seniors, and achieve the social goals of "friendliness for seniors, respect for seniors, assistance for seniors, usefulness for seniors". Further reading
Labor College	Pingtung County Government	Number of Years: 3 Number of Courses: 88 Number of Participants: 1,870 persons	Improve the competencies and skills of farmers and workers, enrich their professional knowledge, and develop more local talents through a wide range of courses. Labor College Facebook Fan Page
Agro-Technology Full Government-Funded Extension Education Bachelor's Degree Programs	Ministry of Education	Number of Years: 5 Number of Courses: 270 Number of Participants: 9,467 persons	Fully government-funded programs to encourage interested youth to engage in quality, safe agricultural production and sales to enhance the overall competitiveness of Taiwan's agriculture. Bachelor of Program in Scientific Agriculture Website
Neipu Township Community Public Nursery Home	Pingtung County Government	Number of Year: First Number of Caregivers: 4 Number of Infants: 12	We operate the Neipu Township Community Public Nursery Home in collaboration with the Hakka Affairs Council on commission of the Pingtung County Government. It is Taiwan's first Hakka kohanga reo (language nest, nursery). Further reading
Agricultural Product R&D	Agriculture and Food Agency Local farmers' association	Number of products developed and processed: 16	Agriculture and Food Agency, Council of Agriculture (now Ministry of Agriculture), and the Department of Food Science co-developed red mung bean and black soybean products and signed a distribution agreement with the Hengchun Farmers' Association to promote local quality processed agricultural products to help farmers enhance economic efficiency. Further reading
Food and Agriculture Education	Local farmers' association, Minhe Elementary School, Pingtung County Linluo Elementary School, National ChiaTung Agricultural Vocational Senior High School, National Nei-Pu Senior Agricultural-Industrial Vocational High School, National Chao-Chou Senior High School, Pingtung Private Mai Hexe High School	Number of Sessions: 96 Number of Participants: 5,064 persons	Through collaboration with local farmers' associations and elementary, senior high, and senior high schools and vocational high schools, we implemented food and agriculture education to develop the correct concept of "valuing food" in participants through "learning by doing" and "valuing food". We also exchanged opinions and experience with local senior high and senior high schools and vocational high schools to improve positive interaction and agricultural technology exchange among teachers and students between NPUST and other schools in the region. Further reading



▲ 2022 University for Seniors Graduation Ceremony



▲ The 2nd Labor College and Elderly Talents Employment Joint Achievement Exhibition



▲ Taiwan's first Hakka kohanga reo nursery home



▲ Assistance for farmers to develop processed agricultural products to increase income



▲ Tomato Food and Agriculture Education Together

● Urge for Legal Amendment for Ecological Common Good

Dedicating themselves to professional research in plant production, wildlife conservation, environmental protection, and food production safety, teachers and students firmly understand that the ecosystem interaction among humans, animals, plants, and the environment is a cycle, and harming the ecosystem will also harm human subsistence. Teachers of the Institute of Wildlife Conservation have spared no efforts in protecting the Formosan black bear and predatory birds. To completely eliminate the use of animal traps that harm wildlife and the use of rodenticides that cause mass bird killings, they drew the attention of animal protection groups and the public through rallies and publicity to indirectly urge the government to eliminate the use of animal traps and cancel the nationwide “Rodent Control Week” by legal amendment. In indigenous hunting control, they also assisted with the communication between the government and indigenous peoples to develop the self-regulation of indigenous hunting.



The Formosan bear is the most representative wildlife of Taiwan and has been listed as an endangered species under the *Wildlife Conservation Act* in 1989. Professor Mei-Hsiu Hwang of the Institute of Wildlife Conservation has been studying the Formosan black bear for 25 hours and has spared no efforts in its conservation. Her efforts indirectly urged the complete elimination of the use of bear traps through the amendment to the *Wildlife Conservation Act* in 2021. (Source: Te-Hsin Li-Chen)

[The Liberty Times](#)



During the fieldwork, the team of the Bird Ecology Lab found that farmers kill rodents and birds with poisons to reduce agricultural losses. Apart from causing mass bird killings, the poison also threatens the survival of the black kite (*Milvus migrans*). The documentary *Fly, Kite Fly* that exposed the mass bird killings also caught the attention of the public, businesses, and government agencies, thus indirectly urging the government to cancel the nationwide “Rodent Control Week” and ban the use of rodenticides.

[Environmental Information Center](#)



In 2021 we co-organized the “Self-Regulation of Indigenous Hunting Workshop” with the Forestry Bureau (now Forestry and Nature Conservation Agency) to help with the communication between the government and indigenous peoples for developing the self-regulation of indigenous hunting and progressive help indigenous peoples or groups to develop the self-regulation mechanism. We also signed a “partnership administrative agreement” with the Forestry and Nature Conservation Agency to resume the right to hunt for indigenous people so as to respect and accept the indigenous hunting culture without sacrificing life and ecological sustainability. [Forestry and Nature Conservation Agency Pingtung Branch Report](#)

● Ingraining Sustainable Quality Education-Vocational Senior High School

Facing the low birthrate trend, the number of new students continues to reduce every year. To cultivate the potential student source of our stakeholder: senior high schools and vocational high schools, we offer the university-industry hand-in-hand collaboration program to develop a teaching-internship collaborative platform among industries, senior high schools and vocational high schools, and universities; provide interdisciplinary, multifaceted vocational experience and assist nearby senior high schools in offering comprehensive electives to ingrain quality TVET.

– Vertical Integration and Optimization of TVET Network

We maintain a sound relationship with National Fongshan Senior Commercial & Industrial Vocational School (FSVS), and every year over 30 students enroll on our programs. To develop complete and quality TVET, FSVS has applied for affiliation to NPUST, hoping to achieve the common good of collaboration through the vertical integration of vocational senior high school into the UST. In 2021 the application passed the second review of the Ministry of Education (MOE), and both schools trialled the collaboration by promoting MOE's "University-Industry Hand-in-Hand Collaboration Program", hoping to offer integrated (one-stop) channels for further education to teachers and students of technical senior high schools and USTs, attract junior high school students to enroll on the program, increase the student sources for both schools, ingrain TVET, and fulfill the "adaptive learning to individual fulfillment".

– Incubating Field Experience Through University-Industry Collaboration

We offer the "University-Industry Hand-in-Hand Collaboration Program" to build a teaching-practice collaboration platform for industries, senior high schools and vocational high schools, and USTs.

– Assistance in Offering Multifaceted Electives for Nearby Senior High Schools

In the past three years, there were 244 academic staff; 16 academic staff and 20 mentors were matched with other USTs; 22 senior high schools and vocational high schools and 9 nearby urban senior high schools were supported; 63 interdisciplinary and career exploration multifaceted electives were offered to develop the sustainability thinking in the daily life and environment of students.

