

AI + SDGs = ∞
ESG + AI = ∞



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TKU SDGs

SUSTAINABILITY REPORT
TAMKANG UNIVERSITY

2022

17 PARTNERSHIPS
FOR THE GOALS





PARTNERSHIPS FOR THE GOALS

Relationships to support the goals

As one of the major higher education research and teaching institutes in Taiwan, Tamkang University actively collaborate with government, NGOs, industries and enterprises to integrate resources and build strong relationship for the development of sustainable goals. Our missions are:

1. To facilitate policy formulating and cross-sectoral communication: In 2021, over one hundred faculty from TKU served in governmental units as consultants, reviewers, professional reviewers, or advisory members of government units, assisting the government in formulating or promoting policies related to sustainable development goals, organizing Sustainable Development Goals activities, and fostering cross-sectoral dialogue.
2. Education and research: Through co-publishing research papers with international scholars, participating in international cooperation programs, and actively cooperating with international institutes to collect or measure data related to the Sustainable Development Goals, we are constantly examining plans to improve sustainable development goals, including

related research on improving wastewater treatment technology, development of flood forecasting system, research and development of green recycling treatment technology for organic waste, etc., with fruitful results.

3. Promotion and services: We have opened many “learning through service” courses that, in partnership with local communities and NGOs, undertakes annual selection and provides a subsidy for the selected group. By doing this, we encourage students to initiate voluntary activities and participate in community service and local creation. In addition, through the promotion of USR projects, we cooperate with regional government units and local non-profit organizations to carry out smart urban and rural construction, record, and preservation of art and culture, and build sustainable cities.

4. To expand the impact: Since 2019, TKU has issued an overall sustainability report every year. In 2021, an overall sustainability report on 17 SDGs and seven separate reports on SDG4, SDG6, SDG7, SDG8, SDG11, SDG12, and SDG17 were issued to reveal and demonstrate the university's sustainable practices on-campus environment, social practice participation, and school governance for public references. By actively participating in the evaluation of various sustainable awards at home and abroad, not only shall we continually seek self-improvement, we will continue to spread influence to promote the achievement of sustainable development goals.

TKU Action — Collaborate with regional NGOs and government for SDG policy



1. Direct involvement in, or input into national government

Over a hundred academic staff of the university served as consultants, deliberative members, professional evaluation members, review members, or advisory members in governmental units to have direct involvement in or input in formulating or promoting relative policies of sustainable development goals, including :

- The Department of Economics signed a contract with Longyuan Holding in June 2022 to establish aquaponics systems within the campuses of Tamkang University and Chong-Cheng Senior High School. They will also develop operational and monitoring modules for these systems.
- The Department of Artificial Intelligence participated in the “2023 Feasibility Study on the Use of AI to Identify Abnormalities in Sewer Pipes” project of Sewerage Systems Office of Public Works Department, Taipei City Government.
- Teachers from the Department of Chinese Literature served as convener of the “Qualification Examination for Teachers of Schools Below Senior Secondary School and Kindergarten” and help to develop the literacy assessment indicators and questions. Significant education issues such as gender equity, human rights, multiculturalism and indigenous culture are integrated into the indicators and questions.
- Teachers from the Department of Water Resources and Environmental Engineering served as members in governmental units such as Taiwan Water Corporation, the Department of Disaster Response Center of Taipei City Government, the

management committee of Te-Chi Reservoir catchment area, the survey group of Taiwan’s wetlands of importance, and the initiative committee of Tamsui River Pollution Control and Remediation.

- Teachers from the Department of Economics served as members in governmental units such as the Advisory Committee of Radioactive Waste Safety, Soil and Groundwater Pollution Remediation Fund Management Board, and Environmental Protection Administration of Executive Yuan.
- Teachers from the Department of Accounting served as members of the group for formulating the covering range of medical benefits for national health insurance to steer the reforming of the health care system.
- Teachers from the Department of Transportation Management served as members of the “Professional Review Committee of Smart Urban and Rural Life Application Subsidy Program” and “Railway environmental improvement construction and surrounding land development plan review meeting”.

2. Collaboration with local government

The university's USR (University Social Responsibility) project, “Tamsui Good Life,” aims to transform Tamsui area into a “learning township.” In long-term collaboration with Tamsui District Office and other government offices, it promotes community development. In 2021, through the jointly organized “Local Regeneration Consensus Conference” with the Tamsui District Office, they identified the unique DNA of the Tamsui area. Through proposals, discussions, and consensus-building, it was decided to assist in building an integrated physical and virtual regeneration platform for local agriculture. This platform addresses the

challenges of the COVID-19 pandemic and accelerates digital transformation, emphasizing the use of technology. Faculty and student teams from the departments of Mass Communication, Computer Science, Management Sciences, and Educational Design are involved in creating a diverse platform called “Open Tamsui,” which connects Tamsui farmers to the world through methods such as websites, Facebook, YouTube, 360-degree panorama videos, design product listings, online platforms, industry-academia collaborations, agricultural facilities, farm experiences, and Tamsui's musical characteristics.

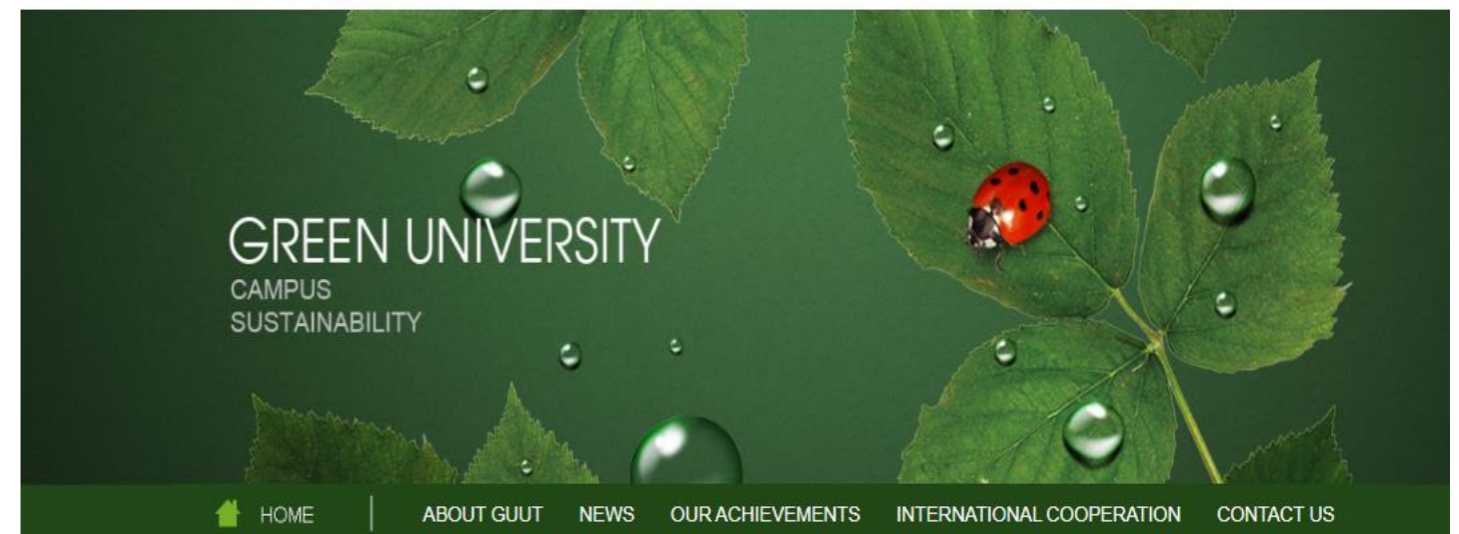
3. Collaboration with domestic non-government organizations (NGOs)

- TKU is both a charter member and a permanent member of the Green University Union of Taiwan and has been serving as a supervisor school since 2019 to continuously make great impacts on issues regarding carbon emission and SDGs.

- Tamkang University has partnered with similar-minded universities, including Tatung University, Taipei University of Marine Technology, Aletheia University, National Open University, and Shih Chien University, to form the “Alliance for Empowering Smart Future – Sustainable and Cultivated Digital Learning.” The alliance has recently passed the review of the Ministry of Education's “University Alliance for the Deepening Promotion and Innovative Application of Digital Learning Project.” Through digital teaching innovation, the alliance will collectively develop goals and existing characteristic strengths, planning thematic courses on “Technology” and “Sustainability,” as well as “Distinctive” course series, to achieve sustainable development in digital learning and enhance the transformation of digital teaching among alliance schools. The project is set to run from June 30, 2022, to January 31, 2024, with approved funding of NT\$13,659,000.



中文 ENGLISH



TKU Action—Initiate cross sectoral dialogue about SDGs

In 2022, Tamkang University continuously initiated and participated in cross-sectoral dialogue about SDGs, including:

1.Center for Sustainable Development and Social Innovation

- Collaborated with the Education Department of New Taipei City Government to promote the Learning City project.
- Collaborated with village office on the Healthy City project, promoting activities related to elderly fitness and care.
- Collaborated with Tamsui Community University on the Livable City project, focusing on quality of living environment, new immigrant issues, and urban development planning.

