



**SKKU**

**SUSTAINABILITY REPORT 2024**

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## FOREWORD

Sungkyunkwan University (SKKU) is deeply committed to addressing the United Nations' Sustainable Development Goals (SDGs) through continuous research and innovation. The university actively promotes the 17 SDGs through a multifaceted approach that encompasses interdisciplinary research, community engagement, university–industry collaboration, and international participation. SKKU has established the Environment, Social, Governance program, aimed at tackling the most pressing global challenges for humanity. In 2023, SKKU was recognized when it was selected as the UNESCO Chair for the Promotion of Sustainable Energy Systems and Clean Environment. SKKU is the first university in Korea to be awarded the **Silver rating** in the Educational Organization ESG evaluation KPCQA.



# About Sungkyunkwan University (SKKU)

SKKU is a private, research-oriented university boasting 626 years of rich historical legacy. Established in 1398, SKKU stands as South Korea's premier private educational institution and Asia's oldest university. SKKU seamlessly blends the past, present, and future through a unique balance of tradition and cutting-edge innovation.

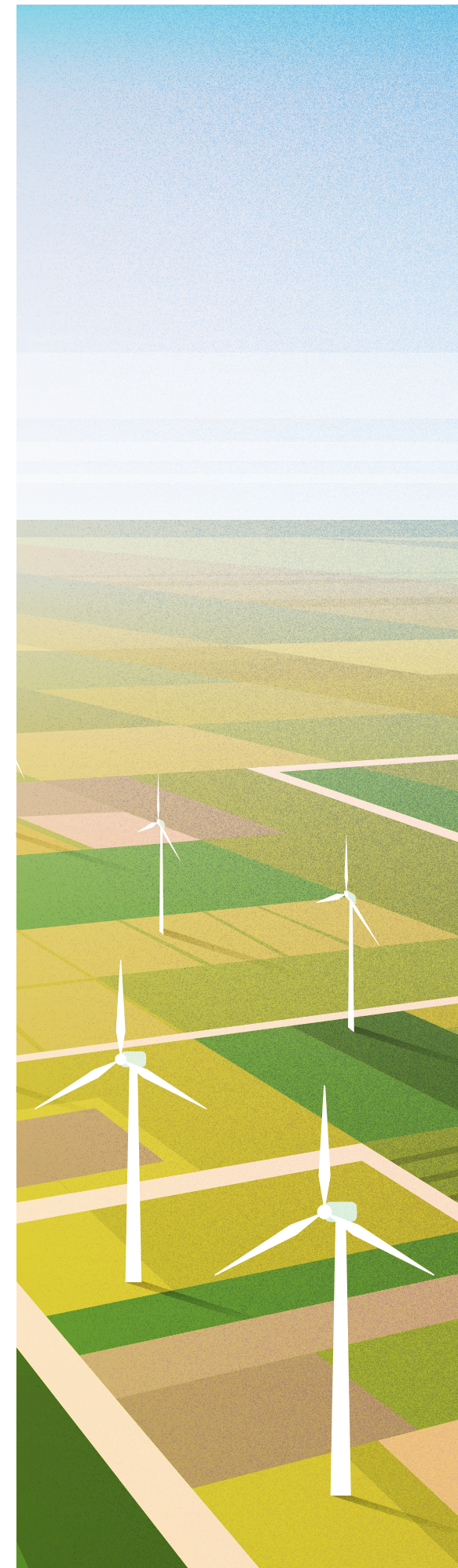
The university is dedicated to fostering global leaders who can contribute to sustainable development and address the world's most important challenges. With a strong focus on environmental, social, and governance issues, SKKU is committed to driving progress towards a more equitable and sustainable future.



## SKKU ESG Management Vision

SKKU, with its long-standing history and tradition, proclaims a new vision for a sustainable future by actively incorporating its founding principles of 인의예지 (仁義禮智)—Benevolence, Righteousness, Propriety, and Wisdom—and the educational philosophy of 수기치인 (修己治人)—Developing the self and guiding others, self-cultivating and people-governing, leading others by taking initiatives—into its ESG (Environmental, Social, and Governance) management strategy.

This vision encompasses education and research, campus operations, community and global collaborations, as well as administrative and financial management, while striving to enhance the welfare and happiness of all its members. Based on this vision, we aim to promote sustainable university operations through the voluntary participation of all members.



## About Sustainable Development Goals

In 2015, 195 nations agreed with the United Nations to change the world for the better. At the heart of this initiative are the 17 sustainable development goals (SDGs), which represent an urgent call to action for all countries to act against global social and economic inequalities while safeguarding the environment. Covering a wide range of global issues, including poverty, hunger, inequality, climate change, environmental degradation, and peace and justice, the SDGs underscore the importance of unified action.

Only by working together can these issues be resolved, paving the way for a sustainable future for all.



SKKU AT A GLANCE



Partnered with **SAMSUNG**

SKKU HISTORY



SKKU is a world-class center of higher education with over six centuries of tradition and excellence. Since its founding at the dawn of the Joseon Dynasty (1392–1910), SKKU has produced countless graduates that have influenced Korea’s development and history. Contemporary SKKU has embraced globalization and emerged as a leading university in Asia and the world, due in no small part to its close partnership with Samsung. SKKU actively encourages global research and collaboration through the academic exchange of students and faculty as well as the development of innovative research and education programs with its global partners.

BRIEF TIMELINE

- 1398 Sungkyunkwan founded
- 1895 Sungkyunkwan reformed into three-year institution
- 1946 Reorganized into Sungkyunkwan College
- 1953 Graduate School opened
- 1978 Natural Sciences Campus opened
- 1996 Samsung joins the University Foundation
- 1997 School of Medicine and SKK GSB established
- 1998 600<sup>th</sup> anniversary
- 2005 Foundation of University College
- 2010 Vision2020 Proclamation Asia Top 10, Global Top 50
- 2013 Foundation of SKKU Institute for Convergence
- 2021 Vision2030 Proclamation The Global Leader, SKKU

RANKINGS AND REPUTATION

**1<sup>st</sup>**

MBA in Korea for 13 consecutive years (Financial Times)

**FT**

**102<sup>nd</sup>**

THE World University Rankings 2025 (#1 Private University in South Korea)

**THE**

**123<sup>rd</sup>**

QS World University Rankings 2025

**QS**

**SKKU’S CONTRIBUTION IN ATTAINING SDGs**

**THE IMPACT RANKINGS**

**1** NO POVERTY Top **97** in the world

**7** AFFORDABLE AND CLEAN ENERGY Top **95** in the world

**9** INDUSTRY, INNOVATION AND INFRASTRUCTURE Top **40** in the world

SKKU ESG



**SKKU ESG COURSES**

- Global Leadership and Sustainability
- Technology, Society and Sustainability
- Diversity and Inclusive Governance
- Climate Change: Science, Technology, and Policy
- Circular Economy
- ESG Management

The UNESCO Chair for the Promotion of Sustainable Energy System and Clean Environment established at SKKU with the scope of UNESCO’s Renewable and Alternative Energies Programme is aimed at promoting the development of new technologies and paradigms around energy and environment with a view of supporting member states to achieve SDGs.

By contributing to the ESG, SKKU can help tackle the most pressing global challenges facing humanity and the world.

In 2022, SKKU launched an intercollegiate ESG committee to oversee and enact campus ESG policies. Various ESG-related courses such as ESG Management, Technology, Society and Sustainability, and Climate Change have been provided to enhance the understanding and collaboration of all members, and in 2023, the university was selected as the first UNESCO Chair in the engineering field in South Korea.



First university in Korea to receive ESG certification from an official institution

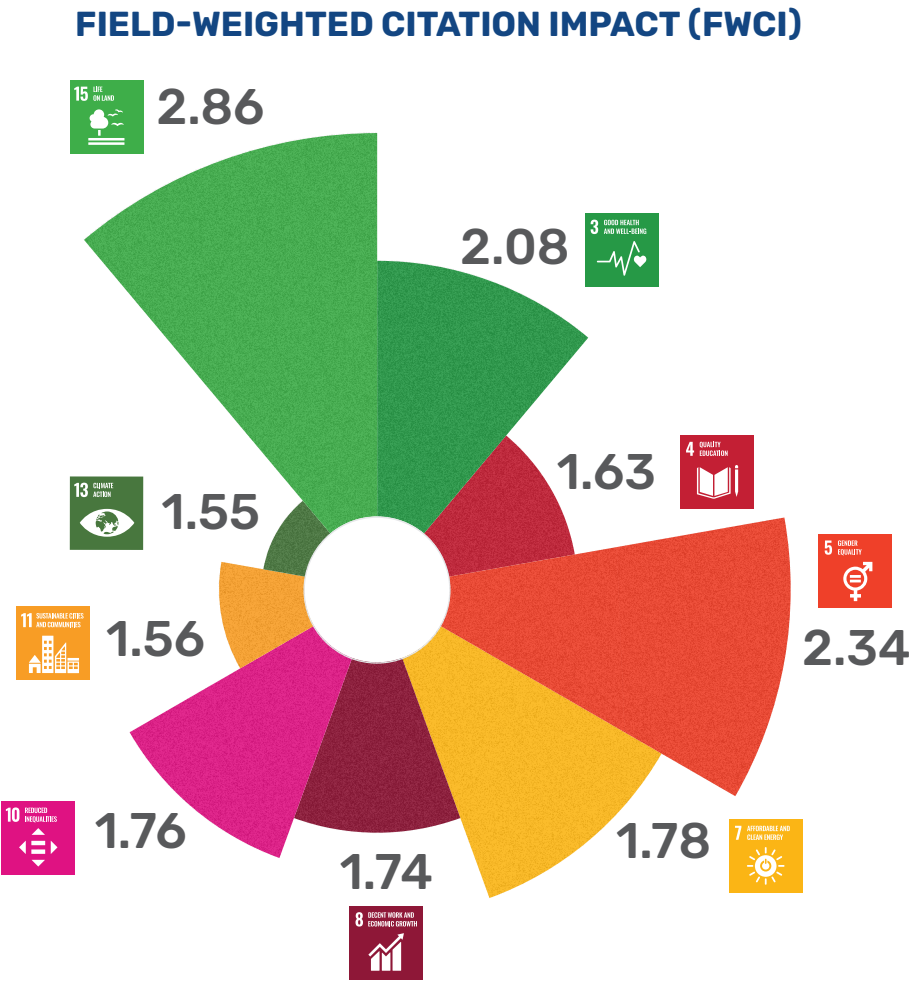


SKKU achieves **“Silver” rating** in the Educational Organization ESG Evaluation KPCQA (Korea Productivity Center Quality Assurance)



UNESCO Chair for Sustainable Energy System and Clean Environment (2023–2026)

SKKU ESG



NUMBER OF CITATIONS



Source: Elsevier SciVal SDGs (2019 to 2023)





TO END POVERTY IN ALL ITS FORMS EVERYWHERE.

SKKU has dedicated 308 billion KRW scholarships over a five-year period, supporting around one-third of its enrolled students through this extensive program.