– Adaptive Publicity of Choices of Study

To help students of senior high schools and vocational high schools to capture career competencies, before they select their choices, senior high schools and vocational high schools and USTs co-organized various publicity activities for students to capture the information of future study. Despite the influence of COVID-19, we have still organized over 60 higher education fairs over the past three years. We have also established the Long for NPUST Facebook fan page to provide information regarding the features of the our departments and institutes, study at NPUST, and the campus information for the reference of teachers, students, and parents of senior high schools and vocational high schools.



▲ Second place at the "2021 2GETHER Technological and Vocational Schools Smart Innovation and Application Competition". [List of Winners](#)



▲ Third place at the "2023 2GETHER Technological and Vocational Schools Smart Innovation and Application Competition". [List of Winners](#)

– Interdisciplinary TVET Experience

Events on Interdisciplinary TVET Experience in Past 3 Years

2019, 2022	2022	2020-2022
TVET Experience Event	Summer Exploration and Learning Plan	Summer Camp for Teachers and Students of senior high schools and vocational high schools
39 experience items 15 senior high schools and vocational high schools (times) Approx. 1,000 teachers and students of senior high schools and vocational high schools	8 students from 6 senior high schools and vocational high schools	47 sessions Over 1,800 teachers and students of senior high schools and vocational high schools
Organize the TVET Dreamer experience event every year together with the school anniversary	Explore and learn from the laboratory of professors at the summer break for students of senior high schools and vocational high schools to engage in laboratory research.	Establish collaboration and exchange between senior high schools and vocational high schools and USTs and offer university resources to help with the practical teaching of senior high schools and vocational high schools.
2020-2022	2021-2022	
Career Exploration and Experience Events	Youth Olympic Camp	
182 sessions 469 students of senior high schools and vocational high schools 9,874 citizens	2 sessions 19 junior and senior high schools (times) 410 students of junior and senior high schools	
Co-organized the “Agronomy Wonderland, Intelligent Agricultural Machinery” and “Go Hero: TVET 2.0” permanent exhibitions with the National Science and Technology Museum and the “In-Depth Exploration of Taiwan Aquaculture” special exhibition with the National Museum of Marine Biology and Aquarium to plan related career exploration and experience activities.	We and Chinese Taipei Olympic Committee (CTOC) co-develop Olympic education for junior and senior high school students to learn and challenge self-extremes and develop the courage to tolerate frustrations.	



We have signed strategic alliance agreements with 17 secondary schools, including 5 junior high schools, 4 senior high schools, and 8 senior high schools and vocational high schools. By building partnerships and alliances with one another, we co-create a win-win academic model. [Further reading](#)



At the 2022 TVET Dreamer experience event held during the school anniversary, each department and institute presented topics that could best represent their features to help students of senior high schools and vocational high schools to discover their areas they like and make earlier decisions. [Further reading](#)



As 2022 was CTOC's centenary, we organized two “Youth Olympic Camps” and invited judoka Yung-Wei Yang (Drangdrang) to share the story of his life and CTOC Chairperson Chu Mu-Ye and other guests to the camp. [Further reading](#)

► 5-4 Global Partners for Sustainable Development 17.17

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We have sister schools in 48 countries across five continents. During 2021-2022 we signed strategic alliance agreements with Pondicherry University of India, Mendel University in Brno of Czech Republic, Zealand Business College of Denmark, Central Bicol State University of Agriculture and Isabela State University of the Philippines, and the Papua New Guinea University of Natural Resources and Environment. With these six new sister universities, we currently have a total of 283 sister universities. Due to COVID-19, the number of international students reduced in the past 3 years. In AY2021 there were 614 international students from 56 countries. So far a total of 3,010 international students have graduated from NPUST, and all alumni have outstanding performance in their areas of specialization.

To extend the operations and development of international cooperation, apart from promoting the introduction, exchange, and learning of advanced technologies from European countries, the USA, and Japan, we also export our technology R&D features and outcomes to sister schools to exchange with them and promote them to New Southbound countries, diplomatic allies, and mainland China to establish a global partnership.

▼ President Dr. Ricmar P. Aquino and Dean of International Affairs Dr. Isagani P. Angeles Jr. of Isabela State University visited us and signed a memorandum of cooperation (MOC) with us to establish the sister school relationship with us, promote student exchange and internship between both schools, the dual master's degree programs with the Department of Animal Science and Department of Aquaculture, and the exchange and cooperation on the international conference on climate change, disaster mitigation, and risk management. [Further reading](#)

Memorandum of Understanding Signing Ceremony with Isabela State University



Statistics on NPUST Sister Schools in 2022

Continent	Country	Number of Sister Schools	Number of Countries of Sister Schools
Asia	China, Japan, South Korea, Indonesia, India, the Philippines, Malaysia, Vietnam, Thailand, Mongolia, Myanmar, Nepal, Cambodia	192	13
Oceania	Australia, Palau, Papua New Guinea	5	3
Africa	The Gambia, Eswatini, Mozambique, South Africa, Burkina Faso	7	5
Europe	Russia, the Netherlands, Czech Republic, Poland, Germany, France, Austria, Turkey, the UK, Lithuania, Ukraine, Denmark, Spain	31	13
Americas	Costa Rica, Panama, Paraguay, Nicaragua, Belize, Honduras, Dominican Republic, Haiti, Colombia, St. Kitts and Nevis, Jamaica, Brazil, Canada, the USA	48	14
Total		283	48

Statistics on Active International Students in Past 3 Years

Continent	Country	of Sister Schools	Number of International Students		
			2019	2020	2021
Asia	Japan, South Korea, Mongolia, Iran, Vietnam, Laos, Thailand, Myanmar, Malaysia, Brunei, Singapore, Indonesia, the Philippines, Nepal, India, Pakistan, Hong Kong, Macau, Bangladesh, Cambodia	20	600	554	505
Oceania	Republic of Fiji, Palau, Papua New Guinea, Solomon Islands, Marshall Islands, Tuvalu, Nauru, Republic of Kiribati, Australia	9	19	13	21
Africa	The Gambia, Ethiopia, Republic of Somaliland, Malawi, Zimbabwe, Eswatini, South Africa, Tanzania	8	29	25	25
Europe	The UK, Germany, Czech Republic, France, Austria	5	6	5	6
Americas	The USA, Canada, Brazil, Belize, Guatemala, Honduras, El Salvador, Nicaragua, Haiti, St. Kitts and Nevis, Saint Vincent and the Grenadines, Saint Lucia, Venezuela, Mexico	14	63	51	57
Total		56	717	648	614

*International short-term students, TEEP students, Mandarin students.