2.USR Projects

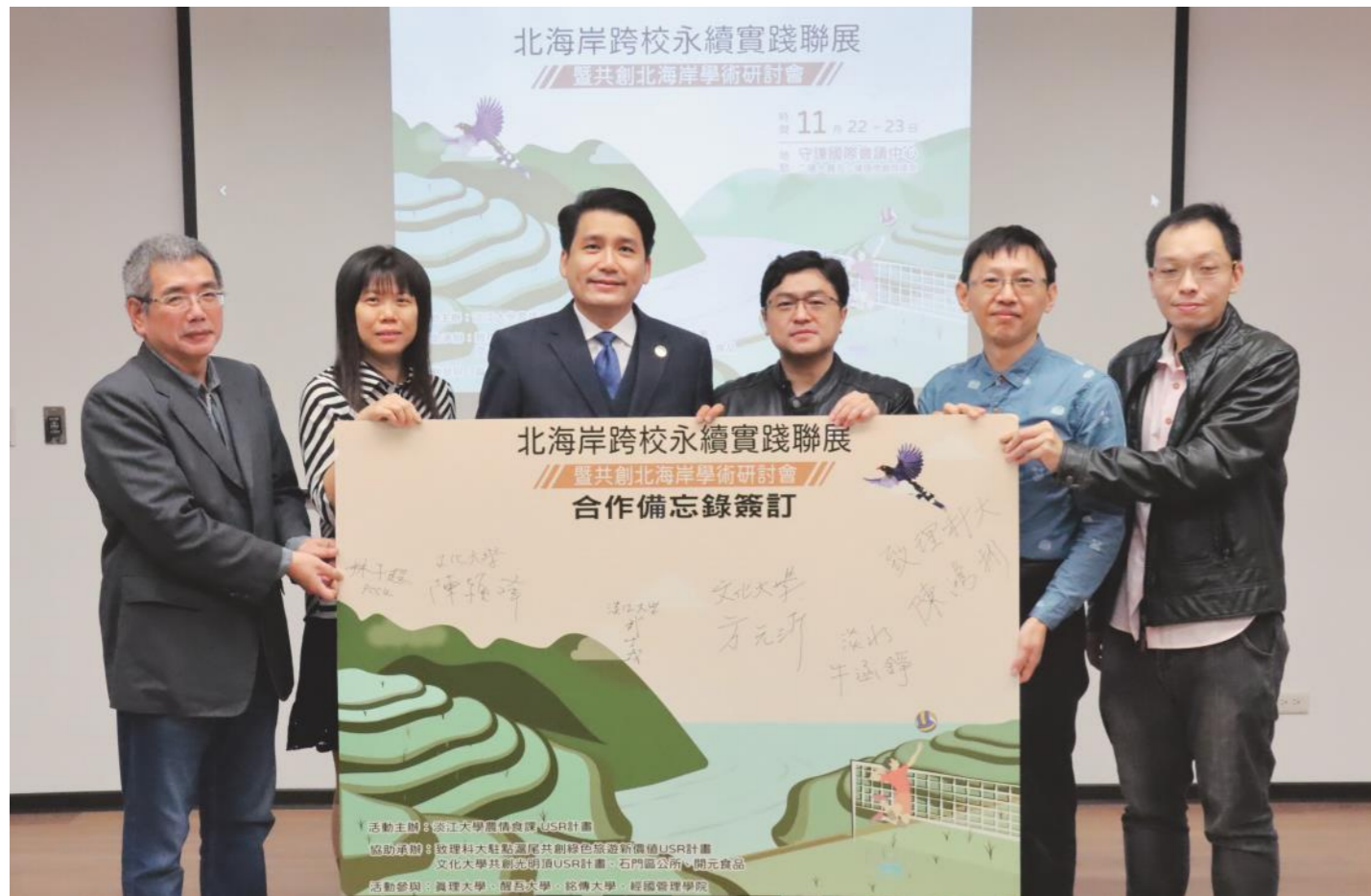
- Collaborated with multiple universities in New Taipei City and Taipei City to host the “Cross-Campus Sustainability Exhibition on the Northern Coast” to engage in dialogue on issues related to the agricultural belt of the northern coast.
- Collaborated with the Agriculture Bureau of New Taipei City Government and 5% DESIGN Planning Company to implement the “New Taipei Good Farm UP” initiative, promoting local distinctive industry chains and introducing cross-disciplinary design and industry resources.
- Organized the “2022 International Linkage Seminar - Establishing International Service Work for Local Resilience and Flexibility” with the theme of the challenges and difficulties of international linkage work in the post-pandemic era. Invited USR teams from Nanhua University, Kaohsiung Medical University, and Chung Yuan Christian University to con-

nect with the Cambodian NGO, ECC School. The event aimed to share the practices and achievements of local and international service work. Nearly 70 people participated .

- Participated in a coastal tree-planting event organized by the Rotary Club, inviting various agencies, communities, and schools in Tamsui to join in planting trees. The event focused on ecological restoration activities at the coastal embankment park in Danhai New Town. In mid-February 2022, the administrative process for adopting a portion of land plot No. 255, approximately 6,800 square meters in Tamsui, managed by the New Taipei City Government, was completed. Nearly ten thousand tree seedlings suitable for the local environment were planted. This initiative aims to create a multi-layered green space in Tamsui, forming an ecological green corridor that connects the Linzi Riverside and the coast.

3. Academic Units

- The Accounting Department held the “2022 Contemporary Accounting Seminar” on May 28, 2022, and the “2022 Contemporary Accounting Master's Thesis Award Seminar” on December 17, 2022. These events discussed topics related to corporate social responsibility and sustainable development.
- The Mass Communication Department executed the “Constructing a Placemaking Platform Ecosystem - Local Brand and Leisure Agriculture MarTech” project. The aim was to achieve a sense of inclusivity and prosperity in Tamsui. After establishing a rural e-commerce platform and a marketing system, the project sought to awaken local awareness among Tamsui residents. Even urban dwellers showed pride in consuming local products and developed a sense of local identity. With minimal carbon footprint, this approach allowed urban and agricultural



areas to harmoniously coexist, creating a shared sense of pride in the local identity of Tamsui.

- The Department of Diplomacy and International Relations organized the “International Conference on the Democratic Reversals in Southeast Asia and the Influence on Taiwan’s New Southbound Policy.” The primary research focus was the current status and development of democratization in Southeast Asian countries and its impact on Taiwan’s New Southbound Policy. Participating scholars came from Taiwan, Singapore, Indonesia, Malaysia, and other countries, contributing a total of 10 papers, with 143 participants from both within and outside the university.
- In 2022, the Wind Engineering Research Center collaborated with the Taiwan Soka Association in response to SDGs’ emphasis on the issue of “climate change.” Together, they integrated the principles of SDGs and the “Earth Charter Initiative” to further promote the concept of SDGs on campus. They specially planned the “Seeds of Hope and Action Exhibition” developed by SGI and the Earth Charter Initiative. Through more diverse and interactive content, they aimed to initiate change starting with “inner transformation,” ultimately transforming the environment and society, and opening the path towards a sustainable and better future for the next generation. This exhibition, promoted by the Soka Gakkai International, has been showcased worldwide and was exhibited at various domestic universities in 2023.
- The Department of Industrial Economics organized the “2022 Academic Conference on Environmental Sustainability and Industrial Development.” The conference featured a special lecture on en-

vironmental sustainability by Professor Daigee Shaw (Adjunct Research Fellow of the Institute of Economics, Academia Sinica), along with presentations of research papers on topics related to environmental sustainability, economic growth and development, industrial organizations, and more.

4. Resource Center for the Visually Impaired

- Collaborated with Chunghwa Telecom and the National Palace Museum - “Using AI to Assist the Visually Impaired in Exploring the National Palace Museum.”
- Collaborated with Chunghwa Post on the “Mobile Post Office App - Tutorial Videos for the Visually Impaired.”
- Collaborated with the Central Engraving and Printing Plant - “Promotion and Advocacy of Accessible and Friendly New Taiwan Dollar Services.”
- Collaborated with Shin Kong Life Insurance to promote “Dementia Patients and Visually Impaired-Friendly Financial Services.”

TKU Action—Engage international collaboration

TKU actively participates in international collaboration on gathering or measuring data for the SDGs:

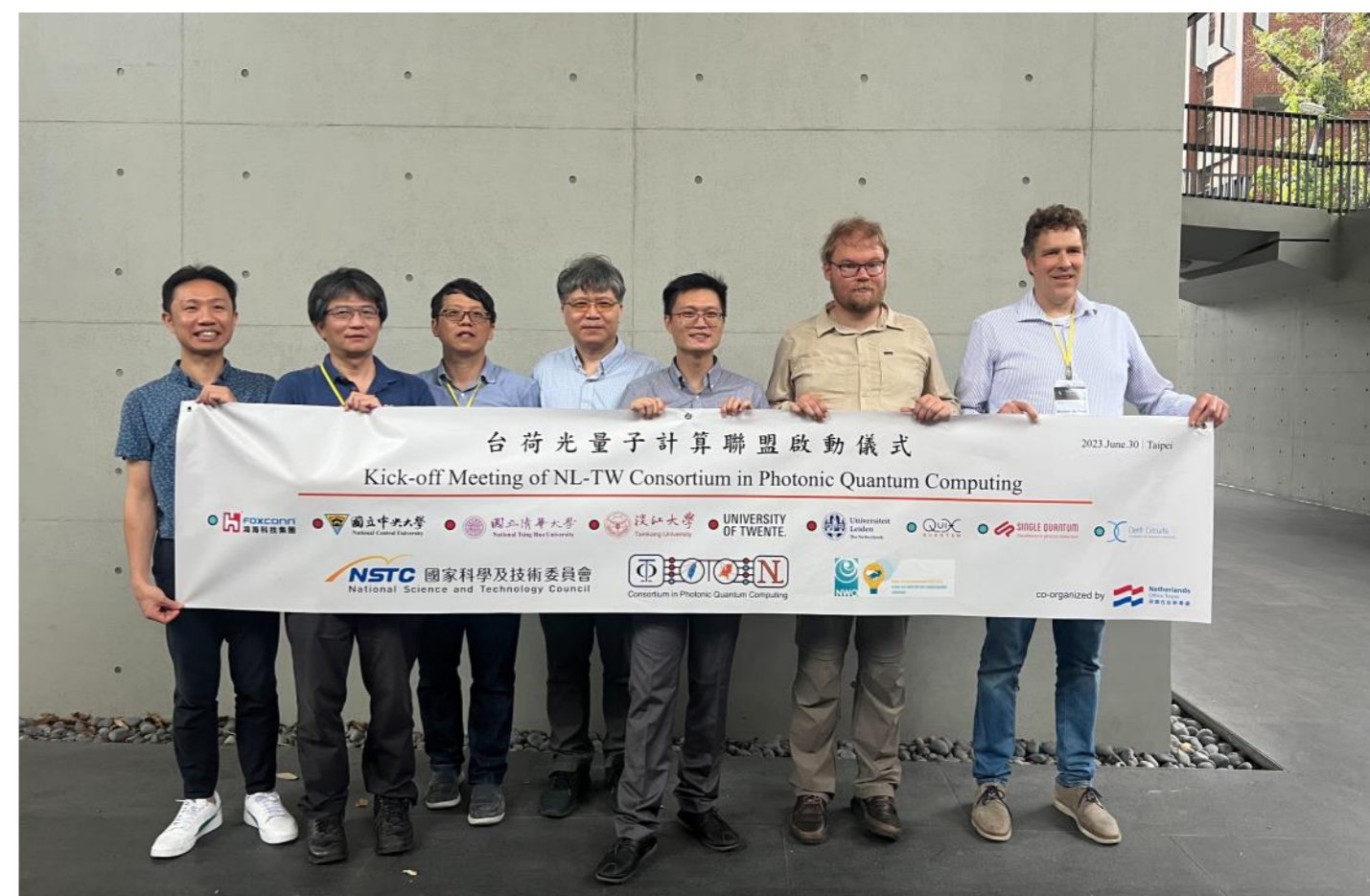
1. The Synchrotron Radiation Research Team from the Department of Physics signed a contract with the National Synchrotron Radiation Research Center to establish an advanced research laboratory for the development of nanomaterials and energy technology. The team published four international-

collaborated papers in 2020, 2 in 2021, and 6 in 2022.

2. The Department of Chemistry is collaborating with Tay Nguyen University (TNU) in Vietnam to conduct a research on the benefits and risks associated with inhibitor therapy in Alzheimer’s and Parkinson’s disease.
3. The Department of Chemistry has been collaborating with TNU and HCMUT (Ho Chi Minh City University of Technology) to publish research papers on ending poverty, health care, and water resources.
4. Faculty members from the Department of Water Resources and Environmental Engineering and International scholars jointly published 8 journal papers related to SDG6 - Clean Water and Sanitation.
5. In 2022, the Wind Engineering Research Center collaborated with the Taiwan Soka Association in response to SDGs’ emphasis

on the issue of “climate change.” Together, they integrated the principles of SDGs and the “Earth Charter Initiative” to further promote the concept of SDGs on campus. They specially planned the “Seeds of Hope and Action Exhibition” developed by SGI and the Earth Charter Initiative. Through more diverse and interactive content, they aimed to initiate change starting with “inner transformation,” ultimately transforming the environment and society, and opening the path towards a sustainable and better future for the next generation. This exhibition, promoted by the Soka Gakkai International, has been showcased worldwide and was exhibited at various domestic universities in 2023.

6. The teachers and students from the Department of Information and Library Science set up a public digital collaboratively-editing online website, Tamsui Wiki, to introduce and record the culture and humanity in Tamsui. Since 2021, the team has extended the field of practice to Malaysia and



set up the Malaysian Chinese Wiki. From September 2013 to December 2021, the cumulative total number of page views has reached more than 2.83 million times. There are more than 1.13 million cumulative users in 149 countries or regions around the world.

7. The Department of Economics has been continuously assisting ECC school, an NGO in Cambodia, in promoting sustainable development of water resources and the economy, through international forums, websites, and platforms, including Facebook, even during the pandemic. On August 13, 2022, they held a local workshop in the PO Village where ECC is located to provide in-depth and easy-to-understand guidance to local residents on water safety concepts and water quality filtration methods.

TKU Action—Collaborae with NGOs for SDGs

1. Student volunteering programs

Through the practice of the “Tamkang University Service-Learning Program”, TKU collaborates with local communities and NGOs to tackle the SDGs issues. Selected teams of the service-learning program were subsidized to encourage students to initiate volunteering programs and participated in community service and placemaking.

- Summer and winter vacation voluntary service teams: Students of volunteering service groups will visit remote towns and the countryside to provide tuition and extracurricular activities for the children during the winter and summer vacations.
- Cambodia service-learning team: Led by teachers from the Department of Eco-

nomics, the volunteering team of students visits Cambodia during winter and summer vacation to provide educational activities such as language teaching, computer literacy, environmental education, and field studies in partnership with the local NGO ECC School. The village where ECC school is located is close to the World Heritage Angkor Wat. It is a poor village where the local children generally look forward to becoming tour guides with a good income in the future. Therefore, English and computer skills are crucial to develop tourism and increase their income.

- Seashore primary school project: The volunteering group of students from the Department of Accounting collaborates with organizations such as the Fund for Children and Families to provide online tuition for children from primary schools and disadvantaged families of remote villages at the seashore. In 2022, we collaborated with institutions such as Xixi Elementary School in Penghu, Xinyuan Educational Foundation, and WT Educational Foundation to carry out the “Penghu Xinyuan Classroom” project.
- Fourth-year students from the Spanish Department, Pin-Hsuan Li and Meng-Hsuan Wu, volunteered as Spanish translators in the “Paraguay Medical Information Management Efficiency Enhancement Project (Phase II)” organized by the International Cooperation and Development Fund from August 6, 2022, to January 31, 2023. They worked alongside a team to assist in the development of Paraguay's medical information management capacity and system implementation, aiming to enhance the management efficiency of medical institutions in the designated areas of Paraguay, including Guaira, Canindeyu, and Alto Parana.

- The Resource Center for the Visually Impaired, in pursuit of community care and providing an employment platform for individuals with visual impairments, has initiated the “Glimmer Project.” They have invited visually impaired performing artists, colleagues with visual impairments, and students with disabilities from our university to participate in this project, aiming to give back to society by utilizing their talents and expertise, thereby creating a dual value of self-help and helping others.
- Through Professional Competence Service courses and professional team service learning support programs, our university collaborates with various communities and NGOs to assist in the development of organizational initiatives and community advancement. For example, the Department of Mass Communication helps NGOs develop creative marketing proposals, the Department of Infor-

mation and Communication applies communication expertise to promote and market local specialty agricultural products, the Department of Business Administration assists women who return to job market in the community with handmade goods and exhibition promotion to increase visibility, the Center for General Education collaborates with NGOs to access forests for ecological preservation, teachers from the fields of arts guide students to delve into local culture and translate it into artistic expressions to promote culture, the Department of Global Politics and Economics aids human rights organizations in promoting human rights issues in our country, the Department of International Tourism Management collaborates with community organizations to promote local specialty events, and education departments assist NGOs in website development and the creation of digital materials, among others.



2. Research programs

- The faculty from the Department of Water Resources and Environmental Engineering implemented the “Ministry of Education Subsidy Project for University Industrial Innovation and R&D.” The project, titled “Full Recovery Clean Process for the Recycling of Waste Incineration Fly Ash Production Wastewater Ceramic Membranes,” contributes to the continuous improvement of wastewater treatment technology in Taiwan. It allows for customized adjustments to membrane materials, effectively removing various ions such as sodium, calcium, and magnesium from water, thus saving up to 30-50% of wastewater treatment costs.
- One of the resident companies of TKU Champion Incubation Center, Monster Environmental Technology Co., Ltd., founded by Tamkang alumni, has developed the “Bio Black Soldier Fly Sys-

tem.” This system is employed for the green and sustainable processing of organic waste. The company was invited to participate in the 3rd SDGs International Forum organized by Global Views Monthly Magazine in 2022, where they showcased their capabilities and achievements.

3. Development of educational resources

- The Resource Center for the Visually Impaired is entrusted by the Ministry of Education to conduct computer education and training programs for the visually impaired. With the aim of enhancing the employment capabilities of visually impaired individuals, the center provides integrated services for employment, develops computer software designed for the blind, and offers training courses on various application software. These courses include Google Analytics (GA) and Microsoft Office Specialist (MOS) certification training, courses on visual

impairment and care support services, as well as an all-around marketing expert training program.

- Tamsui Wiki: The teachers and students from the Department of Information and Library Science set up a public digital collaboratively-editing online website, Tamsui Wiki, to introduce and record the culture and humanity in Tamsui. Since 2021, the team has extended the field of practice to Malaysia and set up the Malaysian Chinese Wiki. From September 2013 to December 2021, the cumulative total number of page views has reached more than 2.83 million times. There are more than 1.13 million cumulative users in 149 countries or regions around the world.
- The Environmental Protection Documentaries Project: This project adapted the concept of “participatory documentary” and “narrative communication”, integrating with courses in video and TV pro-

gram production, to record the stories of people and organizations that have greatly impacted environmental protection in Tamsui. Topics of the documentaries cover the eco system, pollution control, resource recycling, and environmental protection in the community.

