



SUSTAINABILITY REPORT  
TAMKANG UNIVERSITY

2021



17 PARTNERSHIPS  
FOR THE GOALS 

TAMKANG UNIVERSITY

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# 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.



## Relationships with regional NGOs and government for SDG policy

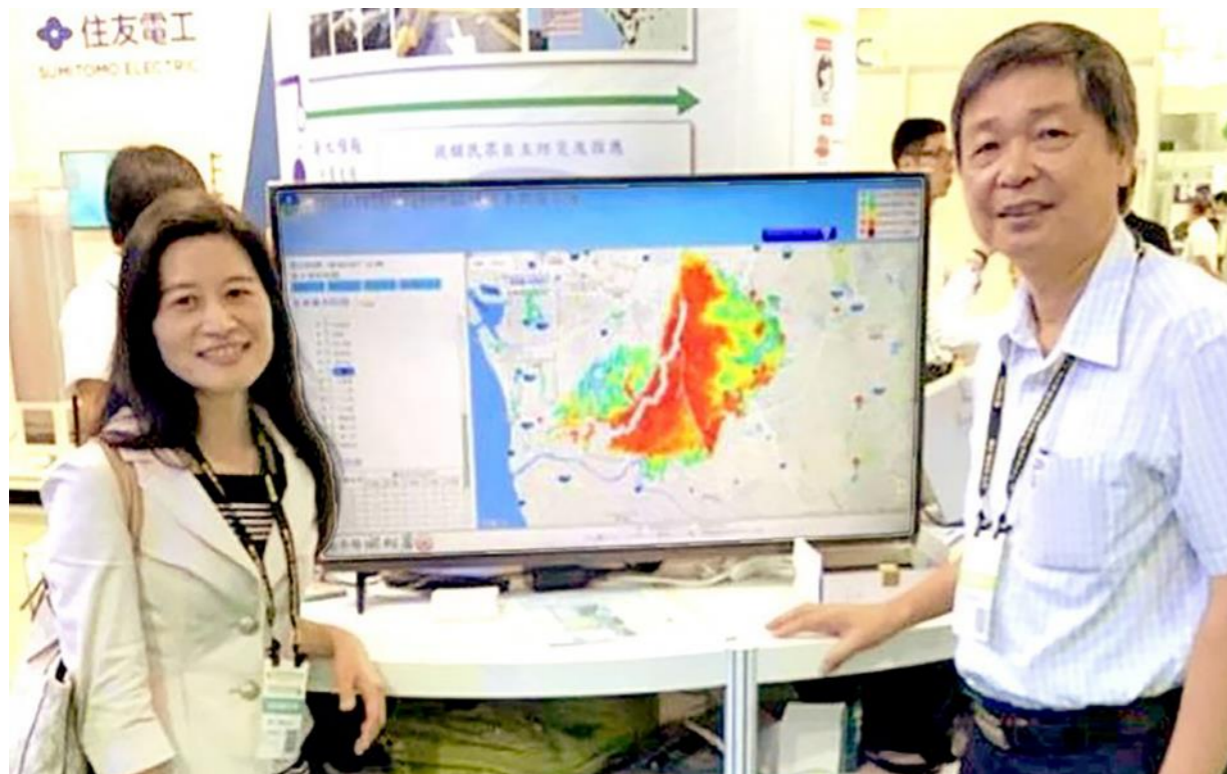
### 1. Collaboration with government

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:

- 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 Graduate Institute of European Studies served as members in governmental units such as National Library, Institute for Information Industry, Ministry of Finance, Ministry of Education, and promoted the professional courses for Climate Development.



- 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
- Teachers from the Department of Mass Communication undertake the professional service case entrusted by the local creation planning of Tamsui District, New Taipei City, hold a consensus meeting on local creation, and hold a briefing session for the Danshui District proposal to the New Taipei City Research and Examination Association and other relevant bureaus, so as to facilitate the follow-up proposal work.
- In partnership with New Taipei City and Taiwan Art Revitalization Foundation, TKU presented a proposal--Crown Northern Coast : the Placemaking Project of Mountain, Ocean, and River-- for future city planning and construction.