SKKU INITIATIVES

Scholarship and Student Support

SKKU Scholarship Funding

58.6 billion 810 billion

KRW in total amount of scholarships (2022) KRW in total education expenses (2022)



Government Funding for Student Support

SKKU has secured the highest funding among domestic universities, receiving major support from the Korean government for programs, such as Brain Korea Four (BK21), the University Innovation Support Project, and the Leaders in Industry-University Cooperation Grant (LINC 3.0).

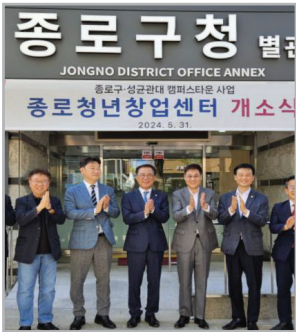


Over the past five years, the University received 232 billion KRW to support education, research, and scholarships.

Local Start-Up Assistance for Community

Campus Town Initiative

The “Campus Town” initiative fosters a vibrant ecosystem for youth-led startups through partnerships with neighboring communities such as Seoul and Jongno-gu. This initiative generates employment opportunities.



Entrepreneurship Support

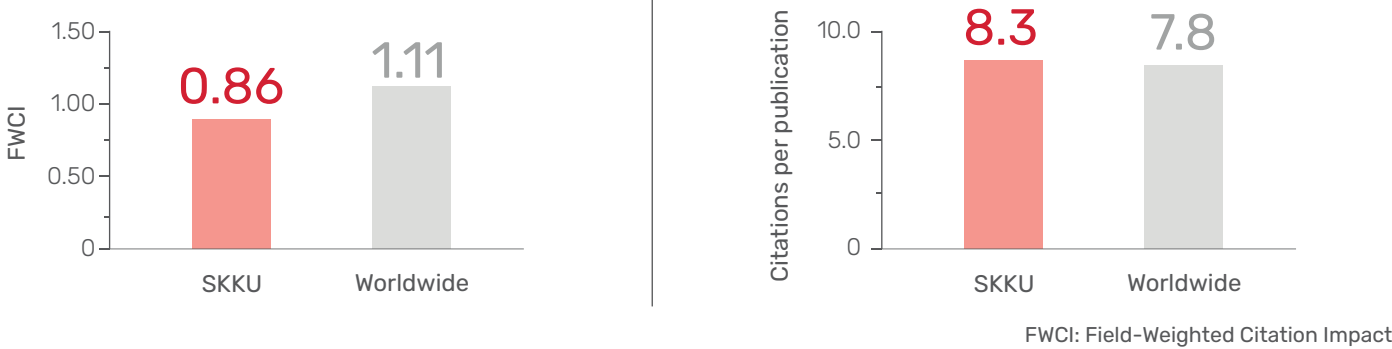
Resources:	Courses:
90	160
dedicated personnel	start-up-related courses
7,207	10,000+
sq. meters of workspace	students benefitted

National Leadership in Startup Support

SKKU ranks second in the nation for sales per startup and third for the number of employees per startup, showcasing the success of its student entrepreneurs.

In 2024, the University received 637 million KRW in tuition fees and 14.8 billion KRW from the government and local entities for startup support.

SKKU Research on SDG 01



FWCI: Field-Weighted Citation Impact



SKKU Outstanding Publication on SDG 01

Professor Eun Jin Shin, Department of Public Administration  
Neighborhood Distribution of Unsheltered Homelessness and its Temporal Changes: Evidence from Los Angeles

Urban Affairs Review | [10.1177/10780874211059990](https://doi.org/10.1177/10780874211059990)





TO END HUNGER, ACHIEVE FOOD SECURITY AND IMPROVED NUTRITION AND PROMOTE SUSTAINABLE AGRICULTURE.

SKKU is taking steps to address food insecurity on campus by ensuring access to affordable meals and promoting sustainable food practices. These efforts aim to create a more inclusive and environmentally conscious campus community.



SKKU INITIATIVES

One Thousand Won Breakfast (namely \$1 breakfast) to Combat Student Food Insecurity

SKKU recognized the risk of food insecurity among its students, which is marked by limited access to affordable and nutritious food, and implemented a proactive response. In 2017, the University launched the “One Thousand Won Breakfast” (namely \$1 breakfast) program to tackle this critical issue. The initiative aimed to promote a routine of daily breakfast consumption and encourage healthier dietary choices among students. Notably, the program provided breakfast at a subsidized cost of 1,000 Won (less than 1 USD) for students who often skipped breakfast. Since its inception, the program has experienced significant growth, with over 2,000 participants and an endowment totaling 1 billion KRW.

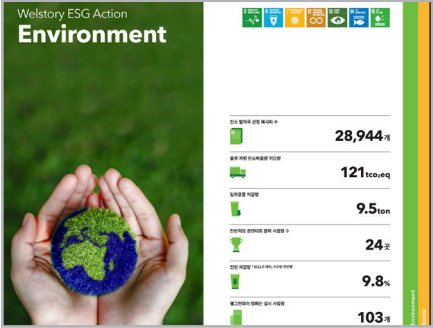


Research and Innovation

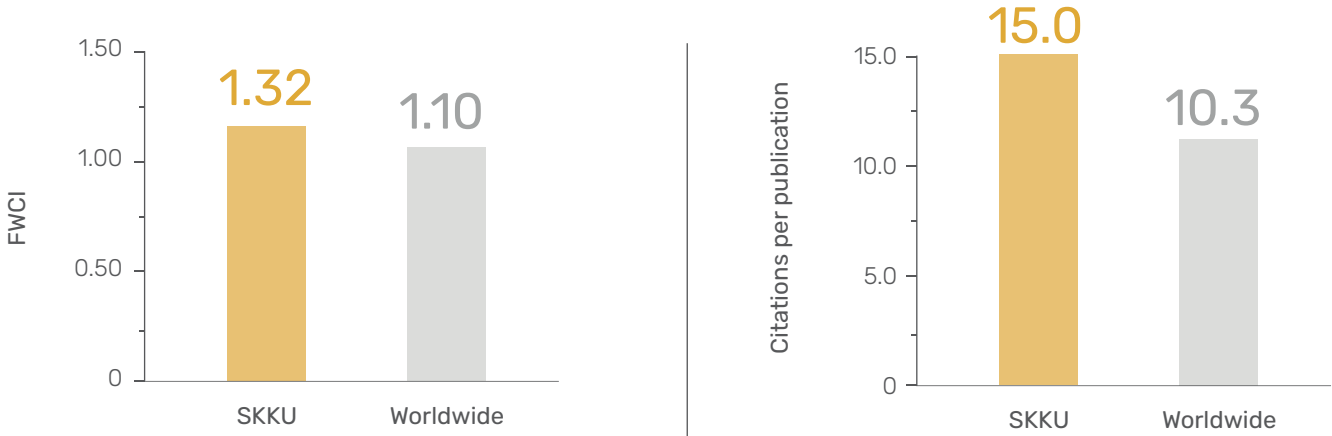
In 2023, Professor Hwa-Seon Lim from the Department of Life Sciences received the Minister of Agriculture, Food, and Rural Affairs Award at the 26<sup>th</sup> Agriculture, Forestry, Livestock, and Fisheries Science and Technology Awards. This prestigious award has recognized exceptional contributions to these sectors through technological innovation since 1998. Professor Lim’s research focuses on developing substances that improve the productivity and quality of pigs and chickens, along with establishing an environmental hazard assessment system. His work has set a new benchmark for sustainable livestock management and elevated the industry’s value-added potential.

Sustainable Food on Campus

SKKU has partnered with Samsung Welstory, a leading Korean food service provider, to provide sustainable, healthy, and affordable food options for the campus community. This collaboration underscores the University’s commitment to environmentally friendly practices. Samsung Welstory is recognized for its dedication to sustainability, working with local farms for ESG management, utilizing eco-friendly packaging, and reducing food waste. By outsourcing food services to the Samsung Welstory, SKKU strengthens its efforts to promote sustainable food choices across campus.



SKKU Research on SDG 02



FWCI: Field-Weighted Citation Impact



SKKU Outstanding Publication on SDG 02

Professor Tae-Young Pak, Department of Consumer Science  
Association of Food Insecurity With Allostatic Load Among Older Adults in the US

JAMA Network Open | [10.1001/jamanetworkopen.2021.37503](https://doi.org/10.1001/jamanetworkopen.2021.37503)



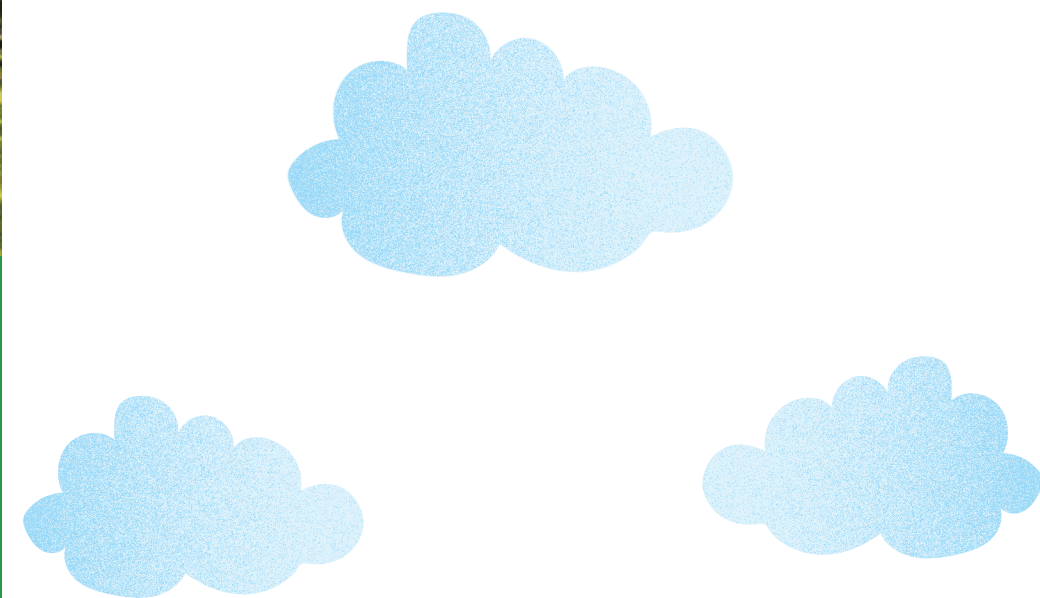


### 3 GOOD HEALTH AND WELL-BEING



## TO ENSURE HEALTHY LIVES AND PROMOTE WELL-BEING FOR ALL AT ALL AGES.

SKKU's partner hospital, Samsung Medical Center ranked 3<sup>rd</sup> among Newsweek's World's Best Specialized Hospitals in 2025—Oncology, maintaining its position as the top hospital in Asia for three consecutive years.



## SKKU INITIATIVES

### Samsung Medical Center Ranks Asia's Top Specialized Hospital in Oncology

Samsung Medical Center (SMC) has been ranked third globally in cancer treatment by Newsweek in its 2025 evaluation of the world's best-specialized hospitals—oncology. This marks a two-spot rise from last year's fifth place, placing SMC behind the MD Anderson Cancer Center and Memorial Sloan Kettering Cancer Center. Considering these top two institutions specialize solely in cancer treatment, SMC's position effectively makes it the world's leading general hospital for cancer care. The hospital also highlighted its achievement in surpassing renowned institutions like the Mayo Clinic in this field.