- Watershed course co-planning: Since 2019, TKU has been continuously promoting a “Learning-oriented urban and rural construction” project, which through the collaboration of Tamkang University, primary and secondary schools, and local culture works, jointly develop courses in environmental protection. There are 3 modules, 4 lesson plans, and a research paper published in 2021.
- The “Great Tamsui Teaching Resource Sharing Platform” was initiated as part of the “Tamsui Good Life” project in response to the educational changes brought about by the competency-oriented courses of Curriculum Guide-



lines of 12 Year Basic Education program and the development of interdisciplinary and diverse courses. The platform aims to facilitate dialogue, listening, and integration of teaching resources from Tamkang University and the needs of various junior high and elementary schools in Tamsui. This platform promotes mutual communication and establishes a sustainable mechanism for cooperation between the university and the local schools to foster a dynamic learning environment. On April 26, 2021, the university organized a meeting to gather teachers who had been involved in providing teaching services to junior high and elementary schools, as well as those who were interested in participating in such services in the future. During this meeting, they shared their experiences and discussed the concept of establishing the platform. On December 7, 2021, TKU invited principals from junior high and elementary schools to discuss and deliberate further collaboration, listening to their expectations and exploring the possibilities for operation. On March 24, 2022, a more in-depth briefing on the platform's operation was conducted at the "Tamsui District Primary School Teachers' Professional Community Visit Tamkang and Symposium" to provide detailed information about how the platform functions.

- The Department of Information and Library Science has signed an observational learning program with the San Francisco Public Library in the United States, to encourage high-achieving students to intern abroad, aiming to cultivate professionals with international perspectives and practical experience.

4. Alliance for advocacy

Since 2019, TKU has been annually inviting teachers and students from college, elementary and high schools, community organizations, and caring groups from the northern Tamsui area to organize an "Environmental Issues" forum. In 2019, it focused on climate action, followed by marine waste action in 2020, water resource issues in 2021, and participation in a coastal tree-planting event hosted by a Rotary Club in 2022, seeking opportunities for regional collaboration. Through these sustainable key issues, the university establishes a close connection with the community, assembles one or more communities, and invites different stakeholders and groups to participate, gradually fostering local awareness and collectively driving local change.

Publication of SDG reports

Starting from 2019, TKU has been consistently publishing a comprehensive sustainability report annually. In 2020, apart from the overall report, TKU also produced individual reports on seven specific Sustainable Development Goals (SDGs), namely: Quality Education (SDG4), Clean Water and Sanitation (SDG6), Affordable and Clean Energy (SDG7), Decent Work and Economic Growth (SDG8), Sustainable Cities and Communities (SDG11), Responsible Consumption and Production (SDG12), and Partnerships for the Goals (SDG17).

In 2022, TKU continued this practice by releasing an overall report covering all 17 SDGs, along with seven separate reports focusing on SDG4, SDG6, SDG7, SDG8, SDG11, SDG12, and SDG17. These reports serve to showcase and highlight the university's commitment to sustainability in its campus environment, social engagement, and in-

stitutional governance, providing a reference for the public.

Education for the SDGs

Education is at the heart of achieving the Sustainable Development Goals. The deepening of the concept of sustainability and the promotion of sustainable actions must be rooted in education, from the course teaching on campus to lifelong education outside the campus, and through the establishment of domestic and international partnerships, the influence will continue to spread.

Tamkang University is committed to promoting education related to sustainable development goals throughout the school, offering various courses related to sustainability including the required courses of "Exploring Sustainability" and "AI Learning," the general education courses such as "Ecological Community Construction," "Vulnerable Groups and Social Welfare" and "Marine Technolo-

gy," to facilitate a solid foundation for students' knowledge for sustainable development. The school requires teachers to state the sustainable development goals related when submitting a teaching plan, thereby encouraging teachers to incorporate SDG practice and experience into curriculum design to facilitate the education related to sustainable development goals.

To better facilitate sustainable development, TKU has expanded the education of SDGs beyond the campus, providing various lectures, seminars, workshops, lifelong learning courses, etc., to provide educational activities related to the SDGs for the community.

To expand our impact on sustainable development, TKU has also actively collaborated with international non-governmental organizations to share and exchange experience. For example, the Department of Economics cooperated with the Cambodian non-profit organization ECC School to tackle the development of economic sustainability and try to establish a circular farming system; the volun-



teering service team “Economics & Education Sail” visited poor villages in Cambodia during the winter and summer vacations, assisting students to study, improve their English and computer skills, help them improve their income, and lead the school children to carry out river cleanup to raise the awareness of environmental hygiene.

TKU Action—Commitment to meaningful education around SDGs

In 2021, TKU President revealed during the Teaching and Administrative Innovation Seminar that the university would revolve around the core concept of “SDGs” in the future. It will integrate elements related to the local community, international perspective, AI technology, and future trends. Simultaneously, it will employ “AI technology and cloud services” as innovative strategic tools to realize the vision of “Collaboratively Creating a Greater Tamsui, Embracing a Smart and Magnificent Future.” In November of the same year, the university applied for the registration of a trademark with the Intellectual Property Office of the Ministry of Economic Affairs and began actively promoting related initiatives.

On June 7, 2022, TKU signed an MOU with Far EasTone Telecommunications for the “5G Metaverse Zero Carbon Emissions Campus” initiative. Building upon the collaboration with Microsoft Taiwan on the “All-Cloud Smart Campus,” the university continues to drive digital transformation. In the meantime, the Center for Sustainability Development and Social Innovation was established, consisting of three divisions: “Zero Carbon Emissions,” “Social Practice,” and “Resilient Governance.” These divisions actively promote the United Nations Sustainable

Development Goals throughout the entire university.

Starting in 2022, the university introduced the “AI and Sustainability” program as part of its distinctive dual-track curriculum. This program includes two courses, “AI and Programming Languages” and “Exploring Sustainability,” each worth 1 credit, which have been incorporated into the compulsory courses for new students. These courses help students gain an understanding of sustainable development while learning about AI and artificial intelligence to prepare for future developments. Following the concept of “sustainable governance,” the Sustainable Development and Social Innovation Center serves as the hub to collaborate with various colleges across the university. Their aim is to nurture “sustainability competence” education within the university. They have introduced the “Exploring Sustainability” course, which guides students through the process of social awareness, social participation, and social innovation. This approach enhances both “exploration literacy” and “sustainability literacy” as two core competencies, fostering the development of future-oriented sustainable citizens within the university. Additionally, TKU has launched a comprehensive program on AI technology and cloud services across the campus. This initiative aims to promote innovation and transformation among students and faculty while accelerating the practical implementation of the United Nations SDGs.

TKU Action—Provide Courses on sustainability

1. Distinctive Dual-Tower Courses: Starting in 2022, the university introduced the “AI and Sustainability” program as part of its distinctive dual-track curriculum. This program includes two courses, “AI and Programming Languages” and “Exploring Sus-

tainability,” each worth 1 credit, which have been incorporated into the compulsory courses for new students. These courses help students gain an understanding of sustainable development while learning about AI and artificial intelligence to prepare for future developments. Following the concept of “sustainable governance,” the Sustainable Development and Social Innovation Center serves as the hub to collaborate with various colleges across the university. Their aim is to nurture “sustainability competence” education within the university. They have introduced the “Exploring Sustainability” course, which guides students through the process of social awareness, social participation, and social innovation. This approach enhances both “exploration literacy” and “sustainability literacy” as two core competencies, fostering the development of future-oriented sustainable citizens within the university. .

2. Micro-program of Sustainable development: TKU has set a micro-program of SDGs, a distributive study open to students of all grades. This program provides SDGs-related training and knowledge such as “Environmental Ethics,” “Marine Technology,” and “Human Rights and Social Justice,” covering three main categories—humanities, society, and technology.

3. Courses opened by each college: The school encourages all colleges to offer diverse and different-oriented courses related to sustainable education according to their professional fields. The school requires teachers to state the sustainable development goals related to the teaching plan when submitting a teaching plan, thereby encouraging teachers to incorporate SDG practice and experience into curriculum design to facilitate the promotion of education related to sustainable development goals.



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- The Civil Engineering Department offers a “Low Carbon Green Building” course that starts with the concept of low carbon and explores the content and certification systems of green buildings, as well as the future development pathways agriculture.
- The Architecture Department offers a “Sustainable Architecture” course, teaching architecture students about the significance, operational objectives, and design methods of sustainable architecture. Sustainable architecture must be considered as part of the ecological environmental system. Through design, it operates in harmony with the natural systems of sound, light, heat, air, water, resources, energy, and nutrition, meeting various human life needs while simultaneously achieving goals of low carbon, energy efficiency, health, safety, and co-existence with nature.
- The Mechanical Engineering Department offers an “Energy Engineering” course that introduces fundamental scientific principles related to energy, applications of energy, future trends in energy, an overview of non-renewable and renewable energy, an introduction to electrical and power systems, efficient energy con-

version, energy management, analysis and evaluation of efficient energy use, and environmental issues related to energy.

- The Aerospace Engineering Department offers a course titled “Introduction to Green Energy Technology.” This course begins by discussing the most widely used fossil fuels and nuclear energy globally, exploring their impacts on the Earth's environment and the necessity of transitioning to green energy. It starts with an introduction to the most common sources such as wind and solar power and continues with topics like hydropower and ocean energy. Additionally, the course includes relevant videos on green energy to enhance students' understanding, shares knowledge on energy transformation, and elaborates on the current status and development of sustainable green energy in Taiwan.
- The Department of Economics offers a course titled “Environmental Economics” dedicated to SDGs 3, 4, 12, and 13. The course aims to equip students with the ability to apply economic theories to analyze problems related to environmental use, environmental policies, and conservation. It also introduces current critical international environmental issues, enabling students to gain a profound understanding and insight into these topics. Approximately more than 60 students have enrolled in this course.
- The Department of Economics offers a course titled “Labor Economics,” which is dedicated to SDGs 1, 4, 5, 8, and 17. This course covers a range of topics, from gender equality issues to dignified employment and the establishment of partnerships. It guides students in understanding the concept of a sustainable labor market. Additionally, it provides stu-

dents with a comprehensive understanding of the regulations and policies they may face in their future career, including regulations related to employment security, minimum wage, labor discrimination, and social insurance and benefits. Understanding the impact of institutional design on the operation of a sustainable economy. Approximately 60 students enroll in this course each year.