### 2. Collaboration with domestic 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.
- 2021, TKU joined the alliance for the “Talent, in Taiwan” campaign initiated by the CommonWealth Magazine and the Cheers Magazine, signing the declaration of action to create a “Good Jobs” working environment through advocacy, combining the strength of the government and enterprises, and promote the sustainable development of talents in Taiwan.
- In collaboration with local agritourism associations, restaurants, and hotels, teachers from the Department of Mass Communications executed a project of “Establishing a Tamsui e-commerce platform ecosystem: promoting new marketing technology for village placemaking marketing” to promote local agritourism.

## Cross sectoral dialogue about SDGs

In 2021, Tamkang University continuously initiated and participated in cross-sectoral dialogue about SDGs, including:

1. Signed an MOU with Taiwan Institute for Sustainable Energy (TAISE) and jointly held the “2021 University Sustainable Development Goals and Industry Development Workshop” to raise public awareness and understanding of SDGs and to demonstrate the link between SDGs,

ESG, and USR through the forums, keynote speech and experience exchange.

2. Signed an MOU with Taiwan Art Revitalization Foundation to collaborate and promote placemaking for northern Taiwan.

3. Held the “SIG Water Resource Forum” to jointly discuss SDGs in Tamsui with the schools and village offices in Tamsui and ECC School, an NGO from Cambodia. Topics such as coast pollution, the cycle of water resources, and international status are covered and shared with participants’ experiences and achievements.

4. Held the “Linzih River Field Workshop” to initiate cross-sectoral communication for water resource preservation of the Linzih River.

5. The Department of Public Administration and Fudan University in Shanghai jointly held an online conference on December 17, 2021, to explore the linkage between natural disasters and public services through the example cases of government plans and management.

6. In collaboration with land developers, the College of Artificial Innovative Intelligence drew a blueprint to integrate industrial and college research energy to build Tamsui into an international and intelligent city.

## 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 and another two in 2021.

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. The research team led by the Department of Water Resources and Environmental Engineering of TKU teamed up with the National Taiwan University in advancing the Typhoon-Related Flood Forecasts System, using AI technology to predict flood patterns two days in advance based on projected typhoon tracking, significantly enhancing the timing accuracy of flood warning, as well as the effectiveness of reservoir flood control and integrated water resources management. This study was published in the internationally-renowned journal, Nature Communications. The team also cooperated with the Malaysian government to assist Malaysia in building a regional flood forecasting system.

5. 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.

## Collaboration for SDG best practice

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 and another two in 2021.

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ment to assist Malaysia in building a regional flood forecasting system.

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 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.

## Collaboration 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.

- Voluntary service teams: Students of volunteering service groups will visit remote towns and the countryside to pro-

vide tuition and extracurricular activities for the children during the winter and summer vacations.

- Cambodia service-learning team: Led by teachers from the Department of Economics, 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.
- Other volunteering programs: Students from the Department of Mass Communication assists local NGOs in preparing creative marketing proposal; students from the Department of Global Politics and Economics assists human rights organizations in advocating issues on human rights; the Department of International Tourism Management assists local communities in promoting local features activities; the Department of Educational Technology assists local NGOs in web-

site establishment and digital material production.

### 2. Research programs

- The team from the Department of Water Resources and Environmental Engineering has been undertaking a project with subsidy from the Ministry of Education to develop the R & D of high-value ceramic filter membranes made from waste incineration ashes. This research helps in enhancing industrial wastewater treatment technology and water pollution control.
- Eco-friendly Treatment for agricultural waste and kitchen waste: Monster Environmental Co. Ltd, one of the many startups supported by the Champion Incubator Center of TKU, developed a BSF-Bio System that helps to turn food waste into a resource. The team has recently been invited to participate in the 2022 SDGs International Forum held by the CommonWealth Magazine to present their achievement.

### 3. Development of educational resources

- 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 program 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.

## Publication of SDG reports

Since 2019, TKU has issued an overall sustainability report every year. In 2020, in addition to the overall report, TKU also issued reports on 7 SDGs respectively, which are : 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 2021, an overall sustainability report on 17 SDGs and seven separate reports on SDG4, SDG6, SDG7, SDG8, SDG11, SDG12, and SDG17 have been issued to reveal and demonstrate the university's sustainable practices on-campus environment, social practice participation, and school governance for public references.