– Importing and Learning Technologies from Advanced Countries

We are one of the six schools of MOE’s “International Talents Development School Trial Program”. Through collaboration with Dalum Academy of Agricultural Business of Denmark, the world’s benchmarked school for technology, NPUST teachers and students are given the opportunity to have internship there. Aside from learning the model of the local pig farming industry, including health management, biogas generation, genetic mating, and smart pig farming, we have also discovered the differences in farming management between both countries. After returning to Taiwan, we introduced the Danish pig farming lab, teaching materials, and teacher training mechanism into Taiwan to develop domestic top pig farmers to improve Taiwan’s pig farming technology. During 2019-2022 (suspended in 2021 due to COVID-19), a total of **21 seed instructors** and **42 students** studied in Denmark.



▶ Students had internship in Denmark to learn the model of local pig farming. [Further reading](#)

In 2021 the College of Agriculture and the Industrial Technology Research Institute (ITRI) co-organized the **2-day “Taiwan-Japan Intelligent and Circular Agriculture Online Conference”** with **over 300 online participants**. Through the collaboration among the academia, research institutions, and industry in Taiwan and Japan, we hope to develop an industry ecosystem that realizes circular agriculture and zero emissions with intelligent technology. With this conference, we also hope to introduce Japan’s intelligent and circular agricultural technologies to further upgrade Taiwan’s rice and agricultural production technologies.



▶ Taiwan-Japan Intelligent and Circular Agriculture Online Conference [Further reading](#)

– Promotion and Transfer of University-Industry Collaborative R&D Outcomes

In 2018 the Office of Global Research & Industry Alliance (GLORIA) promoted international university-industry collaboration through the mutual cooperation of cross-school, cross-discipline research teams. Through domestic and overseas visits, exchange, and event promotion, we aim to facilitate university-industry collaboration at home and abroad and establish linkage between the university-industry collaboration platform and international markets so as to introduce industrial resources into the academia and transfer the university-industry collaborative R&D outcomes and technologies to industries.

Statistics on International Transfer of University-Industry Collaborative R&D Outcomes in Past 2 Years

Year	Target Country	Name of Unit	Name of Transferred Product	Amount (NT\$)
2021	Indonesia	PT Medion Farma Jaya,	Technology transfer of nucleic acid adjuvant for poultries	NT\$4,534,520
2022	France	VIRBAC S.A.	Grouper Streptococcus iniae (GSI-310)	NT\$4,000,000
	Vietnam	IVRD	A process for cloning VP2 gene of the novel duck Parvovirus in Vietnam	NT\$119,081
Total				NT\$8,653,601

▼ Edmond Medard Kitanda-passy from Saint Lucia said, “I engage in quarantine work at a government veterinary unit. Thank Taiwan for offering the course on African swine fever. I can’t wait to share these technologies and experience with my people at home. Particularly, Taiwan’s pig farmers and professors of the Department of Veterinary Medicine of NPUST are very professional in production management and disease prevention. I wish to share these concepts with pig farmers in my home country, so that we can protect the health of pigs and unflinchingly prevent African swine fever from entering our country.” [Further reading](#)



Active Engagement in International Academic Events

We promote international interschool academic cooperation, sustainability courses, training courses, forums, and education fairs and engage in active interschool exchange with members of the University Network for Tropical Agriculture (UNTA).

Additionally, to strengthen our global partnership, we organized the “1st UNTA Sustainability Course” in AY2020. It was offered online once weekly, with a total of seven keynotes on sustainability topics. We also asked students from four schools to share their research results. In 2021 we organized the “2nd UNTA Sustainability Course” with a one-credit course. A total of 13 heavyweight instructors from six schools gave lectures online. The course attracted students from four countries: Thailand, Vietnam, the Philippines, and Indonesia.

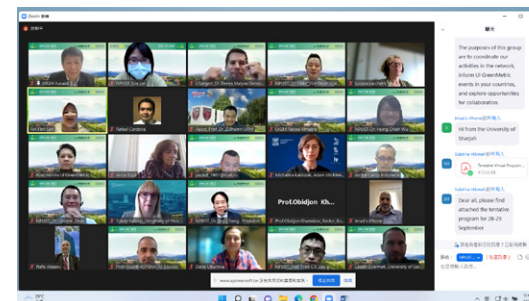
In 2022 we organized the “3rd UNTA Sustainability Course” over a period of nine weeks. The course contents included “energy”, “greenhouse gases”, “animal vaccine”, and “ecological conservation”. Teachers from seven schools shared and exchanged sustainability knowledge and practice through the course.

Statistics on International Sustainability Courses in Past 3 Academic Years

Academic Year	Course	Number of Participants		
		Male	Female	Total
2019	Intelligent Agriculture Training Group (physical) from the Office of the Vocational Education Commission, Thailand	4	20	24
2020	Co-organized the 5-day online asparagus cultivation training course with SML International Education Services of Myanmar.	52	28	80
	Co-organized the online mushroom cultivation course phase I with SML International Education Services of Myanmar.	52	28	80
	The 1st UNTA Sustainability Course (online)	20	17	37
	The 2nd UNTA Sustainability Course (online)	68	102	170
2021	African Swine Fever Prevention Technique Training Course (physical)	11	13	24
	The 3rd UNTA Sustainability Course (online)	26	30	56
Total		233	238	471

Outcomes in International Academic Event Engagement in Past 3 Academic Years

Item	Event Outcomes
International Interschool Academic Cooperation	Participating schools: 122; Outcomes: 15; Research projects: 8; Teaching cooperation: 5; Dual degree: 10 students
International Conference	Number of conferences: 11 Number of participants: 1,220 males and 1,230 females
The 8th International Workshop on UI GreenMetric (IWGM)	Duration: 3 days Number of participants: 285 persons
International Sustainability Course	Courses: 7 categories Number of participants: 233 males and 238 females
The 8th Taiwan-Thailand Higher Education Online Forum	Number of participating schools: 129 schools Number of Participants: 254 persons
Taiwan Higher Education Fair Online in Thailand	Number of participating schools: 62 schools Number of clicks: 30,000



▲ NPUST President Chin-Lung Chang and UI GreenMetric World University Rankings Chairperson Prof. Dr. Riri co-pressed on the opening ceremony of the 8th International Workshop on UI GreenMetric (IWGM). It was the first IWGM to be organized by Taiwan. [Related news](#)



The 1st UNTA Sustainability Course--Young Voices in SDGs



The 2nd UNTA Sustainability Course--2021 UNTA Mater Lectures-Sustainability Lecture Series



The 3rd UNTA Sustainability Course

– Guidance for International Students

Most international students come from the vulnerable or disadvantaged groups of our diplomatic allies and non-diplomatic allied developing countries. They can apply for scholarships to study at ease. During AY2019-2021, a total of 5,545 international students were funded with tuition and fees, student housing grants, or living allowances, with a total amount of NT\$62.76 million. The amount of scholarships and grants for AY2021 increased by 6.4% over AY2019. The “International Bachelor Degree in Tropical Agriculture” offered by the Department of Tropical Agriculture and International Cooperation in response to MOE’s “New Southbound Talent Cultivation Program” recruited a total of 33 students from Nepal, Indonesia, and India. After their graduation in AY2021, both the number of outstanding international PhD students receiving funding and the amount of funding reduced significantly. After graduation and returning to their home countries, many alumni are working at important departments in their countries or have start up their own businesses to make huge contribution to the development of agro-technology, improvement of the living quality, and promotion of local economic prosperity of our diplomatic allies and other Southeast Asian countries.