Additionally, SMC ranked first domestically in respiratory disease treatment for two consecutive years and entered the global top 10 in gastroenterology (6<sup>th</sup>) and urology (9<sup>th</sup>).



### Samsung Medical Center Ranks as Korea's Top Smart Hospital

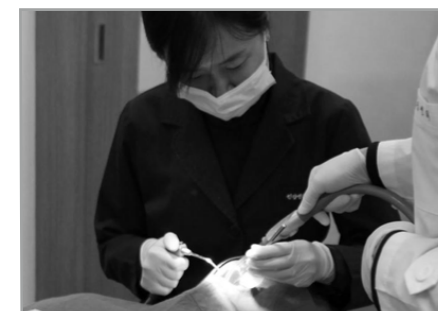
Newsweek, in collaboration with Statista, has released its 2024 rankings of the world's 330 best smart hospitals. The Mayo Clinic tops the list, while Samsung Medical Center ranks 25<sup>th</sup> overall, making it the leading smart hospital in South Korea for four consecutive years. Seoul National University Hospital follows at 55<sup>th</sup>.

This evaluation, the third of its kind, considers criteria such as electronic functionalities, telemedicine, digital imaging with virtual and augmented reality, AI in data analysis, and robotic surgery advancements. Rankings are based on expert recommendations and a rigorous validation process.

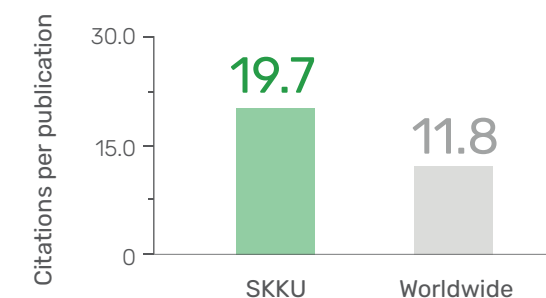
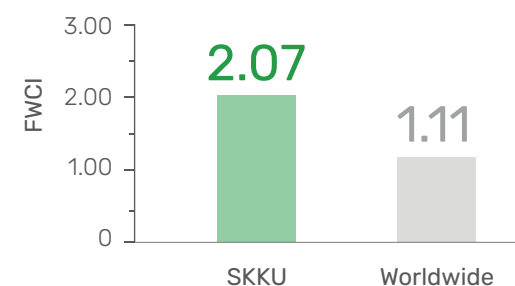
### Health Service and Mental Health Support on Campus

The Health Care Center, established in 1962, offers services like medical treatment, specialist referrals, health counseling, student exams, obesity management, and sanitation education. It also includes an obstetrics and gynecology department providing preventive education and menstrual health counseling.

The Counseling Center, founded in 1964, focuses on mental health support, offering individual and group counseling, psychological testing, and workshops across both university campuses. A recent partnership with the Seoul City Youth Mental Health Center aims to improve early detection and treatment of mental health issues through a collaboration with Maumhada, enhancing support for high-risk students.



## SKKU Research on SDG 03



FWCI: Field-Weighted Citation Impact



### SKKU Outstanding Publication on SDG 03

**Professor Ho Yeong Lim**, School of Medicine

Atezolizumab Plus Bevacizumab in Unresectable Hepatocellular Carcinoma

New England Journal of Medicine | [10.1056/NEJMoa1915745](https://doi.org/10.1056/NEJMoa1915745)





## ENSURING EQUITABLE QUALITY EDUCATION AND PROMOTING LIFELONG LEARNING OPPORTUNITIES FOR ALL.

SKKU is leading the way in global and local community outreach activities to promote equitable quality education and lifelong learning opportunities for all.



## SKKU INITIATIVES

### Education Outreach Activities Beyond Campus

ICT personnel from Korea volunteer in developing nations to bridge the digital divide through education and project implementation. The project showcases Korea's ICT expertise and fosters empathy through collaboration with local communities. SKKU students participated in the project in Thailand, providing hands-on training and donating equipment to a school.



### Lifelong Learning With Community

The College of Education, SKKU, partnered with the Jongno-gu Office to facilitate learning mentorship opportunities for local students through the "Jongno Modern Mentoring" initiative. Mentors from the College of Education guided mentees in discovering learning methodologies, potential career paths, and higher education options.

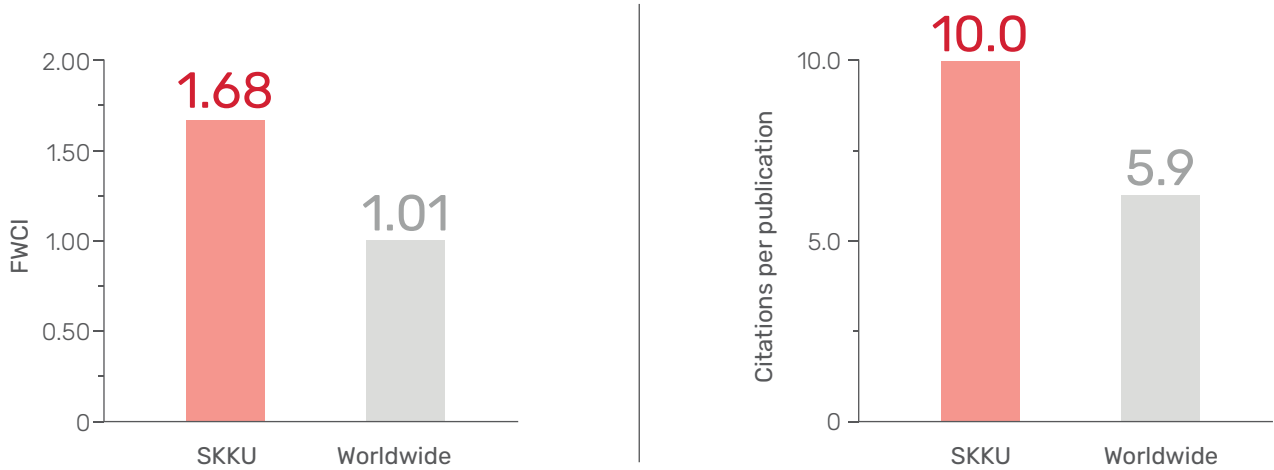
In order to encourage diverse social participation and address disparities in educational attainment, SKKU and the Jongno-gu Office intend to extend their partnership to include additional youth-centered activities.

### Lifelong Learning Access Policy

SKKU is dedicated to offering equitable and inclusive higher education opportunities to students with disabilities through its comprehensive inclusion plan. Since 2002, the University has proactively implemented a range of support systems, including a dedicated student support center, specialized services, and awareness-raising initiatives. SKKU is steadfast in its commitment to fostering a supportive learning environment where students with disabilities can thrive academically, engage fully in university life, and achieve their full potential.



## SKKU Research on SDG 04



FWCi: Field-Weighted Citation Impact



### SKKU Outstanding Publication on SDG 04

**Professor Seongjin Ahn**, Department of Computer Education

Utilizing the Metaverse for Learner-Centered Constructivist Education in the Post-Pandemic Era: An Analysis of Elementary School Students

Journal of Intelligence | [10.3390/jintelligence10010017](https://doi.org/10.3390/jintelligence10010017)





# ACHIEVING GENDER EQUALITY AND EMPOWERING ALL WOMEN AND GIRLS.

**17%**  
of South Korea's engineering students are female.

By forming an EDI (Equity, Diversity, and Inclusion) committee to promote gender quality, SKKU is strengthening its governance.



## SKKU INITIATIVES

### Gender Equality Policies and Programs

SKKU advances gender equality, non-discrimination, and diversity through establishing Committee and EDI Declaration.

Guided by Confucian values, the University fosters a supportive environment that empowers members to reach their potential. The EDI Declaration ensures inclusion across education, research, and administration, promoting a diverse and inclusive community.



### Mentoring and Support Networks

Female students, a minority in engineering institutions, often face significant challenges in both academic and social settings, which discourages many from pursuing engineering majors.

SKKU supports initiatives like WISET (Women in Science, Engineering, and Technology) and WE-UP (Women in Engineering-Undergraduate Leading Program) to enhance educational and career opportunities for female engineers.

These programs, supported by the Ministry of Education and the National Research Foundation of Korea, aim to provide equal opportunities and improve the prospects for female engineers through targeted training and support.

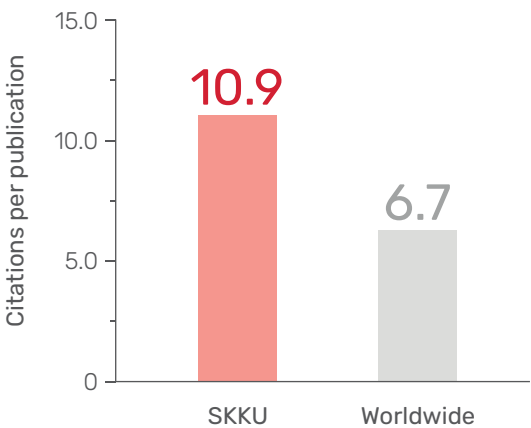
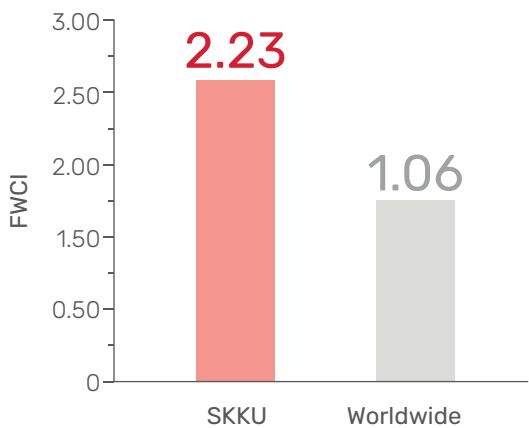
### Curriculum Integration and Awareness Campaigns

SKKU's Center for College Innovation and Collaboration partnered with New Mexico State University on a project themed "Sustainable Innovation: Concepts for a Better World," aligning with the UN's 17 SDGs.

The project brought together students from both institutions to develop innovative solutions to global social issues, emphasizing global citizenship, cultural diversity, and awareness, through social change video content and social media campaigns.