## 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 root-



ed 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 Technology," 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 volunteering 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.

## Commitment to meaningful education around SDGs

To continuously facilitate the education around the SDGs across the university so that students have a broad and in-depth understanding of sustainable development, the school has the following related practices in curriculum design and arrangement:

### 1. Required courses:

- Learning in University: TKU requires the freshman to participate in the “Learning in University courses” to build essential comprehension of “university” and have the fundamental capabilities as an undergraduate. One of the courses titled “Creating a great Tamsui”-the USR project sharing” adapted the concept of a scavenger hunt which leads participants to discover the beauty and historical significance of Tamsui.
- General Education: The university has newly planned the course of "Exploring Sustainability" and "AI Learning" that will be required courses for freshmen starting from 2022.

### 2. Micro-program of SDGs:

TKU has set up a micro-program of SDGs open to students of all grades to study. This program provides SDGs-related training and knowledge such as “Environmental Eth-

ics,” “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.

### Courses on sustainability

1. Common core education for freshmen

- Learning in University program: TKU requires the freshman to participate in the “Learning in University courses” to build essential comprehension of “university” and have the fundamental capabilities as an undergraduate. One of the courses titled ““Creating a great Tamsui”-the USR project sharing” adapted the concept of a scavenger hunt which leads participants to discover the beauty and historical significance of Tamsui.
- General Education: The university has newly planned the course "Exploring Sustainability" and "AI Learning" which

will be required courses for freshmen starting in 2022.

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.

In 2021, a total of 1,258 SDGs-related courses are opened, which is 700 more than the total number in 2020. The number of students taking SDGs-related courses has reached 60,417, which is 30 thousand more compared to 2020. The newly opened courses include “Sustainable Transportation,” “Smart Township and Sustainable Development,” “Sustainable Disaster Prevention,” and “Sustainable Energy Development and Risk Management.”

### Education for SDGs in the wider community

1. Through USR projects

- The USR project teams organize events and activities integrated with classroom teaching, expanding the practice field to local communities and Northern Taiwan, so that the students can gain deeper awareness about the issues in community development and the resources needed, searching for solutions and applications accordingly. Relative activities include:
- 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).
- Learning-oriented urban and rural construction: The USR team organizes outreach educational activities such as field-study training, watershed course workshops, beach cleaning, and artisan mom crafts online showcase to enhance collaboration in local communities.



## 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.

## 2. 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, hop-

ing 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 voluntary students' group from the Department of Economics provides several sustainable economic education in

2021 to help the disadvantaged from remote villages find a way out of poverty.

- The Department of Accounting has a course titled "Tax filing consultancy and service" which takes students to assist taxpayers in tax filing at local revenue agencies. Another course titled "Social Service" encourages students to provide online tuition for children from primary schools and disadvantaged families of remote villages at the seashore in Northern Taiwan.
- The Department of Education and Future Design opens service-learning courses leading students to collaborate with NGOs and conceive methods and services for adult learning by adapting the

education technology profession and the theory of adult learning they have learned from class.

## 5. Through lectures and activities

- The Center of General Education and Core Curriculum and the library jointly held the "Sexuality Equality" campaign and provided six lectures and activities on gender equality in March 2021.
- The TEDxTKU invited the Executive Director of Taiwan Labor and Social Policy Research to give a keynote speech titled "The Dilemma and The Way-outs for Youth in Poverty."