Statistics on the Type of Scholarships and Grants for International Students and the Number of Recipients in Past 3 Years

Academic Year	2019		2020		2021	
	Persons	Amount (NT\$)	Persons	Amount (NT\$)	Persons	Amount (NT\$)
International Student Study Scholarship/Grant	526	2,863,000	565	3,061,000	617	3,310,000
Scholarship for Outstanding Overseas Chinese Students	47	1,236,880	44	1,205,280	47	1,207,415
Scholarship/Grant for Outstanding International PhD Students	167	1,336,000	177	1,416,000	194	1,552,000
Taiwan Scholarship And Huayu Enrichment Scholarship Program (MOFA Scholarship, MOE Scholarship, MOST (now NSTC) Scholarship)	204	4,620,000	228	4,980,000	240	5,820,000
Taiwan ICDF Scholarship	552	7,608,000	636	8,772,000	672	9,336,000
Subtotal	1,496	17,663,880	1,650	19,434,280	1,770	21,225,415

*The total number of scholarship recipients is the sum of the number of approved scholarship recipients each month



▲ International students and local students co-organized the “2022 Indian Diwali Festival” to lead NPUST students to light up the light to celebrate and experience the “Indian New Year”. [Further reading](#)



▲ At the “2021 Thai Songkran Festival” Thai food DIY co-organized by the NPUST Thai Student Union and the Office of International Affairs, Thai students instructed participants how to make Thai food and prayed for good luck in the foreign country during the new year. [Further reading](#)



▲ During the “2022 International Students Hunt Taiwan 2.0” summer event series, KPUST alumnus Korawit Chaisu, a Thai teacher, and nearly 60 KPUST international students visited the Taiwan Indigenous Peoples Cultural Park to experience the unique culture and customs of Taiwan. [Further reading](#)



▲ At the “2022 International Culture Day and Gingerbread House Creativity Competition”, students from 10 countries, such as Pakistan, Indonesia, and Thailand, formed a marketplace for students and teachers to experience an exotic flavor on the campus. [Further reading](#)



▲ Due to COVID-19, the Office of International Affairs invited teachers to show international students how to make the special rice food “turtle-shaped rice cake” and the “paper cake” artwork in 2021 for international students to understand the auspice and health messages that traditional Taiwanese rice food wants to express. [Related report](#)



▲ Indonesian students organized the “2022 Wonderful Indonesia Culture Festival”. In addition to the NPUST president and teachers, Minister Sandiaga Uno of the Ministry of Tourism, Republic of Indonesia, also prepared a blessing video for this event. [Related report](#)



中央有關機關

110 學年度



◀ Dean of International Affairs Rr. Po-Min Li (second left) received the “AY2021 University with Outstanding Achievements in International Student Guidance” from MOE on behalf of NPUST. [Further reading](#)

● Social Co-Prosperity-Highlights of Corresponding SDGs

Link to SDGs

1.4 1.5 8.8
11.3 11.4 15.4

Through collaboration with the Forestry Bureau (now Forestry and Nature Conservation Agency), the Community Forestry Center of the Department of Forestry introduced eco-tourism and the under-forest economy into indigenous regions to help indigenous communities in the affected areas develop the Satoyama economy, protect valuable forest resources traumatized by typhoons, and the Drekey culture and forest knowledge to find new linkages for indigenous communities and solutions for indigenous peoples to return to home. (2021/4/13)

[Further reading](#)

Link to SDGs

4.7



At the “Super Cute Learning Mates-Studying with Dogs” premiered at the Wanluan Township Library in Pingtung County, three learning with assistance dogs (LA dogs) of the Working Dog Training Center helped children learn and develop self-confidence. The event also promoted the life education on love for animals.)

[Further reading](#)

Link to SDGs

4.3 4.4



To improve the science, technology, engineering, and mathematics (STEM) literacy of community citizens, the Smart Media Research Center co-organized the “Community STEM Education and Exploration” activity for the community citizens to engage in robot programming in collaboration with the teachers and students of the Department of Computer Mechanical Drafting of National Fongshan Senior Commercial & Industrial Vocational School (FSVS). (2021/10/23)

[Further reading](#)

Link to SDGs

4.3 8.6



At the 2022 Thematic Career Exploration Show titled “Unlimited Fun for Jobs with TVET”, we and National Kaohsiung University of Science and Technology (NKUST) co-organized the “New Vision of TVET: Career Exploration Show” in collaboration with the National Science and Technology Museum to mark out learning-life integration so as to practice and emphasize holistic development for learners. (2022/3/28)

[Further reading](#)

Link to SDGs

1.a 4.3 10.4



We offer the “Vision Plan Program” and team up with the Taiwan Fund for Children and Families (TFCF) to recruit outstanding economically disadvantaged students from senior high schools and vocational high schools across Taiwan. Four students of the vision plan program received the scholarship for outstanding students from low-income families of The Children of Rotary from RID 3510. (2021/12/27) [Further reading](#)

Link to SDGs

4.7 11.4



We signed a cooperation agreement with the Taiwan Hakka Culture Development Center, Hakka Affairs Council, and initiated the “Liudui Sports Meet-Zhongdai and Zhutian Photography Traveling Exhibition” to promote the academic research and cultural education regarding Hakka and ethnic relationships and museology. We also invited national-treasure-grade photographer Sen-Sung Liu to give related lectures so as to pass down and flourish the Liudui spirit. (2022/4/6) [Further reading](#)

● Social Co-Prosperity-Highlights of Corresponding SDGs

Link to SDGs **4.5** **11.3**



Academic staff of the Graduate Institute of Landscape Architecture and Recreation Management and the Department of Plant Industry led the interdisciplinary USR team to Rong Hua Elementary School to teach senior-year teachers and students to improve the campus environment with both hands and to build a green therapeutic area for the future promotion of naturopathy and green care community activities. (2022/5/25) [Further reading](#)

Link to SDGs **1.2** **10.4**



During the school anniversary, EMBA alumni of different years held a charitable sale and donated all proceeds to the healthcare and vulnerable or disadvantaged groups and schoolchildren in remote townships of Pingtung to develop quality and innovative educational talents. (2022/11/19) [Further reading](#)