TKU Action—Provide education for SDGs in the wider community

1. Through USR projects

- “Tamsui Good Life”: By integrating courses with on-site experiences, this project invites the community to collaborate in field practice modes, such as “international connections,” “environmental improvement,” and “living laboratories,” fostering task-oriented learning outcomes. This in-

cludes the development of the “Great Tamsui Area Teaching Resource Sharing Platform,” “SDGs North Tamsui Environmental Issues Alliance,” “Hometown Conservation Base,” “Building a Cultural Urban Corridor,” “Self-Guided Cultural Tours 4.0,” “Little Hands, Big Questions,” “Tamsui Construction 2022,” and “International Linkage Work 2022,” among 12 other routes.

- Food and agriculture education : In partnership with local tea farmers, the USR team organizes activities of tea culture sharing and organic tea farming experiences to help promote local tea culture and sustainable agriculture.
- Sea and land light tourism: To promote tourism in Northern Taiwan, the USR team Organizes activities such as day tour guides, lectures, canoe lessons, field trips, filming, and interactive games that are related to cultural and historical education and marine leisure, integrated with





marketing and industrial platforms, brand building and value-added new media including smart tourism interactive platform combined with A3 (AR, AI, APP).

2. Through multimedia

The Department of Mass Communications produces and broadcasts educational and cultural programs on Tamkang TV's official website, YouTube channel, and through the Voice of Tamkang Radio (FM88.7) to provide various channels of information for the general public.

3. Through educational activity tour

The Science Education Center and the Department of Chemistry jointly promote the popular science education activity “Chemistry On the Go”, traveling to elementary and middle schools in remote rural areas across Taiwan to demonstrate chemistry experiments for students, hoping to inspire students in the ways of science. The class will first allow the students to understand the goals and methods of the activity, then let the students participate in the preparation of the activity by themselves, giving them the freedom of choosing the number of times they wish to participate in the activity, and finally returning to school to reflect on their learning. In 2021, a total of 42 chemical tourism fun activities have been held across Taiwan, serving nearly 10,000 teachers and students.

4. Through service-learning program

- The Department of Economics collaborates with primary and secondary schools in Tamsui to organize half-day and one-day university activities. This initiative

incorporates sustainable development topics into teaching activities, guiding elementary and secondary school students to experience sustainable economics and assisting in empowering underprivileged individuals.

- The Department of Accounting offers a course titled “Tax Filing Consultancy and Service.” Students taking this course apply their tax knowledge to assist Tamsui residents with their tax filings at the Tamsui Tax Collection Office of National Taxation Office of Northern Area, Ministry of Finance. In another course titled “Social Service,” the department collaborates with organizations like Taiwan Fund for Children and Families to implement the “Coastal Schoolhouse” project, which involves weekly conducting video reading sessions with underprivileged students in remote areas.

- The Department of Education and Futures Design opens Professional Competence Service courses in each academic year. In this course, professional instructors lead students in engaging with NGOs, where they brainstorm how to apply their educational technology expertise and adult learning theory to assist in planning the learning needs of adults, and design and provide the services required to meet these needs.

5. Through lectures and activities

- The General Education and Core Curriculum Center organizes a “Sketching Tour of Century-Old Historic Churches.” Through this tour, both teachers and students are guided to explore the local area with the participation of local residents. They learn about the local culture by visiting historic sites and architectural landmarks.

- The General Education and Core Curriculum Center held two exhibitions titled “TKU & NTU Collaborative Creative Music and Dance X Houtong Miners’ Life Adventure Exhibition and Performance.” These exhibitions were open to the public, with one of them taking place at the Houtong Coal Mine Ecological Park in Ruifang District. This particular exhibition was a collaborative effort between the students and the park, where students performed in the core mining areas. The event invited local mining veterans and the public to watch the performance, and through this showcase, both teachers and students conveyed the power of emotion. They earnestly pass on and sustain the mining culture while making a significant contribution to society.





SDG17

夥伴關係

全球夥伴關係

淡江大學具備教學、研究、推廣及教育宣導等重要功能及實力，為實現永續發展目標，積極與國內外政府組織、非政府組織、學界及產業界合作，整合全球資源，建立多元夥伴關係，協力促進永續願景。相關作為包括：

1. 政策與對話：本校有逾百位教師在政府單位擔任顧問、審議委員、專業審查委員、評議委員或諮詢委員，協助政府制定或推動永續發展目標相關政策；持續透過發起或參與政府及非政府組織之間有關永續發展目標活動，促進跨部門對話。
2. 教育與研究：本校透過與國際學者共同發表學術期刊論文，參加國際機構合作方案，積極與國際合作，蒐集或衡量與永續發展目標相關的數據；透過與國際機構的



合作與研究，以及與國際學者共同發表學術期刊論文，檢視改善永續發展目標的方案，包括提升廢水處理技術相關研究、淹水預報系統開發、有機廢棄物綠色循環處理技術研發等，成果豐碩。

3. 推廣與服務：本校設有專業知能服務學習課程，與多個社區、非營利組織合作，協助組織相關業務與發展，並透過每年舉辦的專業團隊服務學習補助方案徵選，鼓勵學生發起志願性活動，參與社區服務與地方創生。另外，透過 USR 計畫的推展，協力區域性政府單位與在地非營利組織，進行智慧型城鄉建構、藝術與文化之紀錄與保存等工作，建立永續城市。
4. 影響力擴散：本校自 2019 年開始，每年發布學校整體永續發展報告，針對本校各項 SDG 的相關作為及推動進度，進行盤點和記錄。2020 年開始，針對 SDG4: Quality Education、SDG6: Clean water and sanitation、SDG7: Affordable and clean energy、SDG8: Decent Work and Economic Growth、SDG11: Sustainable Cities and Communities、SDG12: Responsible Consumption and production、SDG17: Partnerships for the Goals 等 7 項永續發展目標，每年發布獨立報告，並極積參與國內外各項永續獎項評比，以期自我提升，並持續擴散影響力，促進永續發展目標的達成。另外更發表年度總體報告，針對當年度本校在各項 SDG 的相關作為及推動成果亮點，進行記錄。

SDGs 年度關鍵成果

- 2022 年 5 月「五加二」產業產學聯盟簽約，淡江大學與 12 單位共推數位轉型與永續。
- 2022 年 6 月與遠傳電信簽署「5G 元宇宙淨零碳排校園」MOU，為電信業者與大專院校針對元宇宙、淨零碳排兩大關鍵議題達成產學合作合台首例。
- 2022 年 6 月參與「2022 ESG 高峰會：環境、社會、治理」實體展覽，與國內永續發展、社會責任與公司治理等領域的標竿企業及學術機構，交流永續發展實踐及成果。
- 2022 年 7 月舉辦 2022 線上夏日課程「永續發展—台灣與世界」，以 MS Teams 同步線上會議，邀請來自世界各地 20 多個國家、22 所姊妹校共同認識並探索臺灣，並增進對臺灣的了解。

參與區域性非政府及政府組織之 SDG 政策制定

1. 參與政府組織，協助制定及推動永續發展目標相關政策

本校有逾百位教師在政府單位擔任顧問、審議委員、專業審查委員、評議委員或諮詢委員，協助政府制定或推動永續發展目標相關政策，包括：

- (1) 經濟系於 2022 年 6 月與隆遠集團簽約，於淡江大學校園及中正高中校園內建置魚菜共生系統，並將研發可操作與可監控的運作模組。
- (2) 人工智慧學系參與臺北市政府工務局衛生下水道工程處 112 年度「利用人工智慧 AI 辨識污水管內異常之可行性研究」計畫案。
- (3) 水環系教師受聘擔任經濟部所屬台灣自來水（股）公司獨立董事、臺北市政府「災害防救專家諮詢委員會」委員、經濟部「德基水庫集水區管理委員會」委員、內政部「重要濕地審議小組」委員，以及行政院環境保護署「淡水河系污染整治計畫推動小組」委員，共同推動落實永續發展目標。
- (4) 文學院中文系老師擔任財團法人大學入學考試中心基金會「111 年度高級中等以下學校及幼兒園教師資格考試『國語文能力測驗』審題小組」召集人，協助訂定素養評量指標及題型，並配合課程改革、教育趨勢，將十二年國民基本教育課程綱要、教育政策及重大教育議題（包括精進學生學習成效政策、五育理念、品德教育、性別平等教育、人權教育、多元文化、本土文化教育等）融入各科命題內涵與範圍。
- (5) 經濟系教師擔任行政院原子能委員會「放射性物料安全諮詢會」委員、行政院環境保護署「土壤及地下水污染整治基金管理會」委員、行政院環境保護署「水污染防治費率審議委員會」委員。
- (6) 會計系教師擔任「全民健康保險醫療給付費用總額範圍擬訂公式檢討工作小組」委員，參與健保制度改革工作。
- (7) 運管系教師擔任經濟部工業局「智慧城鄉生活應用補助計畫專業審查會」委員、衛生福利部「兒童及少年事故傷害防制推動小組」委員、交通部「鐵路平交道與環境改善建設及周邊土地開發計畫審查會」委員等。
- (8) 大傳系教師承接新北市淡水區地方創生規劃委託專業服務案，舉行地方創生共識會議，並將淡水區提案向新北市研考會等相關局處舉行說明會，以利推動後續提案作業。