# 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 2021 年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。2021 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。

### 參與區域性非政府及政府組織之 SDG 政策制定

在 2021 年，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. 文學院中文系老師 2021 年 8 月 24 日至 2022 年 7 月 31 日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。
2. 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。

3. 國際學院歐研所教師擔任國家圖書館學科專家、資策會「網域名稱爭議處理」委員、財政部關務署「台北關複查委員會」外部委員、財政部法案諮詢專家學者、教育部「教學實踐研究計畫」審查委員等，並協助清大國際產學營運總中心舉辦「永續淨零技術論壇技術海報展」，推動台北市商業會商業氣候發展師專業課程，參與「111年度產業園區產業輔導創新計畫」及「平鎮產業園區專案輔導計畫」。
4. 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。
5. 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。
6. 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。
7. 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。
8. 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」，作為後續市政設計畫的落實。

本校與國內非政府組織合作，一起參與制定永續發展目標政策，重點摘要如下：

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，就大專校院節能減碳與實踐 SDGs 的議題，持續發揮影響力。
2. 2021 年，本校參加天下學習事業群與 Cheers 雜誌發起之「2022 TALENT, in Taiwan 台灣人才永續行動聯盟」，簽署行動宣言，加入聯盟，透過倡議與結合政府、企業力量，一起打造「Good Jobs」的工作環境，推動台灣人才永續發展。
3. 文學院大傳系教師執行「建立淡水電商平台生態系-推動農村創生行銷新科技」之重點計畫，與滬尾休閒農業園區協會、福容飯店（漁人碼頭店）進行農產學合作。



## 跨國跨部門對話

本校於 2021 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. 本校與財團法人台灣永續能源研究基金會簽立 MOU，於 2021 年 9 月舉辦「2021 大學永續發展目標與產業發展交流工作坊」，透過論壇演講及交流活動，讓本校及社會人員更深入瞭解聯合國永續發展目標（SDGs）、ESG、大學社會責任（USR）之鏈結性，開創產學合作推廣機會。
2. 本校與台灣藝術創生文化基金會簽訂 MOU，結合北台灣地方創生經驗，協助在地青年推動地方創生。
3. 2021 年 7 月 29 日舉辦「SIG 水資源論壇」，共商大淡水地區永續議題，聯合淡水地區數所大學及中小學、鄉里辦公室，以及柬埔寨非政府組織 ECC School，以水資源為主題，討論海岸污染、山海之間、水的循環、國際場域四個議題，安排九場演講，進行經驗分享與成果報告。
4. 2021 年本校透過 USR「淡水好生活學習型城鄉建構計畫」，舉辦多次跨部門對話，其中，於 12 月 4 日在淡水程氏古厝舉行一系列活動，包含由建築系教授帶領同學透過田野調查而發想的「公司田溪田野工作坊」，發表包括「水岸生活指南」、「水

質過濾救生態」、「慢生活的可能性」、「疫後生活新想像」及「經典淡水公司田溪」等地創生企劃案成果，並邀請溪流巡航環境藝術師分享自己透過雕塑藝術方式呈現公司田溪人文生態的故事，透過展演流域環境的關注議題瞭解公司田溪流域的現況，期望更多人加入守護公司田溪的行列。

- 2021年12月17日，公行系與上海復旦大學國際關係與公共事務學院合作舉行線上會議「臺北上海公共管理論壇：數位治理與智慧城市研討會」，以政府機構的規劃與治理層面切入，將自然災害與公共服務串聯在一起，引介智慧臺北的相關推動案例，建立起高效能城市管理的標竿學習對象，並進而達到以市民參與為主的智慧城市與創新城市之目標。
- 本校 AI 創智學院與宏泰集團、宏盛建設洽談智慧城市合作，以大學結合在地企業能量，營造在地特色，將以地方創生 (Placemaking) 為基礎，以建構智慧建築 (Smart Building) 到智慧城市 (Smart City)，並將淡水打造為國際雙語智慧城市的願景。

## 國際合作收集 SDGs 相關數據

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：

- 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 年已有 4 篇跨國合作之論文。2021 年再增加 2 篇跨國合作之論文。
- 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帕金森症之研究。
- 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。
- 水資源及環境工程學系教師及團隊 (水環境資訊研究中心) 建置「智慧城市淹水預報系統」，運用物聯網即時監測資料，結合時序性淹水預報模式，再透過實際降雨事件驗證模式修正，在水患爆發前提早預警。該團隊國立台灣大學組成研究團隊，結合氣象局颱風路徑大數據，利用 AI 技術預測集水區降雨量，可提前兩天提供水庫管理中心以利於水庫調節性放水決策參考，相關研究以〈Self-organizing maps of typhoon tracks allow for flood forecasts up to two days in advance〉為題，發表於 2020