## SKKU Research on SDG 05



FWCI: Field-Weighted Citation Impact



### SKKU Outstanding Publication on SDG 05

**Professor Yesola Kweon**, Department of Political Science and Diplomacy  
Women's Representation and the Gendered Impact of COVID-19 in Japan

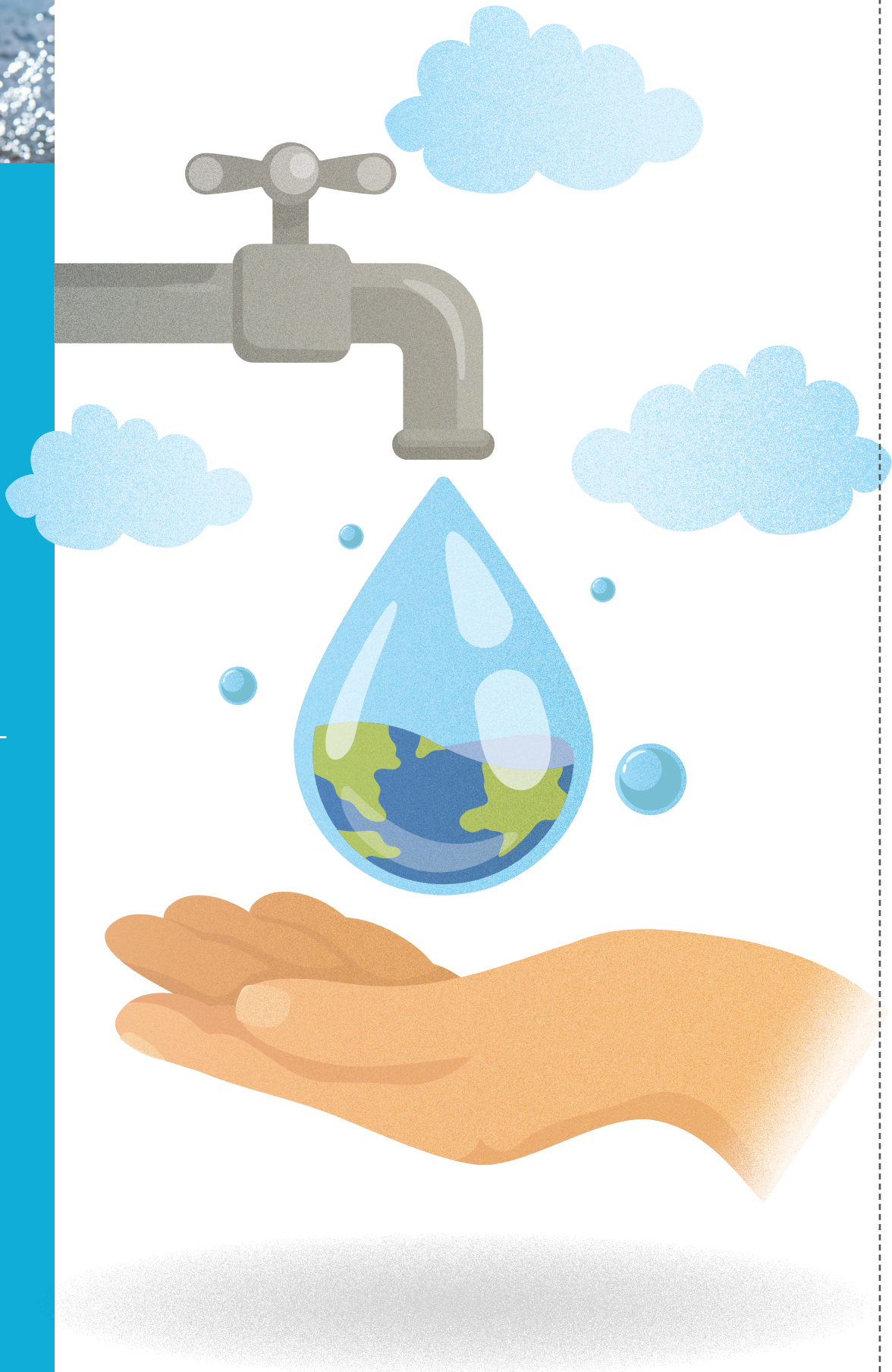
Japan Decides 2021: The Japanese General Election (2022) | [10.1007/978-3-031-11324-6\\_19](https://doi.org/10.1007/978-3-031-11324-6_19)





ENSURING  
AVAILABILITY AND  
SUSTAINABLE  
MANAGEMENT OF  
WATER AND  
SANITATION FOR ALL.

SKKU established the first  
graduate school in the field  
of water resources in South  
Korea.



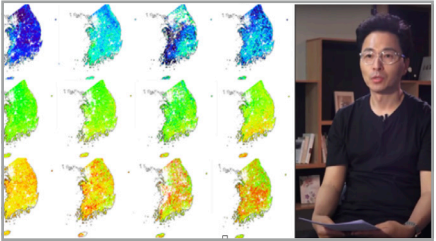
SKKU INITIATIVES

The First Water Resources  
Graduate School in Korea

The rapid growth of the global water industry highlights the need for experts to lead in this expanding field.

SKKU established the first domestic graduate school specializing in water resources to cultivate professionals who can address climate change impacts and lead advancements in the water sector.

The Graduate School of Water Resources at SKKU focuses on training high-level professionals with expertise in water management, nurturing international talent, and fostering cutting-edge information technology applicable to water resources.



Technological Innovation and  
Development

Professor Min-Ha Choi of SKKU's Department of Civil and Environmental Engineering developed advanced methods for drought observation using satellite data and AI.

His research integrates multiple satellite datasets to monitor water resources and create detailed drought maps, addressing limitations in conventional meteorological observation methods.

The team has patented a "System for Creating a Northeast Asia Drought Map Using Satellite Image Data" and has contributed significant insights into sustainable resource management through their studies published in prestigious journals.

Global Engagement and  
Participation

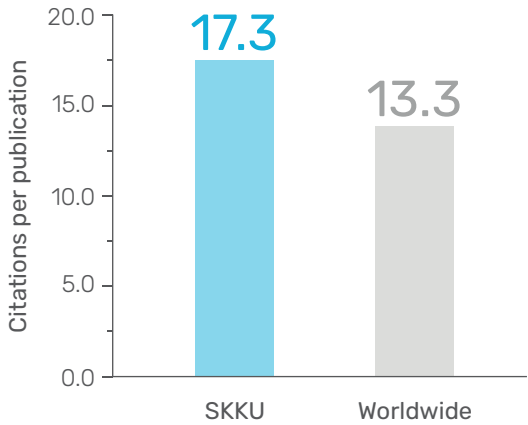
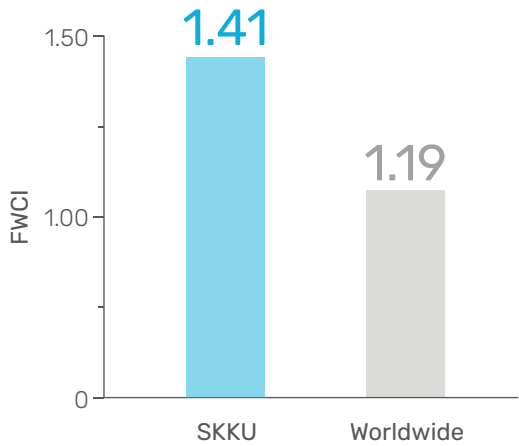
The Global Water Dances event, held at SKKU's Myeongnyundang Hall, highlights the importance of water through synchronized dances that mirror the fluidity of water.

The event originated from a 2008 conference on "Dance & the Environment," in England, which brought together dance scholars specializing in movement analysis. Since then, it has grown into a global phenomenon, with participation in 138 cities worldwide for its 10<sup>th</sup> anniversary.

South Korea joined this international effort in 2017, aiming to raise awareness about water conservation and to help restore the pristine waters of local streams like Okryucheon, which flows from Bukaksan Mountain.



SKKU Research on SDG 06



FWCI: Field-Weighted Citation Impact



SKKU Outstanding Publication on SDG 06

**Professor Am Jang**, School of Civil and Architecture Engineering  
The application of microalgae in removing organic micropollutants in wastewater

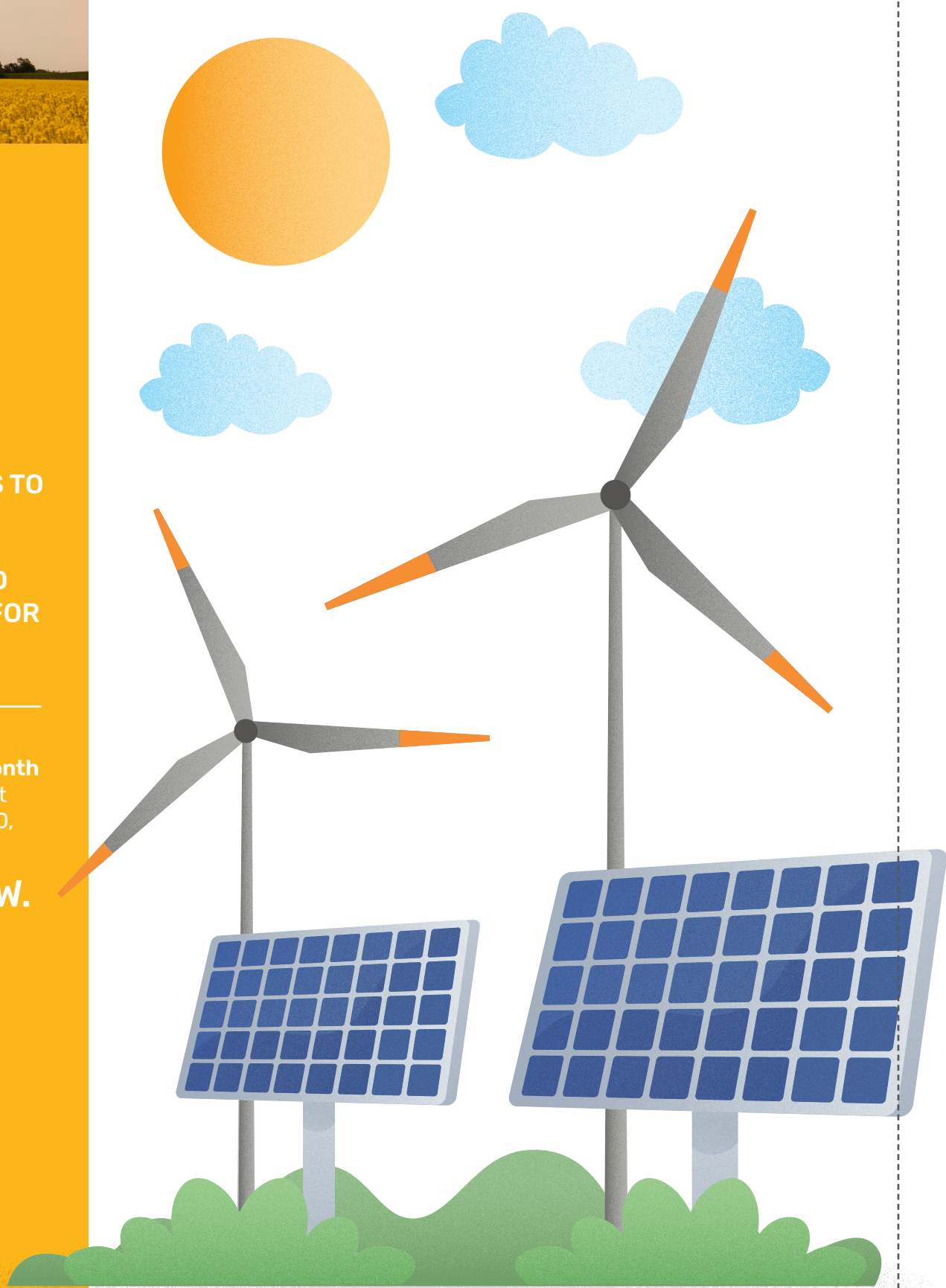
Critical Reviews in Environmental Science and Technology | [10.1080/10643389.2020.1753633](https://doi.org/10.1080/10643389.2020.1753633)





**ENSURING ACCESS TO AFFORDABLE, RELIABLE, SUSTAINABLE, AND MODERN ENERGY FOR ALL.**

SKKU launched a **48-month** solar power development project on July 14<sup>th</sup>, 2020, with an investment of **11.3 billion KRW.**

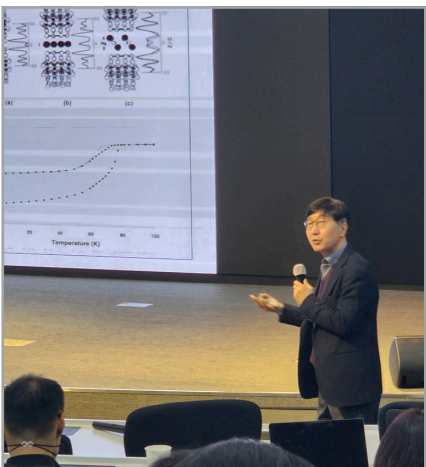


## SKKU INITIATIVES

### Research and Innovation Center for Clean Energy

SKKU SIEST (Sungkyunkwan University Institute for Energy Science and Technology) was established to tackle global challenges in energy sustainability and environmental protection.