- (9) 與新北市政府副秘書長辦公室及台灣藝術創生文化基金會共同提案「地方創生學院」與「皇冠海岸：山海河城地方創生計畫」，作為後續市政建設計畫的落實。

2. 與區域政府合作，推動永續發展

本校 USR 計畫「淡水好生活」以建構淡水地區為「學習型城鄉」為目標，長期與淡水區公所等地區政府單位合作，推動社區營造。2021 年，透過與淡水區公所合辦之「地方創生共識會議」，盤點淡水地區 DNA，經過提案、討論，逐漸形成共識，決定協助在地農業建置整合實體與虛擬的創生平台，以因應新冠疫情，加速數位轉型的腳步，加大科技導入的力度。本校大傳系、資工系、管科系、教設系等師生團隊以網站、fb、YT、360 度環景影片、設計商品上架，網路平台、產學農合作、農場設施、農遊體驗，以及淡水的音樂特色等，創設「農門淡水」多元平台，將淡水農民與世界連結。

3. 與國內非政府組織合作

- (1) 本校為「臺灣綠色大學聯盟」（Green University Union of Taiwan）創始會員及永久會員學校，並於 2019 至 2021 年擔任監事學校，2022 年擔任理事學校，就大專校院節能減碳與實踐 SDGs 的議題，持續發揮影響力。
- (2) 淡江大學邀集大同大學、台北海洋科技大學、真理大學、國立空中大學及實踐大學等志同道合的夥伴學校，組成「智慧大未來—數位學習永續深耕聯盟」，



日前通過教育部「大學聯盟深化數位學習推展與創新應用計畫」審查，將透過數位教學創新，共同發展目標及既有特色優勢，規劃「科技」與「永續」主軸系列課程及「特色」系列課程，完備數位學習永續發展，推動聯盟學校精進數位教學轉型。該計畫期程為 2022 年 6 月 30 日至 2024 年 1 月 31 日止，核定補助經費 1,365 萬 9,000 元。

跨國跨部門對話

本校於 2022 年持續透過發起或參與政府及非政府組織之間有關永續發展目標活動，促進跨部門對話，包括：

1. 永續發展與社會创新中心

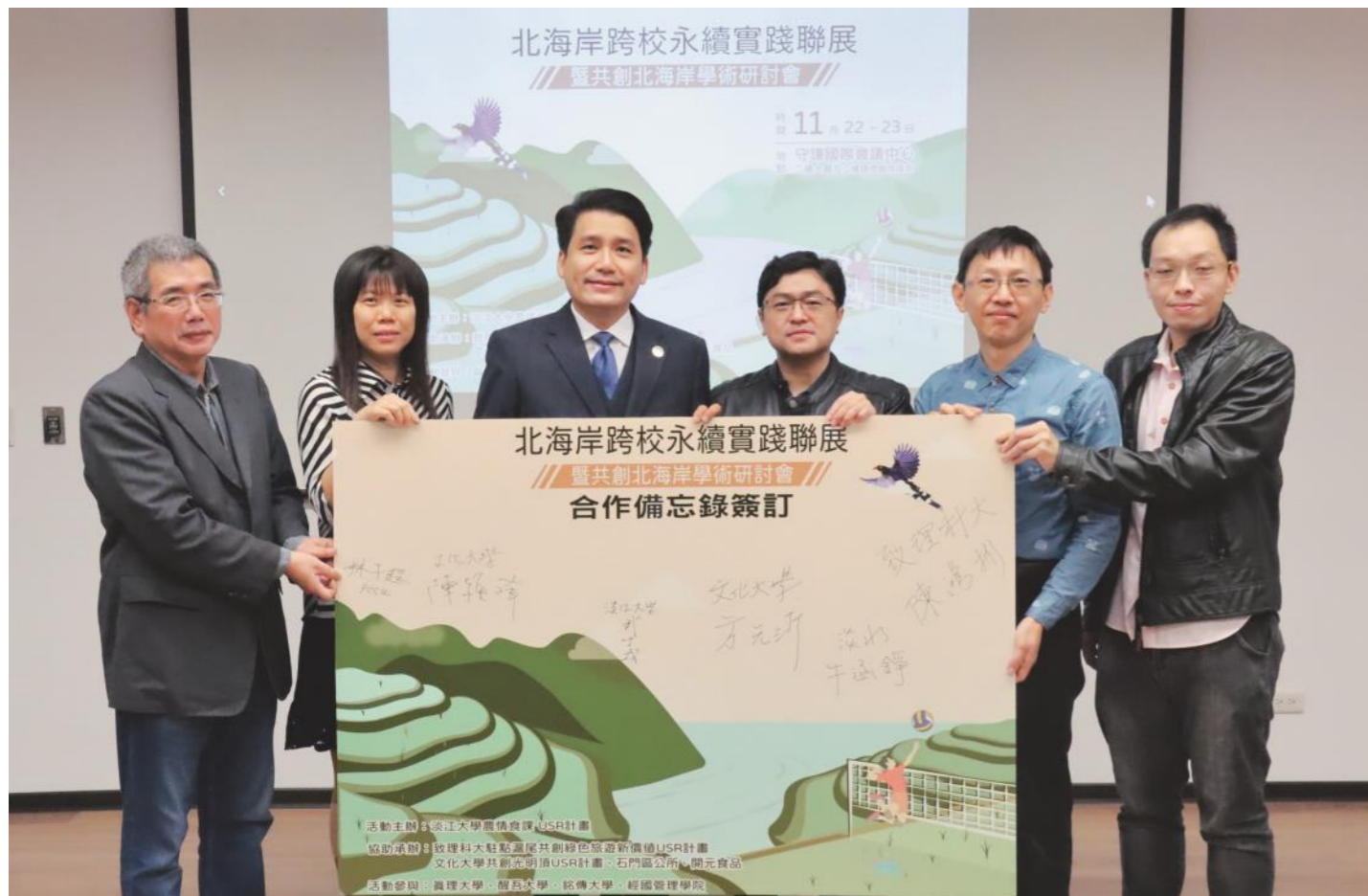
- (1) 與新北市政府教育局共同合作推動學習型城市計畫。
- (2) 與里辦公室合作健康城市計畫，推動老人體適能照護等活動。
- (3) 與淡水社區大學合作宜居城市計畫，關注生活環境品質、新住民議題及城市發展規劃。

2. USR 計畫

- (1) 與新北市及台北市多所大學合作舉辦「北海岸跨校永續聯展」，就北海岸農業帶議題進行對話。
- (2) 與新北市政府農業局及 5% DESIGN 企劃公司合作辦理「新北好農域 UP」青農創生行動，推動地方特色產業鏈，跨域導入設計及業界資源。
- (3) 舉辦「2022 國際鏈結研討會—奠基地方彈性與彈力的國際服務工作」，以國際鏈結工作在疫後的困境與挑戰作為主題，邀請南華大學、高雄醫學大學及中原大學 USR 團隊，與柬埔寨非營利組織 ECC school 跨國連線，分享投入在地與國際服務工作的做法與成果，近 70 人參與。
- (4) 參與扶輪社所舉辦的海岸植樹活動一同邀請淡水的各機關里鄰及學校參與響應種樹活動，在淡海新市鎮海岸堤防公園綠地進行生態復育行動，並在 2022 年 2 月中旬完成認養新北市政府所轄淡水區淡海段 255 地號部份土地約 2057 坪的行政程序，將護植近萬棵適地生長的苗木，打造淡海複層綠地，連通公司田溪水岸與海岸的生態綠廊。

3. 學術單位

- (1) 會計系：2022 年 5 月 28 日舉辦「2022 當代會計研討會」、2022 年 12 月 17 日舉辦「2022 當代會計碩士論文獎研討會」，探討企業社會責任及計永續發展相關議題。



- (2) 大傳系：執行「建構創生平台生態系—地方品牌與休閒農業 MarTech」，為達到淡水共融共榮，在農村電商平台與行銷系統健全後，喚醒淡水人的在地意識，居住於都會區的在地人亦以消費在地產物為榮的地方認同感，以最少的碳足跡使都會區與農業區能相互融和生活型態，共同創造淡水在地的光榮感。
- (3) 外交系：舉辦「東南亞民主化逆流及其對新南向政策之影響國際研討會」，主要研究議題為東南亞各國民民主化現況與發展，及我國新南向政策之影響，參與學者來自台灣、新加坡、印尼、馬來西亞、等國，共收錄 10 篇論文，校內外共 143 人參與。
- (4) 政經系舉辦「第四屆『後疫情時代下日本與全球政經變遷及影響』國際學術研討會」，主要研究議題為日本與全球政治經濟變遷影響。參與學者來自台灣、日本、中國大陸、馬來西亞等國家，約 83 人參與，並收錄 24 篇論文。
- (5) 風工程研究中心 2022 年與台灣創價學會合作，呼應 SDGs 重視「氣候變遷」議題，結合 SGI 與「國際地球憲章」(Earth Charter Initiative) 進一步將 SDGs 理念深入推廣至校園內。特別將 SGI 與國際地球憲章全新策劃的「希望與行動的種子展」，透過更多元、互動的內容，從自身「心的變革」做起，進而變革環境、社會，為下一代開啟永續美好的未來。此展覽經由國際創價學會推展後已於世界各地展出，2023 年於國內各大專院校展出。
- (6) 產經學系舉辦「2022 環境永續與產業發展學術研討會」，邀請蕭代基教授(中央研究院經濟研究所兼任研究員)進行環境永續相關議題專題演講，以及以環境永續、經濟成長與發展、產業組織等論文發表。

3. 視障資源中心

- (1) 與中華電信及故宮博物院合作-「用 I 幫盲」遊故宮。
- (2) 與中華郵政合作「行動郵局 APP 視障者操作教學影片」。
- (3) 與中央印製廠合作「新臺幣無障礙友善推廣服務宣導」。
- (4) 與新光人壽合作推動「失智視障友善金融服務」。