年《自然通訊》第 11 卷 (Nature Communications volume 11, Article number:1983 (2020))。該團隊並透過台灣水文資訊學會與馬來西亞政府合作，以技術輸出方式，協助馬來西亞建置區域淹水預報系統。

- 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。

## 與非政府組織合作

- 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：
  - 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。
  - 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。
- (4) 其他：大傳系學生協助非營利組織提出創意設會行銷提案、企管系學生協助社區弱勢學童手做木盒與策展成果、政經系學生協助人權組織推動我國人權議題、觀光系學生與社區組織合作推動在地特色活動、教科系學生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) 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。

- (3) 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。

## 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。

2021 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

本校為持續在全校推展與永續發展目標相關的教育，使學生對永續發展有廣泛且深入的認識，在課程設計與安排上，有以下相關作法：

1. 必修課程：「大學學習課程：共創大淡水之 USR 課程分享」採走讀闖關等遊戲方式，帶領學生認識淡水環境及歷史的演變，為新生必修課程；另外，2021 年策劃「特色雙塔」課程，將「探索永續」及「AI 學習」納入下個學年度起的新生校訂必修課程，協助學生認識永續發展，透過學習 AI 人工智慧，因應未來發展。
2. 通識教育：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，本校通識與核心課程中心特設置「永續發展」微學程，開放所有學生選修。以主軸式議題串連「人文」、「社會」、「科學」三大領域中的永續發展目標與實踐方法，奠定學生永續發展的知識涵養。
3. 各學院開設課程：學校鼓勵各學院依各專業領域，開設多元且不同面向，與永續教育相關的課程。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。

## 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. 新生必修課程
  - (1) 大學學習課程：為協助新生為「學業」、「心理」、「社會」及「生涯發展」等 4 個面向做好準備，本校整合全校資源，開設必修「大學學習」套裝課程，其中由本校 USR 實踐計畫推動之「共創大淡水之 USR 課程分享」，採走讀闖關等遊戲方式，帶領學生認識淡水環境及歷史的演變。
  - (2) 特色雙塔課程：於 2021 年策劃「特色雙塔」課程，將「探索永續」及「AI 學習」納入下個學年度起的新生校訂必修課程，協助學生認識永續發展，透過學習 AI 人工智慧，因應未來發展。

## 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）：

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。

## 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：2021 年，本校有 7 個大學社會責任計畫進行，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。相關活動包括：
  - (1) 食農教育：與在地茶農合作，進行茶文化交流，探索未來發展的可能性；結合有機農園推廣與社區服務學習的農場體驗活動。
  - (2) 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、品牌建構與新媒體加值、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。
  - (3) 學習型城鄉建構：舉辦田野調查培訓、流域課程工作坊、職人媽媽永續手作線上體驗課程、淨灘行動。
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：2021 年 1 月 19-23 日 嘉義永安國小偏鄉助學，將永續發展議題帶入教學活動中，協助翻轉貧窮、2022 年 4 月 7 日於板橋高中進行經濟永續教育、2022 年 4 月 19 於海山高中進行經濟永續教育、2021 年 11 月 17 日於板橋高中進行經濟永續教育、2021 年 12 月 28 日於中和高中進行經濟永續教育

(2) 會計系：「報稅輔導與服務」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與覺生紀念圖書館聯合舉辦「性別平等」展演活動，自 3 月 15 至 26 日安排 6 場「性別平等系列講座」，每場講座連結至不同的性平主題，邀請到涵蓋「哲學與宗教」、「全球科技革命」、「藝術欣賞與創作」、「自然科學」及「社會分析」等學門領域的講者進行分享，開放校外人士參與。

(2) TEDxTKU 工作坊，12 月 18 日以「最長的捷徑 Longest Shortcut」為主題，舉辦演講、展板互動、遊戲關卡等活動，並邀請台灣勞動與社會政策研究協會執行長張烽益演講「青年貧窮的困境與出路」，解析青年貧窮的發展脈絡與社會現象，並分享青年如何從自身做起改善現況。