The focus of these research centers lies in advancing research in renewable energy, energy storage, and conversion technologies. To address complex energy issues, SKKU SIEST has collaborated with global academic institutions, industries, and government organizations. The aim of these centers is to educate and train future energy scientists and engineers.



### Renewable Energy Projects

The solar power project of SKKU, led by Professor Junshin Lee, was part of the “Core Technology Development Program for New and Renewable Energy.”

The focus of this project lies in developing high-efficiency TOPCon solar cells with a 25% conversion efficiency to enhance export competitiveness. For this, it has collaborated with eight other institutions, including LG Electronics and SK Solar Energy. The aim of this project is to ultimately develop new materials and processes for solar modules and validate commercialization.

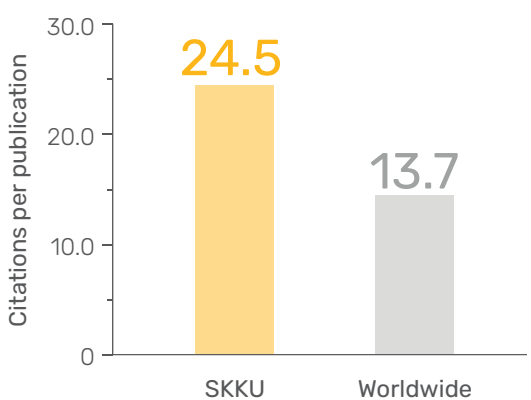
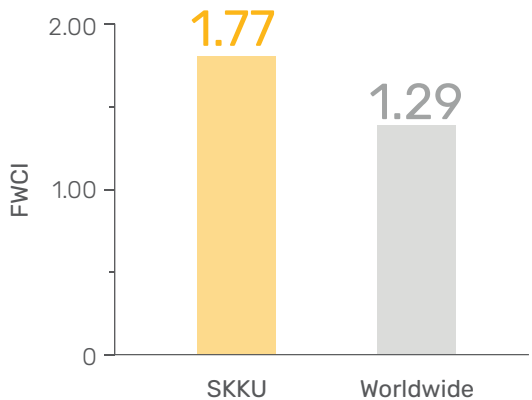
### Professor Nam-Gyu Park awarded the 2024 Eni Award

Professor Nam-Gyu Park from SKKU has been awarded the 2024 Eni Award in the Energy Frontiers category, a prestigious recognition for innovative research in energy and environmental fields. He was honored for his pioneering work on next-generation solar cells using perovskite materials, which are more cost-effective, flexible, and efficient than traditional silicon-based cells. His research has been instrumental in improving the stability of perovskite solar cells, overcoming early challenges and significantly advancing their commercialization potential.

This breakthrough is regarded as a game-changing development in the renewable energy market. In his acceptance speech, Professor Park expressed gratitude for the international recognition and reaffirmed his commitment to sustainable energy research. He also hoped that this achievement would showcase SKKU and South Korea’s research accomplishments on the global stage.



### SKKU Research on SDG 07



FWCI: Field-Weighted Citation Impact

### SKKU Outstanding Publications on SDG 07



**Professor Jin-Wook Lee,**  
Department of Nano Science and Technology  
Stability-limiting heterointerfaces of perovskite photovoltaics  
Nature | [10.1038/s41586-022-04604-5](https://doi.org/10.1038/s41586-022-04604-5)



**Professor Nam-Gyu Park,**  
School of Chemical Engineering  
Unveiling facet-dependent degradation and facet engineering for stable perovskite solar cells  
Science | [10.1126/science.adf3349](https://doi.org/10.1126/science.adf3349)



## 8 DECENT WORK AND ECONOMIC GROWTH



**PROMOTING SUSTAINED, INCLUSIVE, AND SUSTAINABLE ECONOMIC GROWTH, FULL AND PRODUCTIVE EMPLOYMENT, AND DECENT WORK FOR ALL.**

SKKU has achieved the highest employment rate among Korean higher education institutions for eight consecutive years, with a reported rate of 76.5% according to the 2022 Graduate Employment Statistics Survey. This success is attributed to strong job support programs, including large-scale job fairs and specialized initiatives through the University Job Plus Center.



## SKKU INITIATIVES

### Entrepreneurship and Innovation Programs

SKKU's Startup Support Center has driven innovation and supported over 200 startups since 1998, earning the Presidential Medal at the 2022 Venture Award Ceremony. Many of these startups have grown into mid-sized companies, boosting the local economy.

The center's initiatives have also gained international recognition, with seven startups making a mark in Silicon Valley. It offers resources like an entrepreneurial lab, business incubator, and campus town project board to foster innovation and startup success.



### Achieved Highest Employment Rate through Impeccable Career Services

SKKU's Student Success Center and Talent Development Team foster a supportive environment for student growth, academically and personally.

The "Student Success Forum" drew 200+ participants from 80 universities to explore student-centered strategies for enhancing success.

The "Student Success Story" series inspires students by providing practical entrepreneurial insights from successful SKKU alumni. The team also offers job counseling, online mentoring, and tailored employment programs, contributing to one of Korea's highest university employment rates.

*"The high employment rate, even during the COVID-19 pandemic, can be attributed to our proactive response to market conditions through enhanced non-face-to-face employment support programs and customized assistance for students."*

*We will continue to provide comprehensive employment support at the university level,"* says Hee-hyun Park, Head of the Student Talent Development Team.

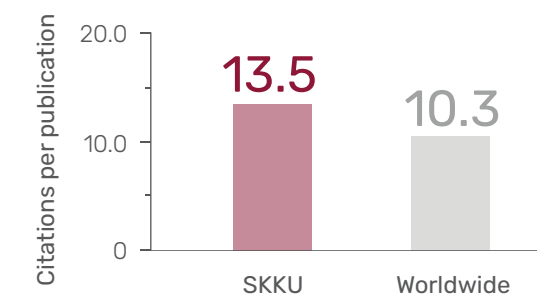
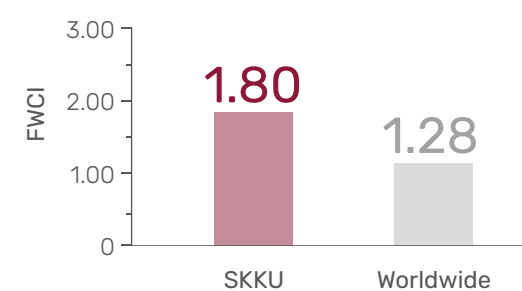
### Incubators and Accelerators

Kingo Partners, SKKU's premier entrepreneurship accelerator, nurtures innovation and supports startup growth in South Korea. With over 200 startups supported, it has attracted 30 billion KRW (~25 million USD) in investment, demonstrating its effectiveness in cultivating high potential ventures.

Kingo Partners offers comprehensive support, including mentorship, funding, and global networking, fostering a dynamic ecosystem for entrepreneurs. This success showcases SKKU's commitment to entrepreneurship education, driving economic growth and innovation.



## SKKU Research on SDG 08



FWCI: Field-Weighted Citation Impact



### SKKU Outstanding Publication on SDG 08

**Professor Gokce Basbug**, Graduate School of Business

Job search and employment success: A quantitative review and future research agenda

Journal of Applied Psychology | [10.1037/apl0000675](https://doi.org/10.1037/apl0000675)





## 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



**TO BUILD RESILIENT INFRASTRUCTURE, PROMOTE SUSTAINABLE INDUSTRIALIZATION, AND FOSTER INNOVATION.**

SKKU propels innovation by establishing state-of-the-art research centers, forming global partnerships and empowering student-led startups.



## SKKU INITIATIVES

### Innovation Hub to Promote Academic-Industry Collaboration

SKKU partnered with Seongnam City to establish the "Fabless-AI Innovation Research Center" and nurture expertise in system semiconductors and artificial intelligence. Located in Kins Tower, Jeongja-dong, the center brings together SKKU's faculty, students, and researchers with the goal of expanding the workforce.

By combining academic expertise with industry support, this regional research and development innovation hub contributes to developing a thriving ecosystem for system semiconductors in Seongnam City and drives South Korea's technological advancement.



### Partnership with NTU for Global Innovation

SKKU strengthened its ties with Nanyang Technological University (NTU), Singapore. NTU's Vice President, Lam Khin Yong, visited SKKU and presented opportunities for expanding research and industry-academia collaborations with the university.

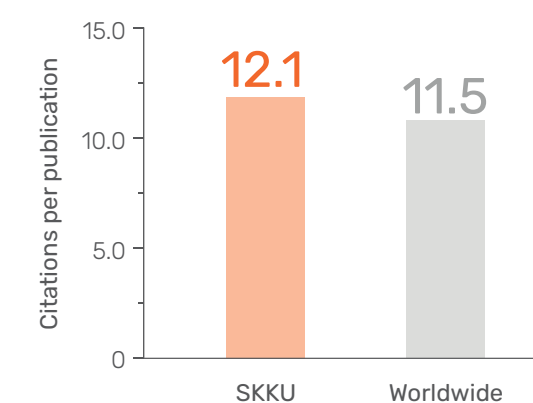
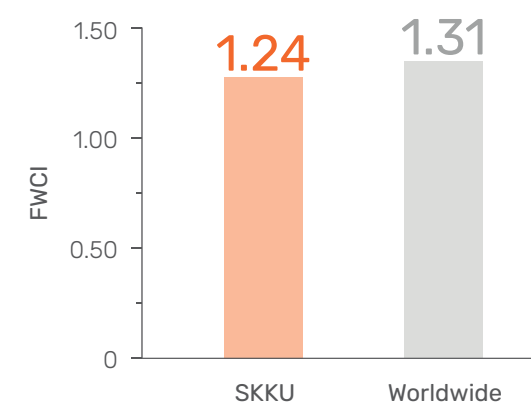
He discussed NTU's recent partnership with Siheung City to create a global-local research cluster that fosters new industries and attracts strategic partnerships from top companies. SKKU looks forward to deepening its friendly relations with NTU through innovative projects and mutual growth.