Link to SDGs **4.5** **4.a**



Every summer the Center for Teacher Education will form teams to offer Schweitzer Spirit Education Service to junior high schools in remote townships and “nor-rural and non-urban” areas in Pingtung County. This year a total of 11 student teachers guide 31 junior high school students to join the online digital creative DIY activities. (2022/7/14) [Further reading](#)

Link to SDGs **2.1** **12.3**



With the subsidization of the Council of Agriculture (now Ministry of Agriculture), we established the Agricultural Product Value-Added Proofing Center to offer preliminary processing services including “drying, crushing, milling, roasting, and squeezing” to help develop the prototype of processed agricultural products for commodification using agricultural ingredients from the Gaoping region. (2022/11/19) [Further reading](#)

Link to SDGs **2.3** **2.4**



At the 10th International Symposium on Machinery and Mechatronics for Agricultural and Biosystems Engineering (ISMAB2022), we invited experts and scholars from different countries to find solutions for sustainable agriculture that meets net-zero emissions and the ESG requirements for issues in relation to climate change, labor ageing, and food shortages in the future. [Further reading](#)

Link to SDGs **4.7** **13.3**



NPUST professors and elementary school headmasters and headmistresses co-planned the 5th Hirano Festival & Northern Kaohsiung Science Day: Kaohsiung All-Out Defense Science Day for parents and children to “play science” outdoor. The event attracted over 3,000 local citizens at all ages. (2022/11/21) [Further reading](#)

06 Conclusion of Report Highlights



■ Our indoor stadium has 200m lanes and various sports classrooms. Apart from using them for student learning, we also open them for use by the public, primary and second schools, and groups achieve the goal of resource sharing and social interaction.

► 6-1 Sustainability Highlights



- Plantation during 2020-2022: **over 5000 seedlings**, survival rate: **over 90%**.
- Electricity consumption in 2022 over 2020: **▼4,454.64 GJ and ▼4%**
- Campus shuttle bus ridership during 2020-2022: **318,148 persons (times)**, total length of shaded pavement: **1,512.95m**
- Average rate of electricity saved during 2015-2021: **1.62%**
- EUI in 2021 and 2022: 87.1 and 89.6, both below the base value of 90.
- Sewage purification and recycling: **Total reclamaion and zero discharge**
- Total number of IUCN Red List species and national conservation list species sheltered during 2020-2022: **105 species**
- Rate of green procurement during 2020-2022: **over 99.53%, with 100% Taiwanese suppliers.**
- Accumulative readers of *NPUST e-Newsletter*: **580 persons**
- Sustainable library resources-Collection of the **SDGs e-book section**: **1,889 volumes**, with **65,657 clicks**.



E
Environmental

- Signed the “Co-Empowerment Agreement” to promote USR experience together with **8 universities**
- Co-established the **Taiwan University Alliance for Sustainable Governance (TUASG)** to promote university sustainable development and university social responsibilities with **9 universities**
- Recipients of USR community service during 2020-2022: **24,048 persons (times)**
- Recipients of community sharing of school resources 2020-2022: **72,231 persons (times)**
- Community citizens participating in extension education during 2020-2022: **15,894 persons (times)**
- Businesses and hospitals signing strategic alliance agreements during 2020-2022: **113 units**
- Courses offered in collaboration with governmental and non-governmental organizations during 2020-2022: **485 courses**
- Participants from senior high schools and vocational high schools participating in interdisciplinary TVET experience during 2020-2022: **3,687 persons (times)**
- 283 sister schools, number in 2022 over 2020 **▲6 schools**
- Amount of scholarships for international students in AY2021 over AY2019 **▲6.4%**



S
Social

- Academic and administrative staff from the southern region during 2020-2022: **71%**, local employment
- Encouraged academic staff to implement USR and SDGs, 2022 flexible pay over 2020: **▲5%**
- Pioneered Taiwan’s first “Academic and Administrative Staff Stress Relief Center” with **2** visually impaired masseurs to provide services for **3,724 persons(times)** during 2020-2022.
- AY2021 rate of field research and training completion of academic staff: **100%**
- Total amount of funds for optimizing teaching space and facilities during 2020-2022: **NT\$800 million**
- Number of certificates and licenses obtained by students in AY2021 over AY2019: **▲10.4%**
- Scholarships and grants for economically and culturally disadvantaged students each year: **8%** of the total amount of tuition and fees and **5% more** than that of MOE; benefited up to **41,324 persons** with a total amount of **over NT\$31 million**.
- Rate of internship completion of graduating classes during AY2019-2021: **100%**
- Employment rate of graduates during AY2019-2021: **94.6%, 96.2%, and 96.7%** respectively.
- Total income from university-industry collaboration projects and technology transfer during 2020-2022: **over NT\$2 billion** and **over NT\$37 million** respectively.
- Research fund for sustainable development during AY2019-2021: about **NT\$1.6 billion**, nearly **50%** of the total R&D funds.



G
Governance

► 6-2 Sustainable Glory

E Environmental

- UI GreenMetric World University Rankings
 - › 2014-2022: **No. 1 in Taiwan for nine consecutive years**
 - › 2022: Global ranking: **Top 2%, No. 3 in Asia, No. 27 in the world**
- 2021 The 2nd USR Awards by *Global Views Monthly*: **No. 1 in "Ecology Co-Benefit"**.
- 2021: A professor was awarded the "Order of Propitious Clouds with Grand Cordon", "International Membership" of the **Chinese Innovation & Invention Society & IAIA**, and the **17th International Inventor Prize**.
- 2021 Academic staff at the All American DAVINCI International Innovation and Invention Expo: **Gold Medal**
- 2021 Students at the 8th International Cultural Creative Cup World Skills Competition: First place for eco-friendly apparel creative design
- 2022 The 3rd USR Awards by *Global Views Monthly*: **Model of "Ecology Co-Benefit"**
- 2022 A professor was awarded the **Merit of Forestry and Nature Conservation**
- 2022 Excellence in Teaching Sustainability Award for teacher: **Honorable Mention** for "Renewal Energy and Sustainable Development"
- 2022 The innovation and entrepreneurship team won the first place and best potential award at the "Pingtung County Youth Agricultural Makerathon: Agricultural Landscape Innovation and Entrepreneurship Proposal Competition".