國際合作與研究

本校透過與國際學者共同發表學術期刊論文，或以參加國際機構合作方案等方式，積極與國際合作，蒐集或衡量與永續發展目標相關的數據，包括：

1. 物理系同步輻射團隊與國幅中心簽約，建置先進輻射技術實驗站，可用於奈米材料與能源技術的開發，造福人類，團隊於 2020 年發表 4 篇跨國合作論文；2021 年 2 篇；2022 年 6 篇。
2. 化學系教師與越南西原大學教授合作，進行抑制劑對抗阿茲海默症以及巴金森症之研究。
3. 化學系教師與越南西原大學、胡志明科技大學教授合作發表消除飢餓、解救健康、環境水資源相關議題論文。
4. 水環系教師與國際學者共同發表與 SDG6 潔淨水與衛生相關之期刊論文 8 篇。
5. 風工程研究中心 2022 年與台灣創價學會合作，呼應 SDGs 重視「氣候變遷」議題，結合 SGI 與「國際地球憲章」(Earth Charter Initiative) 進一步將 SDGs 理念深入推廣至校園內。特別將 SGI 與國際地球憲章全新策劃的「希望與行動的種子展」，透過更多元、互動的內容，從自身「心的變革」做起，進而變革環境、社會，為下一代開啟永續美好的未來。此展覽經由國際創價學會推展後已於世界各地展出，2023 年於國內各大專院校展出。
6. 資圖系師生團隊創立數位共筆網站《淡水維基館》，開放大眾共用，透過線上／線下社群共筆、共學、共創。2021 年將實踐場域拓展至馬來西亞，另創《大馬華人維



基館》。自 2013 年 9 月至 2021 年 12 月為止，累計總瀏覽量已達到 283 萬餘次。累計使用者總數有 113 萬多人，分布於全球 149 個國家或地區。

7.經濟系持續協助柬埔寨非政府組織 ECC school 推展在地水資源永續與經濟永續，透過國際論壇、網站平台以及 FB 等方式，在疫情期間將資料與經驗傳遞提供永續發展參考。於 2022 年 8 月 13 日在 ECC 所在的 PO 村舉辦地方工作坊，深入淺出指導當地居民水的安全觀念以及過濾水質的方法。

與非政府組織合作

1. 學生志願計畫

本校設有專業知能服務學習課程，與多個社區、非營利組織合作，協助組織相關業務與發展，並透過每年舉辦的專業團隊服務學習補助方案徵選，鼓勵學生發起志願性活動，參與社區服務與地方創生。相關作為包括：

- (1) 寒暑假服務隊：由學生組成社團，於寒暑假期間至偏鄉城鎮辦理陪讀及課輔活動。
- (2) 柬埔寨服務學習團：由經濟系教師培訓學生團隊，每年寒暑假前往柬埔寨，與當地的 NGO ECC school 合作，進行國際教育工作，包含英語教學、電腦教學、環境



衛生教育、以及一些當地文化踏查工作。ECC school 所在的村落緊臨世界遺產吳哥窟，是一個貧困村落，當地兒童們普遍期盼未來能成為有豐厚收入的導遊，因此需要英文能力與電腦能力，藉以發展觀光事業，提高所得。

- (3) 濱海小學堂計畫：會計系學生與家扶基金會等單位合作，陪伴偏遠地區之弱勢小學生每周定期視訊閱讀，除培養小朋友之閱讀能力外，亦提供修課學生社會關懷及反思之機會。2022 年與澎湖西溪國小、馨園文教基金會、文曄文教基金會等單位合作，進行「澎湖馨園小學堂」計畫。
- (4) 西語系四年級學生李品璇、吳孟軒於 2022 年 8 月 6 日至 112 年 1 月 31 日參與財團法人國際合作發展基金會人道救援計畫「巴拉圭醫療資訊管理效能提升計畫(第二期)」，擔任西語翻譯實習志工，與團隊共同協助巴國醫療資訊管理能力建構及系統建置，提升巴拉圭指定區域（Guaira、Canindeyu 及 Alto Parana）之醫療院所管理效能。
- (5) 視障資源中心為實現社區關懷及提供視障者就業平台，邀請視障表演藝術工作者、視障同仁及本校身障學生參與視障者回饋社會「微光專案」執行計畫，以自身才藝及專長回饋社會，創造自助助人的雙重價值。
- (6) 透過專業知能服務學習課程、專業團隊服務學習補助方案，與多個社區、非營利組織合作，協助組織相關業務推展與社區發展。如：大傳系協助非營利組織提出創設會行銷提案、資傳系運用傳播專業協助在地特色農產食品推廣行銷、企管系協助社區二度就業婦女手做與協助策展提高曝光率、通核中心與非營利組織合作進入森林協助生態維護、藝術與學門領域教師帶領學生深入地方文化轉譯為藝術表現協助文化推廣、政經系協助人權組織推動我國人權議題、觀光系與社區組織合作推動在地特色活動、教科系協助非營利組織架設網站及數位教材製作等。

2、研究計畫

- (1) 水資源及環境工程學系教師授執行「教育部補助大學產業創新研發計畫」，計畫名稱「垃圾焚化飛灰循環利用生產廢水陶瓷濾膜之全回收清潔製程」，協助我國廢水處理產業回收技術不斷精進，能客製化調整濾膜材料，有效分別去除水中鈉、鈣、鎂等離子，節省廢水處理成本三至五成。
- (2) 本校建邦中小企業創新育成中心進駐廠商之一，由淡江校友成立之巨獸綠色科技有限公司開發出「黑水虻生物處理系統」，進行有機廢棄物綠色循環處理工作，獲邀參與天下雜誌主辦 2022 第三屆 SDGs 國際論壇，展現實力與成果。

3. 教育資源開發

- (1) 視障資源中心受教育部委託辦理視障電腦教育訓練計畫，以培養視障者就業能力為出發點，提供視障者就業系統整合服務，開發盲用電腦軟體，並辦理應用

軟體訓練課程，包括 Google Analytics(GA)與 MOS 認證研習、視覺障礙暨照護支持服務課程，以及全方位行銷達人培訓班。

- (2) 資圖系師生團隊創立數位共筆網站《淡水維基館》，開放大眾共用，透過線上／線下社群共筆、共學、共創。2021 年將實踐場域拓展至馬來西亞，另創《大馬華人維基館》。自 2013 年 9 月至 2021 年 12 月為止，累計總瀏覽量已達到 283 萬餘次。累計使用者總數有 113 萬多人，分布於全球 149 個國家或地區。
- (3) 推展《環保志》計畫，以「參與式紀錄片模式」和「敘事傳播」的概念，結合本校影視專案企劃與製作的課程，進行「社區影像」，記錄淡水區永續環境有貢獻和影響力的人物和機構的故事，包含生態環境、污染防治、資源循環和社區環保等面向，提供後端網路平台作為典藏，建構有效之傳播方法。
- (4) 2019 起持續推動「學習型城鄉」的未來學校理念，以「流域課程」作為課程內容的基礎，淡江大學與中小學老師及地方工作者合作，透過「共讀」與「課程共備」協同發展環境教育課程，研發成果包括 3 個流域課程模組，舉辦 3 場工作坊，於 2021 年舉辦大型研討會發表 4 個教案、1 個專題論文。
- (5) 大淡水教學資源分享平台：因應十二年國教素養導向課程，跨領域多元的課程發展等教育變革，淡水好生活計畫啟動「大淡水教學資源分享平台」透想，希望透過對話、聆聽，以整合淡江大學教師資源及淡水各國中小需求，促進雙方

進行交流，建立大學與地方學習的作用，發展一個永續交流機制。2021 年 4 月 26 日邀請本校已經有參與中小學的教學服務以及未來有意願參與中小學服務的教師，舉行交流會議分享經驗，並提出建置平台的構想。該年底 12 月 7 日邀請中小學校長共同討論後續的合作，聽取與研商構想的期待與操作可能。2022 年 3 月 24 日進一步舉辦「淡水區小學教師專業社群參訪淡江暨座談會議」更深入的說明這個平台運作的方式。

- (6) 資圖系與美國舊金山市立圖書館(San Francisco Public Library)簽訂觀摩學習計畫，鼓勵成績優異學生赴國外實習，以培養具有國際視野及實務經驗之專業人才。

4. 倡議聯盟

資圖系與美國舊金山市立圖書館(San Francisco Public Library)簽訂觀摩學習計畫，鼓勵成績優異學生赴國外實習，以培養具有國際視野及實務經驗之專業人才。

永續發展目標報告書

本校自 2019 年開始，每年發布學校整體永續發展報告。



2022 年度總體報告中，本校針對 17 項 SDG 的相關作為及推動進度，皆有進行盤點和記錄。2020 年開始，針對 SDG4: Quality Education、SDG6: Clean water and sanitation、SDG7: Affordable and clean energy、SDG8: Decent Work and Economic Growth、SDG11: Sustainable Cities and Communities、SDG12: Responsible Consumption and production、SDG17: Partnerships for the Goals 等 7 項永續發展目標，每年發布獨立報告，揭露本校關於校園環境、社會實踐參與以及學校治理等永續作為，供社會大眾參考。

永續發展目標教育

教育是實現永續發展目標的關鍵核心。永續觀念的深化，永續行動的推展，必須從教育扎根，從校園內的課程教學，到校園外的終身教育，透過國內、國際夥伴關係的建立，將影響力持續擴散出去。

本校致力於在全校推展與永續發展目標相關的教育，開設各項永續相關課程，開放學生修習，包括校訂必修之「探索永續」及「AI 學習」課程，以及「生態社區建構」、「弱勢團體與社會福利」、「海洋科技」等通識課程，奠定學生永續發展的知識涵養。本校要求教師在提交教學計畫時，需說明與此教學計畫相關之永續發展目標，藉此鼓勵教師將 SDG 的實踐和體驗融入課程設計，以利推展與永續發展目標相關的教育。