### Student Entrepreneurship for Environmental Solutions

Rounder, a student-led startup from SKKU, developed an Internet of Things (IoT)-based solution to efficiently return smart cups and reduce carbon emissions in corporate settings. The company won accolades at the 2023 SKKU Startup Residency Competition and the ASCN International Conference and became a representative resident company of the Kingo Campus Town. The startup's success transcends beyond the university as it has supplied its smart cup solutions to major academic institutions and local government organizations. The startup showcased its eco-friendly cup solution at the 2024 SKKU University Festival, replacing around 145 disposable cups with recyclable smart cups over the two-day event. This initiative resulted in a carbon emission reduction of 6,153.80 grams, and the university intends to continue supporting such environmentally conscious companies.



### SKKU Research on SDG 09



FWCI: Field-Weighted Citation Impact



### SKKU Outstanding Publication on SDG 09

**Professor Dong In Kim**, School of Electronic and Electrical Engineering

A Dynamic Hierarchical Framework for IoT-Assisted Digital Twin Synchronization in the Metaverse

IEEE Internet of Things Journal | [10.1109/JIOT.2022.3201082](https://doi.org/10.1109/JIOT.2022.3201082)





TO REDUCE  
INEQUALITY WITHIN  
AND AMONG  
COUNTRIES.

SKKU is committed to creating a zero-barrier campus, promoting equality through improved accessibility and inclusive support for all students.



SKKU INITIATIVES

Educational Welfare Support

SKKU was recognized as the top university among 423 campuses across 343 universities in the 2020 Evaluation of Educational Welfare Support for Students with Disabilities, conducted by the National Institute of Special Education. The university excelled in all assessed areas, including student selection, teaching and learning, and facilities and equipment, highlighting its commitment to providing an inclusive and supportive environment for students with disabilities.

This recognition underscores SKKU’s ongoing efforts to enhance accessibility, ensuring equal opportunities for all students to thrive academically and socially.



Accessible Campus Environment

SKKU is dedicated to creating an inclusive and accessible environment for students with disabilities. The university’s infrastructure features mobility support vehicles, expanded revolving and automatic doors at building entrances, and ramps throughout the campus.

Additionally, SKKU provides captions for online lectures and has introduced a text interpretation system for remote non-face-to-face classes. Committed to enhancing educational welfare, the university continuously implements new initiatives to support students with disabilities, ensuring they can thrive in their academic pursuits.

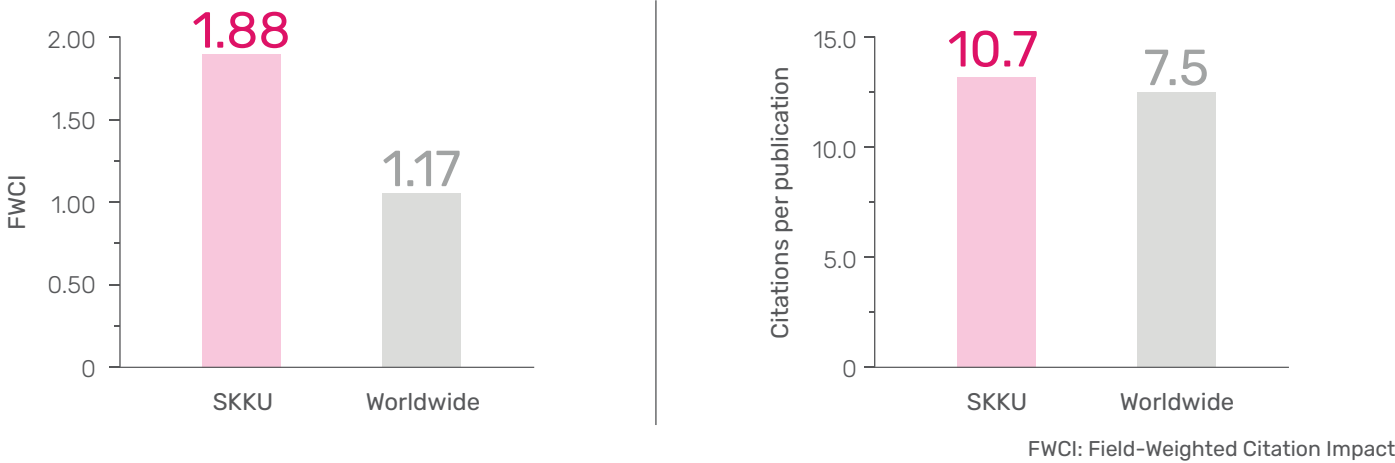
Inclusion Through Accessible Education

Since 2002, SKKU has implemented a special admissions process for students with disabilities, promoting a “barrier-free environment” to ensure they can fully engage in learning and campus life.

In 2006, the university established the Disability Support Center under the Student Affairs Office to provide specialized assistance through the Open Stop Service System, offering personalized academic support. Aligned with SKKU’s founding principles of human dignity, self-fulfillment, and global peace, the center fosters inclusion and will continue enhancing communication, creativity, and high-quality support to help all students thrive.



SKKU Research on SDG 10



SKKU Outstanding Publication on SDG 10

Professor Shu-Chin Lin, College of Economics  
Financial Liberalization, Political Institutions, and Income Inequality

Empirical Economics | [10.1007/s00181-019-01808-z](https://doi.org/10.1007/s00181-019-01808-z)



## 11 SUSTAINABLE CITIES AND COMMUNITIES



TO MAKE CITIES AND HUMAN SETTLEMENTS INCLUSIVE, SAFE, RESILIENT AND SUSTAINABLE.

SKKU nurtures a sustainable future for the university and its surrounding areas through cultural heritage preservation, smart city initiatives, and eco-friendly transportation solutions.



### Restoring Local Heritage and Community

SKKU is enclosed by the Hanyangdoseong (Seoul City Wall), which is a historic fortress built to safeguard important locations from invaders. The university actively collaborates with local governments to preserve this cultural heritage and promote sustainable urban and community development.

Students from SKKU also partnered with local residents to revitalize the surrounding fortress villages. Building on this success, the university developed support programs to encourage youth entrepreneurship and further contribute to regional revitalization.



## SKKU INITIATIVES



### Advancing Smart City Solutions

SKKU's College of AI Convergence Innovation partnered with Jongno District, where the university's Humanities and Social Sciences Campus is located, to develop a smart city in Jongno and solve local issues by using artificial intelligence (AI). This partnership focuses on training people in AI, verifying AI technologies, supporting local businesses, and providing technical verification and policy consultation for smart city initiatives. SKKU and Jongno District are steadfast in transforming Jongno into a sustainable urban environment.

### Connecting Places Through Sustainable Transportation

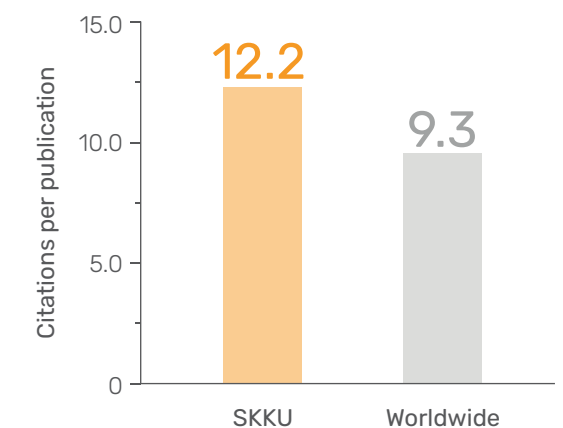
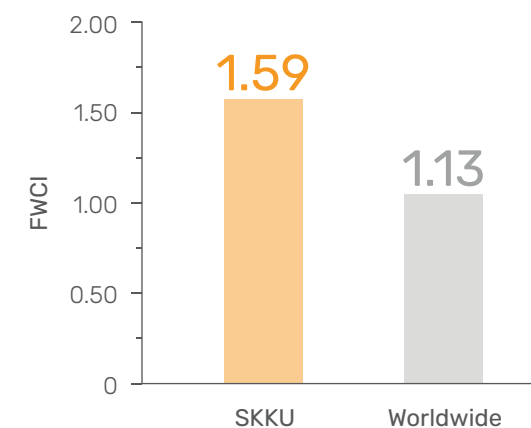
SKKU has launched a new eco-friendly bus route connecting its Humanities and

Social Sciences Campus to Hyehe Station, the nearest subway station. This initiative, developed through consultations with local officials, campus members, and community residents, aims to enhance transportation convenience for students and staff. The route covers key points near the campus and major university buildings, reducing reliance on private vehicles and personal mobility devices, which is expected to lower carbon emissions.

Additionally, transfer discounts through public transportation will help alleviate transportation costs for the university community. SKKU plans to collaborate with local governments and the operating company to increase the number of eco-friendly vehicles over time, reinforcing its commitment to sustainability.



## SKKU Research on SDG 11



FWCI: Field-Weighted Citation Impact



### SKKU Outstanding Publication on SDG 11

**Professor Khan Muhammad**, Department of Applied AI

Deep Learning for Safe Autonomous Driving: Current Challenges and Future Directions

IEEE Transactions on Intelligent Transportation Systems | [10.1109/TITS.2020.3032227](https://doi.org/10.1109/TITS.2020.3032227)





# TO PROMOTE SUSTAINABLE CONSUMPTION AND PRODUCTION PATTERNS.

SKKU fosters a campus culture of upcycling through diverse student-led initiatives and partnerships with eco-friendly startups.



## SKKU INITIATIVES

### Mindful Consumption to Minimize Waste

SKKU's Institute for Convergence of Culture, Arts, and Media hosted an online media art exhibition to increase awareness on toxic waste and environmental pollution. It was part of a campaign titled "Cradle to Cradle," which promotes a closed-loop system of reuse rather than disposal.

During the exhibition, visuals were projected on repurposed materials to reinforce the environmental theme. By fostering awareness about resource waste, SKKU encourages its community to engage in responsible consumption.



### Turning Waste into Resources

SKKU's student-driven environmental club, Re:SKKU, promotes sustainable consumption and carbon neutrality through innovative projects. To tackle the massive waste generation on campus, the club collaborated with the Korea Zero Paper Art Association and transformed waste boxes and paper into practical items like calendars and postcards.

They also repurposed donated clothing into stylish bags and wallets. These initiatives have gained strong support from the campus community, with the club preparing to launch more projects.