S Social

- 2021 A professor was awarded the 4th National Award for Distinguished Contribution to Industry-Academia Cooperation.
- A professor was awarded the 45th **Top 10 Taiwan Outstanding Agriculturalists** in 2021.
- 2021 Awarded the **University with Outstanding Achievements in International Student Guidance** by MOE.
- 2021 A student team won the first place at the "2021 National SDGs Presentation Competition" with "Nesting@Wusui Drainage".
- 2021 The 3rd 2GETHER Technological and Vocational Schools Smart Innovation and Application Competition with National Fongshan Senior Commercial & Industrial Vocational School: **Second Place**
- 2022 Alumna Dr. Odette Marie Varela Milla from El Salvador of the Department of Tropical Agriculture and International Cooperation was awarded the 3rd **Distinguished Taiwan Alumni Award**.
- 2022 An alumnus of the Department of Plant Medicine was awarded the 2nd IPM Award for the onsite operation category and the **Top 100 Youth Farmers Award**.
- 2022 An alumnus of the Department Plant Industry was awarded the 33rd **Top 10 Farmers Award**.
- 2022 An alumnus of the Department of Forestry was awarded the **Top 10 Outstanding Young Persons**.
- 2022 The "Nan Formosa Agriculture" and "Talk About Plants" projects won from the Youth Development Administration, Ministry of Education, the stage 1 Innovation and Entrepreneurship Prize of NT\$350,000 and school funding of NT\$150,000.

G Governance

- Impact Rankings by *Times Higher Education*
- **World's top 301-400** and **No. 1** of USTs in Taiwan in 2021
- 2022 **World's top 201-300** and **No. 1** in Taiwan's USTs
- **Platinum Award** for University Sustainability Report at the 2021 Taiwan Corporate Sustainability Awards (TCSA)
- Awards from domestic and overseas student competitions during 2021-2022: **1,817** times
- 2021 Award for boulangerie at the 51st National Skill Competition: **Gold medal**
- **No. 1 for Integrated Performance in the TVET category** at the 2022 USR Awards by *Global View Monthly*.
 - › University Education Performance Review by *Cheers* magazine
 - › **No. 19** in the 2022 "University Education Performance Improvement Top 20"
 - › **No. 29** in the 2022 "Most Favorite University Graduates Ranking Top 30 of the Top 2000 Enterprises"
 - › **No. 7** in the 2022 "Most Favorite Public TVET Systems Top 10"
- 2022 Excellence in Teaching Sustainability Award: **First place for "Intergovernmental Organization"**
- A professor won the **Platinum Award, the highest honor** of the Asia International Innovation Invention Exhibition in 2022.
- Students won the **Gold Medal** for door and window carpentry at the 46th World Skills Competition in 2022.
- The 18th Outstanding Award of Technological and Vocational Education 2022 for students: **Excellence Award** in competition and **Outstanding Award** in TVET.



07 Appendices



● Appendix 1 GIR Content Index

Number of Disclosure	Title of Disclosure	Corresponding Section and Description	Page
GRI 2: 2021			
Organization and its reporting practices			
2-1	Organizational details	1-2 Operations and Development of Sustainable University	15
2-2	Entities included in the organization's sustainability reporting	About this Report	1
2-3	Reporting period, frequency and contact point	About this Report	1
2-4	Restatements of information	1-6 Stakeholder Inclusiveness (Management Approach) 2-2 Campus Infrastructure and Hardware/ Software Facilities 4-1 Low-Carbon Campus	29-38 45 71
2-5	External assurance	Statement of Audit	
Activities and workers			
2-6	Activities, value chain and other business relationships	1-1 NPUST History	14
2-7	Staff	2-1 Fostering Quality Workforces	40
2-8	Workers who are not employees	2-1 Fostering Quality Workforces	40
Governance			
2-9	Governance structure and composition	1-2 Operations and Development of Sustainable University (Operation of the University Council & Various Committees)	18
2-10	Nomination and selection of the highest governance body	1-2 Operations and Development of Sustainable University (Operation of the University Council & Various Committees)	18
2-11	Chair of the highest governance body	1-2 Operations and Development of Sustainable University (Operation of the University Council & Various Committees)	18
2-12	Role of the highest governance body in overseeing the management of impacts	1-2 Operations and Development of Sustainable University (Operation of the Sustainability Development Advisory Committee)	19
2-13	Delegation of responsibility for managing impacts	1-2 Operations and Development of Sustainable University (Operation of the Sustainability Development Advisory Committee)	19
2-14	Role of the highest governance body in sustainability reporting	1-2 Operations and Development of Sustainable University (Operation of the Sustainability Development Advisory Committee)	19
2-15	Conflicts of interest	1-2 Operations and Development of Sustainable University (Operation of the University Council & Various Committees)	18

Number of Disclosure	Title of Disclosure	Corresponding Section and Description	Page
2-16	Communication of critical concerns	1-2 Operations and Development of Sustainable University (Operation of the Sustainability Development Advisory Committee)	19
2-17	Collective knowledge of the highest governance body	1-2 Operations and Development of Sustainable University (Operation of the Sustainability Development Advisory Committee)	19
2-18	Evaluation of the performance of the highest governance body	1-2 Operations and Development of Sustainable University 1-5 Risk Management and Assessment 2-1 Fostering Quality Workforces (reward and benefits)	15 27 40
2-19	Remuneration policies	2-1 Fostering Quality Workforces (remuneration and promotion)	40
2-20	Process to determine remuneration	2-1 Fostering Quality Workforces (remuneration and promotion)	40
2-21	Annual total compensation ratio	2-1 Fostering Quality Workforces (remuneration and promotion)	40
Strategy, policies and practices			
2-22	Statement on sustainable development strategy	1-3 Concept and Vision of Sustainable Development	22
2-23	Policy commitment	1-6 Stakeholder Inclusiveness (Management Approach)	29-38
2-24	Embedding policy commitments	1-6 Stakeholder Inclusiveness (Management Approach)	29-38
2-25	Processes to remediate negative impacts	1-6 Stakeholder Inclusiveness 3-4 Disclosure of Negative Information and Improvement Mechanisms	29 69
2-26	Mechanisms for seeking advice and raising concerns	1-6 Stakeholder Inclusiveness (Management Approach) 2-1 Fostering Quality Workforces (optimizing communication)	29-38 42
2-27	Compliance with laws and regulations	3-1 Compliance with laws and regulations	64
2-28	Membership associations	5-2 Social Linkage	91
Stakeholder engagement			
2-29	Approach to stakeholder engagement	1-6 Stakeholder Inclusiveness	29
2-30	Collective bargaining agreements	Our employees are mostly teachers who are not suitable for forming a labor union.	
GRI 3: 2021			
Number of Disclosure	Title of Disclosure	Corresponding Section and Description	Page
3-1	Process to determine material topics	1-6 Stakeholder Inclusiveness	29
3-2	List of material topics	1-6 Stakeholder Inclusiveness Description of changes in material issues	29-30 119
3-3	Management of material topics	1-6 Stakeholder Inclusiveness	29-30