本校為推廣永續發展目標，將 SDGs 的教育擴大到校園之外的範圍，以各種講座、研討會、工作坊、終身學習課程等，針對社區提供與永續發展目標相關的教育活動。

為擴大永續影響力，本校更與國際非政府組織合作，進行經驗分享與交流，例如經濟系與柬埔寨非營利組織 ECC School 合作，共同討論經濟永續的發展目標，並嘗試循環農作體系的建立；經濟系教師率領教育服務型團隊「經探號」，利用寒暑假期間協助柬埔寨貧困村落學童學習，提升英文能力與電腦能力，幫助其提高所得，並帶領小學生認識環境衛生教育，進行淨川工作。

推動永續教育的承諾

2021 年，本校校長於本校教學行政革新研討會中揭示，本校未來將以「SDGs」為核心理念，整合在地、國際、智慧、未來等要素，同時運用「AI 技術與雲端服務」做為創新的策略工具，以實現「共創大淡水，智慧大未來」的願景。同年 11 月向經濟部智慧財產局提出註冊商標申請，並開始積極推動相關措施。

2022 年 6 月 7 日與遠傳電信簽署「5G 元宇宙淨零碳排校園」MOU，在與臺灣微軟合作「全雲端智慧校園」的基礎上，持續推動數位轉型；同時成立永續發展與社會創新中心，下轄「淨零碳排」、「社會實踐」、「韌性治理」三個組，積極在全校推動聯合國永續發展目標。

2022 年起開設 AI 與永續「特色雙塔」課程，以「AI 與程式語言」及「探索永續」各 1 學分的課程，納入新生校訂必修課程，協助學生認識永續發展，並透過學習 AI 人工智慧，因應未來發展。在「永續治理」的理念下，以永續發展與社會創新中心作為樞紐，協力全校各學院，以涵育本校「永續力」教育為標，開設「探索永續」課程，引導學生經歷社會覺察（social awareness）、社會參與（social participation）及社會創新（social innovation）之過程，豐沛「探索素養」、「永續素養」兩大核心素養，希望在大學養成教育中，培養出邁向未來的永續公民。同時開辦全校性 AI 技術與雲端服務課程，推動全校師生創新轉型，加速加值實踐 SDGs。

校內永續課程

本校以永續發展目標為宗旨而開設之的課程包括：

1. 特色雙塔課程：2022 年起開設 AI 與永續「特色雙塔」課程，以「AI 與程式語言」及「探索永續」各 1 學分的課程，納入新生校訂必修課程，協助學生認識永續發展，並透過學習 AI 人工智慧，因應未來發展。在「永續治理」的理念下，以永續發展與社會創新中心作為樞紐，協力全校各學院，以涵育本校「永續力」教育為標，開設「探索永續」課程，引導學生經歷社會覺察（social awareness）、社會參與（social participation）及社會創新（social innovation）之過程，豐沛「探索素養」、「永續素養」兩大核心素養，希望在大學養成教育中，培養出邁向未來的永續公民。



2. 永續發展微學程：為提升學生對全球永續轉型重大議題的認知，思辨數位化變革下人與環境共存的挑戰，將永續目標融入專業知能，特設置「永續發展」微學程，開放所有學生選修。以主軸式議題串連三大領域中不同學門的通識課程，課程內容包括「海洋科技」、「人權與社會正義」、「環境倫理」等，奠定學生永續發展的知識涵養。

3. 各系所開設課程（必修或選修）：

(1) 土木系開設「低碳綠建築」課程，從低碳概念出發，探討綠建築內容與標章評估系統，以迄未來發展路徑探討。

(2) 建築系開設「永續建築」課程，教導建築系學生認識永續建築的意義、操作目標及設計方法。永續建築必須視為生態環境系統的一部分，透過設計，與自然界的音、光、熱、氣、水、資源、能源、營養等系統循環運行，除了滿足人類各式生活需求之外，同時達到低碳節能、健康安全與自然共生的發展目標。

(3) 機械系開設「能源工程(ENERGY ENGINEERING)」課程，介紹能源相關之基本科學原理，能源之應用及未來發展趨勢，非再生能源及再生能源概論，電力與動力系統簡介，能源的有效變換，能源管理，有效能源之解析與評估，能源之使用與環保問題。

(4) 航太系開設「綠色能源科技概論」，本課程從目前全球使用最多的化石燃料與核能談起，探討其對地球環境之衝擊與適時導入綠能之必要性。從最普及的風力與太陽能開始介紹，其後接續水力能，海洋能等等，並搭配相關綠能影片加深學生印象，分享能源轉型知識、闡述台灣永續綠能現況及發展。

(5) 2021 年本校 8 個學院及通識與核心課程中心，開設大學部 1,129 門、研究所 129 門，共計 1,258 門永續相關課程，選課學生共 60,417 人次，比 2020 年增開 700 多門課程，選課學生增加 3 萬人次，新開設課程包括「永續議題設計」、「建築與永續環境概論」、「永續運輸」、「創新智慧城鄉與永續發展」、「永續防災」、「歐洲永續發展與氣候變遷」、「環境變遷與永續發展」、「永續都市設計理論」、「永續能源發展與風險管理」等課程。

(6) 經濟系開設「勞動經濟學」致力於 SDGS1、4、5、8、17 的永續目標，從性別平等的議題、到尊嚴就業、再到如何建立夥伴關係，引導學生建立永續勞動市場的概念，並讓同學們對將來就業後所面臨的法規與政策能有全盤性了解，包括就業保障法規、基本工資、勞動歧視、及社會保險與福利，了解制度面的設計對永續經濟運作的影響力。每年共約 60 位學生修習此課程。

社區永續教育

本校為推廣永續發展目標，將 SDGs 的教育擴大到校園之外的範圍，針對社區提供與永續發展目標相關的教育活動，包括：

1. USR 計畫推動：本校有 3 項大學社會責任計畫持續進行，配合各計畫主持人及團隊老師的課程，帶領課堂學生進入社區，包含淡水、三芝至北海岸地區、宜蘭都是實施場域。深入了解社會所需資源及問題，針對問題設計解決方法與應用。各專業教師帶領學生運用所學專業，參與社區服務，共同為社區發展貢獻心力。相關活動包括：

(1) 淡水好生活計畫：透過將課程與學生帶到場域，邀請社區一起行動，進行「國際連結」、「環境改善」與「生活實驗室」等場域實踐模式，進行「有任務的學習」成果，包括「大淡水地區教學資源分享平台」、「SDGs 北淡環境議題聯盟」、「家鄉守護基地」、「經營一條城市文化遊廊」、「自導式文化參訪 4.0」、「小手大學問」、「2022 淡江構築」、「2022 國際鏈結工作」等 12 條路線。



(2) 食農教育：與在地農業合作，透過特別設計的微學分課程，讓學生透過農事體驗，加深對在地農業價值的認識；透過在地創生，提供希望回到家鄉創業的人們，有好的商品銷售和友善的環境，讓更多人選擇有機無毒的農產品。

(3) 淡蘭海陸輕旅遊：舉辦文史觀覽與海洋休閒、整合行銷與產業平台、品牌建構與新媒體增值、結合 A3 (AR、AI、APP) 之智慧觀光互動平台相關活動。包括走讀式導覽、演講、獨木舟課程、田野考察與影片拍攝、互動遊戲闖關活動。

2. 多媒體推廣：本校大傳系製播與 SDGs 發展相關節目，於淡江電視台官網、YouTube 頻道，以及淡江之聲 FM88.7 播放。

3. 教育性巡迴活動：科學教育中心與化學系聯手推廣科普教育活動「化學遊樂趣」，到台灣各地偏鄉的國中小學做化學實驗給學生看，希望能啟發學生對科學的興趣，課程會先讓學生了解活動的目標與方式，再讓學生親手參與活動的準備，並讓學生選擇親身參加活動的場次，最後回到學校做學習的反思。於 2021 年間於台灣各地舉辦共計 42 場化學遊樂趣活動，服務近萬名師生。

4. 專業知能服務學習課程：

(1) 經濟系與淡水區中小學合作舉辦半日營以及一日大學生活動，將永續發展議題帶入教學活動中，帶領中小學生體驗永續經濟，協助翻轉弱勢。



(2) 會計系開設「報稅輔導與服務」課程，修課學生應用所學之稅務知識，至財政部北區國稅局淡水稽徵所協助淡水居民報稅。「社會服務」課程與家扶基金會等單位合作，進行「濱海小學堂」計畫，陪伴偏遠地區之弱勢小學生每周定期視訊閱讀。

(3) 教科系每學年開設一門「專業知能服務學習」課程，由專業教師帶領學生進入非營利組織服務，構思如何運用教育科技的專業以及成人學習的理論來協助規劃成人之學習需求，設計與提供他們所需要的服務。

5. 講座與展演活動：

(1) 通識與核心課程中心舉辦「百年古蹟教堂走讀速寫」，透過走讀方式帶領師生與當地居民進行在地行旅，從古蹟與建築認識在地文化。

(2) 通識與核心課程中心舉辦 2 場「淡江台大舞樂共創 X 猴硐礦工生命奇遇成果展演《返照》」，開放校外人士參加，其中 1 場於瑞芳區猴硐煤礦博物園區整煤廠與猴硐礦工文史館合作成果展。由同學們在礦業核心生產場域裡演出，邀請在地礦工前輩們及民眾觀賞；師生用展演傳達感動的力量，真切地傳承與永續礦工文化，為社會盡一份心力。