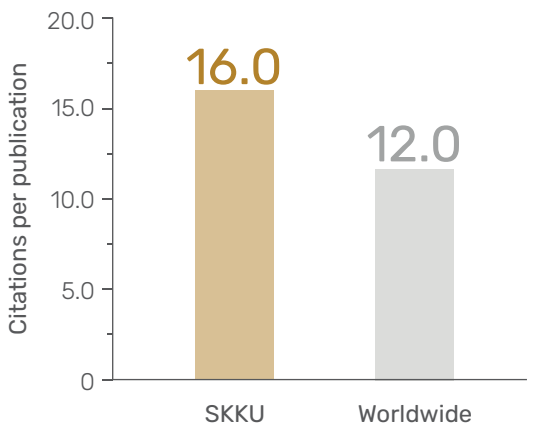
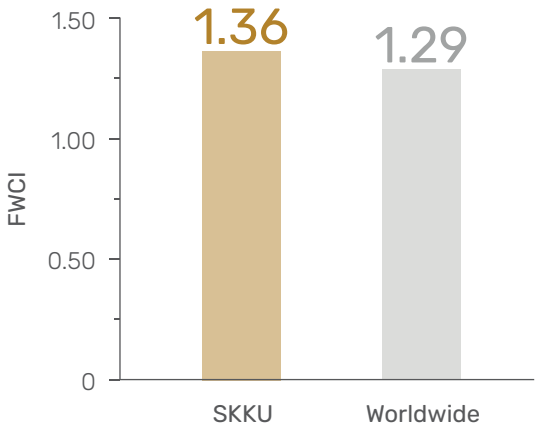
### Innovative Solutions for Battery Recycling

SKKU partnered with SK Ecoplant EcoLab—an eco-friendly R&D platform—to conduct joint research on advanced battery recycling technologies, train specialized personnel, and develop educational programs.

This collaboration aims to overcome the existing limitations in wet recycling technologies, improve metal recovery methods, and create an eco-friendly recycling process. Both SKKU and SK Ecoplant EcoLab are committed to stabilizing the supply chain of essential battery minerals and promoting a sustainable circular economy for K-batteries.



## SKKU Research on SDG 12



FWCI: Field-Weighted Citation Impact

## SKKU Outstanding Publication on SDG 12



**Professor Jun Yeob Lee**, School of Chemical Engineering  
 High-Efficiency, Long-Lifetime Deep-Blue Organic Light-Emitting Diodes  
 Nature Photonics | [10.1038/s41566-021-00763-5](https://doi.org/10.1038/s41566-021-00763-5)





# TO TAKE URGENT ACTION TO COMBAT CLIMATE CHANGE AND ITS IMPACTS.

SKKU is committed to achieving Scope 3 Carbon Neutrality through cutting-edge research, academic collaborations, and higher education initiatives by **2050.**



## SKKU INITIATIVES

### Path to Carbon Neutrality

SKKU launched the Institute for Carbon Neutrality (ICON SKKU) to combat climate change and create a sustainable campus through various initiatives, including climate change research, campus green remodeling, zero-energy building promotion, and energy and carbon data management.

In 2023, the institute conducted a thorough analysis of energy use and emissions to understand the current status of carbon neutrality across SKKU campuses. Based on this analysis, the university has planned to achieve Scope 1 and 2 neutrality by 2045 and Scope 3 by 2050 and become a “Global Leader for a Sustainable Campus.”



### Joint Research Initiatives for Sustainable Technologies

In March 2022, SKKU partnered with the Korea Institute of Science and Technology (KIST) to launch the KIST-SKKU Carbon Neutrality Joint Research Center.

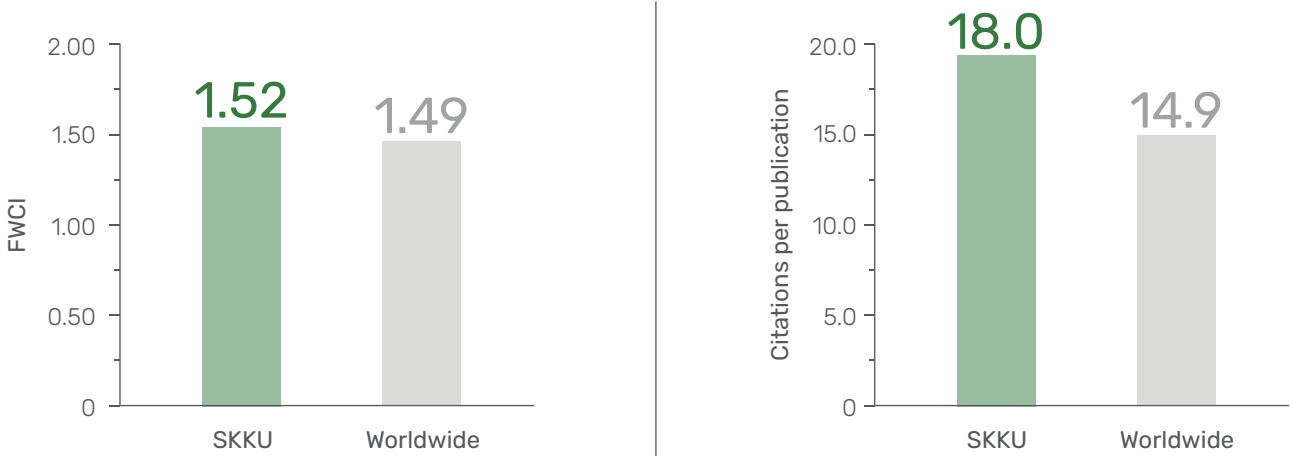
This center focuses on conducting research in energy and carbon neutrality technologies and creating a foundation for applying these technologies in industrial sectors, with an expected annual investment of over 1 billion KRW. This collaboration has produced significant results in six fields, including energy harvesting, solar cells, and carbon capture, with findings featured in leading journals.

### Training Global Environmental Leaders

SKKU has been selected as the host for the 2023 International Environmental Expert Training Program, organized by the Korea Environment Corporation under the Ministry of Environment of the Republic of Korea. This program aims to develop practical, field-ready international environmental experts through specialized education in environmental fields and global competency training. Participants will gain essential knowledge and skills for work in international organizations. Those who excel in the domestic education program will have the opportunity to intern at various international environmental organizations, including the United Nations Environment Programme (UNEP), the Global Green Growth Institute (GGGI), the Green Climate Fund (GCF), and the Organisation for Economic Co-operation and Development (OECD).



## SKKU Research on SDG 13



FWCI: Field-Weighted Citation Impact



### SKKU Outstanding Publication on SDG 13

**Professor Jeong Min Baik**, School of Advanced Materials Science & Engineering

Advanced materials for carbon neutrality: Energy conversion, Hydrogen storage, and CO<sub>2</sub> capture and conversion

Nano Energy | [10.1016/j.nanoen.2023.108726](https://doi.org/10.1016/j.nanoen.2023.108726)





**TO CONSERVE AND SUSTAINABLY USE THE OCEANS, SEAS AND MARINE RESOURCES FOR SUSTAINABLE DEVELOPMENT.**

SKKU strives to conserve water resources through international collaborations and pioneering research.



## SKKU INITIATIVES

### International Collaboration for Water Resource Monitoring

The Smart Water Grid Research Group (SWG) at SKKU recently completed the “Smart Water Grid Pilot Project” in Hai Duong Province, Vietnam. Supported by the Korea Environmental Industry & Technology Institute (KEITI), the project enabled real-time water usage monitoring, remote metering, leakage detection, and communication of water quality and outage information through the installation of advanced water management systems in Hai Duong.



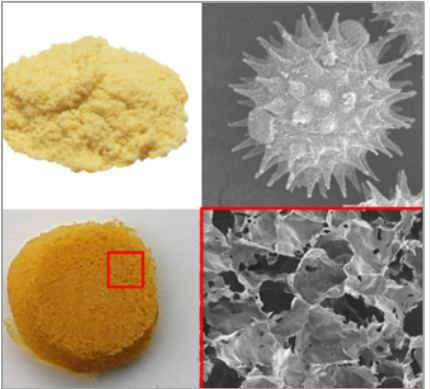
### Institution for Cultivating Water Resource Professionals

Established in 2013, the Graduate School of Water Resources (GSWR) at SKKU is the first of its kind in South Korea, created to tackle the rapid expansion of the global water industry. With a strong emphasis on training experts in water resource management and conservation, GSWR is dedicated to developing a new educational model.

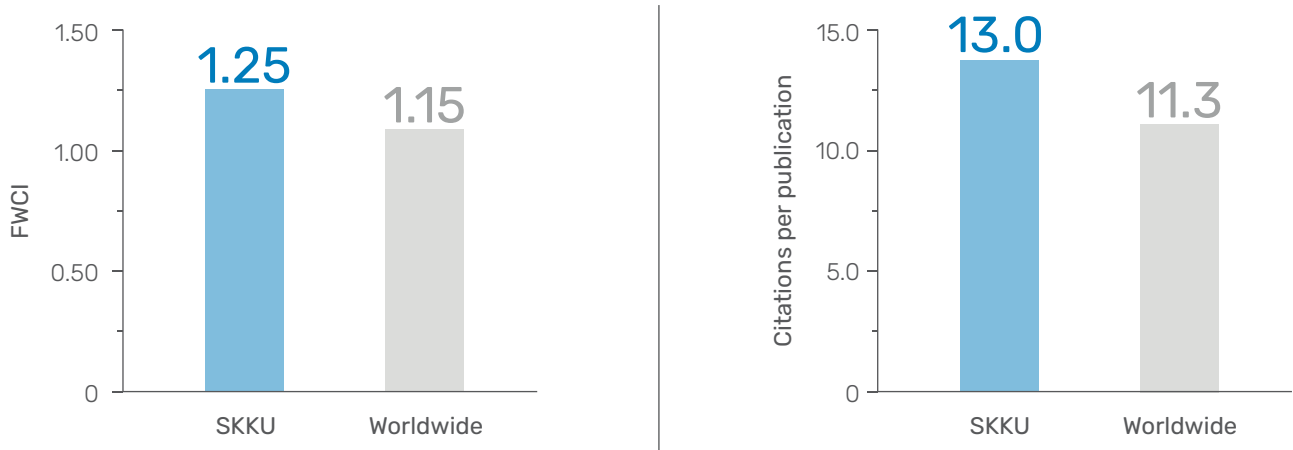
With financial support from the Korean Government, GSWR aims to create a new educational model and nurture globally competitive professionals.

### Innovation for Tackling Marine Water Pollution

Professor Joshua Jackman and Dr. Youngkyu Hwang from the Department of Chemical Engineering at SKKU, in collaboration with Professor Nam-Joon Cho from Nanyang Technological University (NTU), developed an eco-friendly sponge using sunflower pollen to combat marine water pollution, such as oil spills. The hydrophobic sponge, made from a microgel form of pollen, has an absorption capacity comparable to commercial oil sorbents.



## SKKU Research on SDG 14



FWCI: Field-Weighted Citation Impact



### SKKU Outstanding Publication on SDG 14

**Professor Jae-Seong Lee**, Department of Biological Sciences  
 Different Effects of Nano- and Microplastics on Oxidative Status and Gut Microbiota in the Marine Medaka *Oryzias melastigma*  
 Journal of Hazardous Materials | [10.1016/j.jhazmat.2020.124207](https://doi.org/10.1016/j.jhazmat.2020.124207)





TO PROTECT, RESTORE AND PROMOTE SUSTAINABLE USE OF TERRESTRIAL ECOSYSTEMS, SUSTAINABLY MANAGE FORESTS, COMBAT DESERTIFICATION, AND HALT AND REVERSE LAND DEGRADATION AND HALT BIODIVERSITY LOSS.