● Material Topics

GRI Topics	Number of Disclosure	Title of Disclosure	Corresponding	Page	Corresponding SDG Targets
E03 Renewables					
GRI 302: Energy 2016	302-1	Energy consumption within the organization	4-1 Low-Carbon Campus	71	7.1
	302-3	Energy intensity	4-1 Low-Carbon Campus	71	
E04 Waste Recycling and Reuse					
GRI 306: Waste 2020	306-1	Waste generation and significant waste-related impacts	4-1 Low-Carbon Campus	75	11.6 12.4 12.5
	306-2	Management of significant waste related impacts	4-1 Low-Carbon Campus	75	
	306-3	Waste generated	4-1 Low-Carbon Campus	75	
	306-4	Waste diverted from disposal	4-1 Low-Carbon Campus	75	
E06 Water Management and Use					
GRI 303: Water and Effluents 2018	303-1	Interactions with water as a shared resource	4-2 Water Sustainable Management	77	6.3 6.5
	303-2	Management of water discharge related impacts	4-2 Water Sustainable Management	77	
	303-3	Water withdrawal	4-2 Water Sustainable Management	77	
E07 Protection and Restoration of Biodiversity					
GRI 304: Biodiversity 2016	304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	4-3 Protection and Restoration of Biodiversity	79	12.2 15.4 15.5
	304-2	Significant impacts of activities, products, and services on biodiversity	4-3 Protection and Restoration of Biodiversity	79	
	304-3	Habitats protected or restored	4-3 Protection and Restoration of Biodiversity	79	
	304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	4-3 Protection and Restoration of Biodiversity	79	
S08 Information Security					
GRI 418: Customer Privacy 2016	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	5-1 Campus Safety (information security)	88	16.10

GRI Topics	Number of Disclosure	Title of Disclosure	Corresponding	Page	Corresponding SDG Targets
S04 USR and Local Co-Prosperity					
GRI 413: Local Communities 2016	413-2	Operations with significant actual and potential negative impacts on local communities	3-4 Disclosure of Negative Information and Improvement Mechanisms 5-3 Expanding Sustainability with Stakeholders	69 92-94	11.A 12.B 17.17

● Self-Defined Material Issues

Material Topics	Number of Disclosure	Title of Disclosure	Corresponding	Page	Corresponding SDG Targets
G06 Infrastructure and Hardware/Software Facilities					
G101 Campus Development	3-3	Management of material topics	2-2 Campus Infrastructure and Hardware/Software Facilities	45-47	4.7
G07 Teaching Quality					
G102 Faculty Quality	3-3	Management of material topics	2-3 Teaching Innovation and Teaching Quality	48	4.7
G13 COVID-19 Countermeasures					
G103 Study at Ease	3-3	Management of material topics	2-6 COVID-19 Counteractions	61	3.3
S05 Global Partnership					
S101 Global Partnership	3-3	Management of material topics	5-4 Global Partners for Sustainable Development	105-109	17.16
S06 On-Campus and Off-Campus Traffic					
S102 Sustainable Commuting	3-3	Management of material topics	5-1 On-Campus and Off-Campus Traffic	86	11.2
S07 Campus Environment and Safety					
S103 Campus Safety	3-3	Management of material topics	5-1 Campus Safety	87	11.1

● General Topics

GRI 200: Economic				
GRI Topics	Number of Disclosure	Title of Disclosure	Corresponding Section and Description	Page
GRI 201: Economic Performance 2016	201-4	Financial assistance received from government	1-4 Sustainable Financial Management	24-26
GRI 203: Indirect Economic Impacts 2016	203-1	Infrastructure investments and services supported	5-3 Expanding Sustainability with Stakeholders	92
GRI 204: Procurement Practices 2016	204-1	Proportion of spending on local suppliers	4-5 Sustainable Supply Chain	82
GRI 400: Social				
GRI 401: Employment 2016	401-1	New employee hires and employee turnover	2-1 Fostering Quality Workforces	40
	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	2-1 Fostering Quality Workforces	40
	401-3	Parental leave	2-1 Fostering Quality Workforces	40
GRI 403: Occupational Health and Safety 2018	403-2	Hazard identification, risk assessment, and incident investigation	5-1 Campus Safety (occupational safety and health)	90
	403-3	Occupational health services	5-1 Campus Safety (occupational safety and health)	90
	403-4	Worker participation, consultation, and communication on occupational health and safety	5-1 Campus Safety (occupational safety and health)	90
	403-5	Worker training on occupational health and safety	5-1 Campus Safety (occupational safety and health)	90
	403-6	Promotion of worker health	5-1 Campus Safety (occupational safety and health)	90
	403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	5-1 Campus Safety (occupational safety and health)	90
	403-8	Workers covered by an occupational health and safety management system	5-1 Campus Safety (occupational safety and health)	90
GRI 404: Training and Education 2016	404-1	Average hours of training per year per employee	2-1 Fostering Quality Workforces	40

GRI 200: Economic				
GRI Topics	Number of Disclosure	Title of Disclosure	Corresponding Section and Description	Page
GRI 405: Diversity and Equal Opportunity 2016	405-1	Diversity of governance bodies and employees	2-1 Fostering Quality Workforces	40

● Appendix 2 SASB-Education Content Index

Topic	Number of Disclosure	Metric	Description/Corresponding Sections	Page
Table 1. Sustainability Disclosure Topics & Accounting Metrics				
Data Security	SV-ED-230a.1	Description of approach to identifying and addressing data security risks	5-1 Campus Safety (information security)	88-89
	SV-ED-230a.2	Description of policies and practices relating to collection, usage, and retention of student information	5-1 Campus Safety (information security)	88-89
	SV-ED-230a.3	(1) Number of data breaches (2) percentage involving personally identifiable information (PII) (3) number of students affected	5-1 Campus Safety (information security)	88
Quality of Education & Gainful Employment	SV-ED-260a.1	Graduation rate	2-4 Student Career Development and University-Industry Collaboration	53
	SV-ED-260a.2	On-time completion rate	2-4 Student Career Development and University-Industry Collaboration	53
	SV-ED-260a.3	Job placement rate	2-4 Student Career Development and University-Industry Collaboration	53
Marketing & Recruiting Practices	SV-ED-270a.3	(1) Instruction and student services expenses and (2) marketing and recruiting expenses	1-4 Sustainable Financial Management	24-26
Table 2. Activity Metrics				
	SV-ED-000.A	Number of students enrolled ⁵	1-1 NPUST History	14
	SV-ED-000.D	Number of: (1) teaching staff and (2) all other staff	2-1 Fostering Quality Workforces	40

● Description of changes in material issues



Based on the previous issue (2020), a total of 34 potential concerned topics were defined in terms of the three aspects of sustainability. After reviewing these concerned issues, the working group concluded the issues that concern stakeholders more and included 31 issues in the current issue (2022), including 12 material issues defined as follows:

2020 Sustainability Report		
Institutional Governance (G)	Environmental Sustainability (E)	Social Co-Prosperity (S)
G01 Institutional Development Plan	E01 Safety Information of Teachers and Students	S01 Physical and Mental Health of Academic and Administrative Staff
G02 Institutional Operational Evaluation	E02 Low-Carbon Campus	S02 Benefits and Grievances of Academic and Administrative Staff
G03 Institutional Operation and Committees	E03 Food Safety and Hygiene (Sanitation)	S03 Student Physical and Mental Health
G04 Financial Information Management	E04 Campus Energy Conservation Management	S04 Scholarships and Grants
G05 Compliance with Laws and Regulations	E05 Water Use and Wastewater Treatment	S05 Rights and Interests of Economically Disadvantaged Students
G06 Stakeholder Engagement	E06 Renewables	S06 Housing Environment
G07 Supply Cooperation and Management	E07 Waste Recycling and Disposal	S07 International Exchange
G08 Domestic and International Rankings	E08 Green Building	S08 On- and Off-Campus Traffic Safety
G09 Academic Integrity	E09 Green Procurement and Selection of Local Products	S09 Campus Environmental Safety
G10 Teaching Quality	E11 Protection and Restoration of Campus Biodiversity	S10 USR and Community Engagement
G11 Guidance Performance	E12 Compliance with Environmental Laws and Regulations	S11 Local Cooperation and Development
G12 Academic Performance	E13 Sustainable Environmental Education	S12 Community and Citizen Feedback
G13 Career Development and Training of Academic and Administrative Staff	E14 Occupational Safety and Health	S13 Social Service Engagement of Student Volunteers
G14 Campus Infrastructure and Hardware/Software Facilities		S14 Alumni Contacts and Activities
G15 Career Development and University-Industry Collaboration		S15 Global Partnership

2022 Sustainability Report		
Sustainability Governance (G)	Environmental Sustainability (E)	Social Co-Prosperity (S)
G01 Stakeholder Inclusiveness	E01 Climate Change Governance and Action	S01 Sharing of Education Resources
G02 Financial Management	E02 Energy Conservation Management	S02 Alumni Contacts and Activities
G03 Compliance with Laws and Regulations	E03 Renewables	S03 Social Linkage
G04 Academic Integrity	E04 Waste Recycling and Reuse	S04 USR and Local Co-Prosperity
G05 Gender Equality and Well-Being	E05 Green Building	S05 Global Partnership
G06 Infrastructure and Hardware/Software Facilities	E06 Water Management and Use	S06 On-Campus and Off-Campus Traffic
G07 Teaching Quality	E07 Protection and Restoration of Biodiversity	S07 Campus Environment and Safety
G08 Career Development and University-Industry Collaboration	E08 Green Procurement and Selection of Local Products	S08 Information Security
G09 Study Assistance Measures	E09 Soil Conservation and Disaster Prevention	S09 Occupational Safety and Health
G10 Student Physical and Mental Health		
G11 Sustainability Education		
G12 Academic Performance		
G13 COVID-19 Countermeasures		

*Items in bold face are material issues.

● Appendix 3 Statement of Audit Opinion

GRI CHECK INDEPENDENT OPINION STATEMENT

NPUST 2022 Sustainability Report

The British Standards Institution is independent to National Pingtung University of Science and Technology (hereafter referred to as NPUST in this statement) and has no financial interest in the operation of NPUST other than for the GRI Check of this report.

This statement has been prepared for NPUST only for the purposes of GRI Standards Check relating to its sustainability report, more particularly described in the Scope below. It was not prepared for any other purpose. The British Standards Institution will not, in providing this statement, accept or assume responsibility (legal or otherwise) or accept liability for or in connection with any other purpose for which it may be used, or to any person by whom the independent opinion statement may be read.

This statement is prepared on the basis of review by the British Standards Institution of information presented to it by NPUST. The review does not extend beyond such information and is solely based on it. In performing such review, the British Standards Institution has assumed that all such information is complete.

Any queries that may arise by virtue of this independent opinion statement or matters relating to it should be addressed to NPUST only.

Scope

The scope of engagement agreed upon with National Pingtung University of Science and Technology includes the check of the extent of NPUST 2022 Sustainability Report is adherence to GRI Standards 2021 is conducted in accordance with GRI Standards, however, the data disclosed in the report is not verified through the GRI Check process.

Opinion Statement

We conclude that NPUST 2022 Sustainability Report Review provides a fair view of the NPUST sustainability programmes and performances during 2022.

A team of sustainability report assessors in accordance with GRI Standards carried out our work. We planned and performed this part of our work to obtain the necessary information and explanations. We conclude that NPUST provided sufficient evidence to satisfy the description of their approach and their self-declaration of in accordance with GRI Standards was fairly stated.

GRI Sustainability Reporting Standards (GRI Standards)

NPUST provided us with their self-declaration of in accordance with GRI Standards 2021 (For each material topic covered in the applicable GRI Sector Standard and relevant GRI Topic Standard, comply with all reporting requirements for disclosures). Based on our review, we confirm that sustainable development disclosures with reference to GRI Standards' disclosures are reported, partially reported or omitted. In our professional opinion the self-declaration covers the NPUST's sustainability topics.

Materiality

The NPUST publishes information completely with materiality analysis that enables its stakeholders to make informed judgments about the NPUST's management and performance. In our professional opinion the report covers the NPUST's material topics.

Stakeholder Inclusivity

In this report, it reflects that NPUST has made a commitment to its stakeholders, as the participation of stakeholders has been conducted in developing and achieving an accountable and strategic response to sustainability. There are fair reporting and disclosures for the information of Environment, Social and Governance (ESG) in this report, so that appropriate planning and target-setting can be supported. In our professional opinion the report covers the NPUST's inclusivity topics.

Sustainability Context

The report presents the NPUST's performance in the wider context of sustainability.

Completeness

Coverage of the material topics and their boundaries are sufficient to reflect significant impacts on the economy, environment, and people, including impacts on their human rights and enable stakeholders to assess the NPUST's sustainability performance in the reporting period; in our professional opinion the report covers the NPUST's Completeness.

Responsibility

The sustainability report is the responsibility of the NPUST's Chairman. Our responsibility is to provide an independent opinion statement to stakeholders giving our professional opinion based on the scope described.

Competency and Independence

BSI is a leading global standards and assessment body founded in 1901. The GRI Check team was composed of Lead Auditors experienced in relevant sectors, and trained in a range of sustainability, environmental and social standards including AA1000AS, GRI Standards, ISO 14001, ISO 45001, ISO 14064 and ISO 9001. The GRI Check is carried out in line with the BSI Fair Trading Code of Practice.

For and on behalf of BSI:



Peter Pu, Managing Director BSI Taiwan

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NPUST Website



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