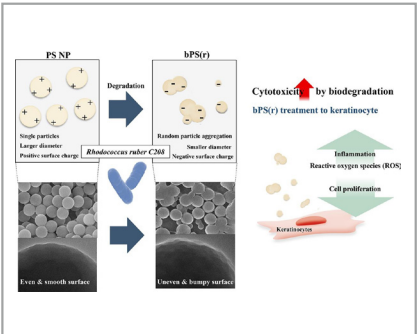
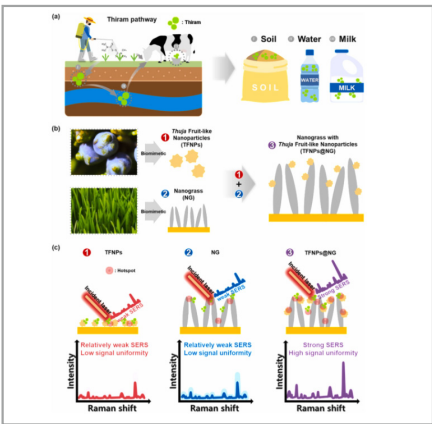
SKKU endeavors to protect land and lifeforms through trailblazing research, awareness programs, and community activities.



## SKKU INITIATIVES

### Pesticide Detection for Preventing Soil Contamination

Professor Jin-Seong Park's team at SKKU has developed a new ultra-sensitive method for detecting Thiram, a pesticide component, in various environments such as soil, drinking water, and milk. Thiram, commonly used to combat fungal infections in crops, can accumulate in the body and cause a range of health issues. This new method is 10,000 times more sensitive than the previous techniques for detecting Thiram.



### Research on the Biological Impact of Biodegraded Microplastics

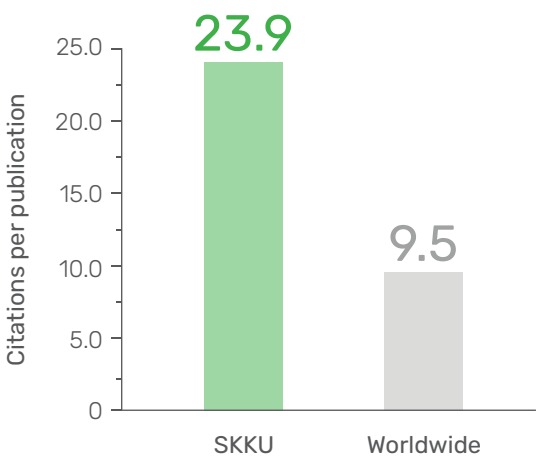
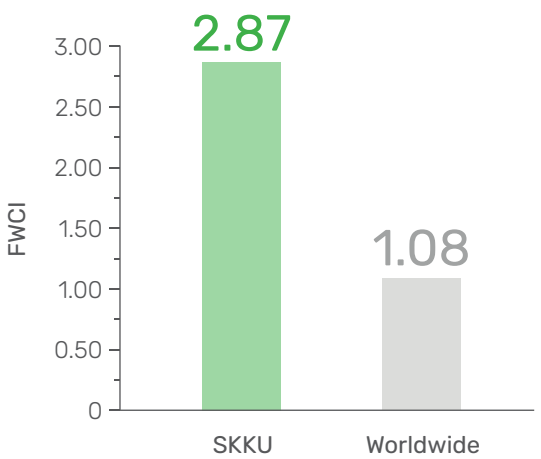
In a pioneering study, a research team at SKKU, led by Professor Seokho Bang, investigated the health risks posed by microplastics degraded by microorganisms. The research revealed that biodegraded nanoplastics undergo structural changes, reverse surface charges, and increased aggregation. These altered properties are significantly different from those of non-degraded nanoparticles. The study paves the way for future research on the toxicity of biodegradable plastics.

### Community Outreach to Support Farmers

In 2023, approximately 210 SKKU students participated in rural service activities in twelve villages near Sangju-si, Gyeongsangbuk-do. These activities served two purposes: to assist farmers with agricultural work during the busy farming season when labor is scarce, and to develop students' character while fostering a spirit of coexistence with the local community through volunteering activities.



## SKKU Research on SDG 15



FWCI: Field-Weighted Citation Impact



### SKKU Outstanding Publication on SDG 15

Professor Jeong Ha Kim, Department of Biological Sciences

Global Kelp Forest Restoration: Past Lessons, Present Status, and Future Direction

Biological Reviews | [10.1111/brv.12850](https://doi.org/10.1111/brv.12850)





**TO PROMOTE PEACEFUL AND INCLUSIVE SOCIETIES FOR SUSTAINABLE DEVELOPMENT, PROVIDE ACCESS TO JUSTICE FOR ALL AND BUILD EFFECTIVE, ACCOUNTABLE AND INCLUSIVE INSTITUTIONS AT ALL LEVELS.**

SKKU strengthens governance to promote peaceful and inclusive societies. The university promotes inclusive laws and policies to prevent crime, eliminate violence, and build equitable, peaceful societies by fostering academic-industry collaboration.



## SKKU INITIATIVES

### Center for National Policy Studies

The Future Policy Research Institute at SKKU's Law School was recently inaugurated. Besides serving as an international platform for scholars, the Institute will help design sustainable political systems and public reforms, align policies with rapidly evolving science and technology, and provide recommendations for societal development. It aims to support future generations by spearheading the Republic of Korea's development through forward-looking policy research and talent development.



### Graduate School of Public Policy and Governance

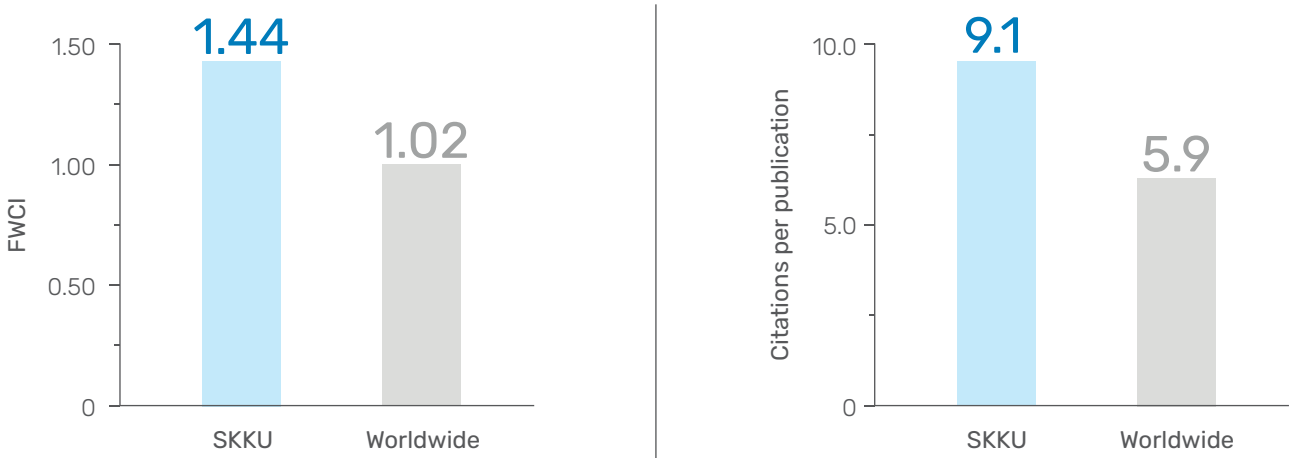
SKKU has formally established the Graduate School of Governance (GSG) with the goal of fostering future leaders capable of addressing contemporary policy challenges in both South Korea and worldwide. Functioning as a think tank, GSG provides guidance on Korea's public administration and offers strategic alternatives. Additionally, leveraging its extensive experience in educational research, GSG promotes societal change through voluntary service initiatives.

### Partnership with the Government for Strong Institutions

The Human Resources Development Division of the Seoul Metropolitan Government has signed a collaborative agreement with the SKKU Graduate School of Public Policy and Leadership to enhance the professional competence of city officials and improve staff training. This partnership will offer various programs for Seoul Metropolitan Government officials, including scholarships for selected civil servants, and facilitate the exchange and integration of educational curricula between the two institutions.



## SKKU Research on SDG 16



FWCI: Field-Weighted Citation Impact



### SKKU Outstanding Publication on SDG 16

**Professor Eunkyong Han**, Department of Media and Communication

A Win-Win Way for Corporate and Stakeholders To Achieve Sustainable Development: Corporate Social Responsibility Value Co-Creation Scale Development and Validation

Corporate Social Responsibility and Environmental Management | [10.1002/csr.2412](https://doi.org/10.1002/csr.2412)





## 17 PARTNERSHIPS FOR THE GOALS



**TO STRENGTHEN THE MEANS OF IMPLEMENTATION AND REVITALIZE THE GLOBAL PARTNERSHIP FOR SUSTAINABLE DEVELOPMENT.**

SKKU emphasizes the importance of local and international cooperation to advance SDGs. By strengthening global partnerships, the university has established collaborations with 552 institutions in 67 countries.

These regional and cross-country partnerships facilitate sustainable growth in key development areas, including finance, technology, capacity building, and trade, allowing the university to contribute significantly to addressing global challenges.



## SKKU INITIATIVES

### SKKU Selected as the UNESCO Chair

The UNESCO Chair for the Promotion of Sustainable Energy Systems and a Clean Environment was established at SKKU under the ambit of UNESCO's Renewable and Alternative Energies Programme. The program aims to promote the development of novel technologies and frameworks encompassing energy and the environment, with a wider objective of assisting member states achieve SDGs.



### Collaboration for SDG Best Practice

In 2023, SKKU has expanded collaboration with esteemed institutions of higher learning on an international scale through its affiliation with the Higher Education Sustainability Initiative (HESI) Network. Launched as an open partnership between several United Nations entities and the higher education community, the HESI aims to enhance the role of the higher education sector in advancing sustainable development by facilitating multi-stakeholder discussions, actions, and the dissemination of best practices.

### Partnership for Sustainable Environment

SKKU has recently joined the Race to Zero campaign and signed an agreement to establish a carbon-neutral campus by progressively reducing carbon emissions. The Race to Zero campaign, supported by the United Nations Environment Programme, the Environmental Association for Universities and Colleges (EAUC), and Second Nature, serves as a global initiative designed to mobilize leadership and action within the educational sector.



## SKKU GLOBAL NETWORK AND PARTNERSHIPS

**552**  
INSTITUTIONS

**67**  
COUNTRIES







**HUMANITIES AND SOCIAL SCIENCES CAMPUS:**

(03063) 25-2, SUNGKYUNKWAN-RO, JONGNO-GU, SEOUL, KOREA

**NATURAL SCIENCES CAMPUS:**

(16419) 2066, SEOBU-RO, JANGAN-GU, SUWON-SI, GYEONGI-DO, KOREA



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