



전북대학교
JEONBUK NATIONAL UNIVERSITY



2024 SUSTAINABLE DEVELOPMENT GOALS REPORT

JEONBUK
NATIONAL
UNIVERSITY



ABOUT

Since its founding in 1947, Jeonbuk National University (JBNU) has been committed to raising global leaders, nurturing over 250,000 alumni who have contributed to society across a wide range of fields. Our vision is to become the best Glocal university that leads both the local community and the world through our innovation strategies.

Our main strategy towards this vision is innovation of a Regional and Industry–Academic Cooperation through establishing a University–Industry–City triangle.

Creating a regional think tank which provides solutions to regional challenges and revitalizing closed and idle university campuses are similar strategies planned to implement. Improving current student recruitment strategies and institutional infrastructure for both regional and international students are also strategic advancements towards our vision.

We envision the establishment of a student-centered, barrier-free, flagship university through our education innovations, such as broadened freshman recruitments, modular academic structure, and regional university partnerships.

We aim to become a glocal university by promoting international students' recruitment and strengthening global employability. Through globalizing our proven regional strategies of industrial academia collaboration, we uphold our fundamental mission in education and research.

We have affirmed confidence, integrity, and generosity as our core values, which we use as stepping stones to enter top 100 universities globally. Through glocalized educational programs (with enhanced practical competency as well as fostering convergent interdisciplinary research) and future-oriented core technologies, we will upgrade our status to the best glocal university by 2030.

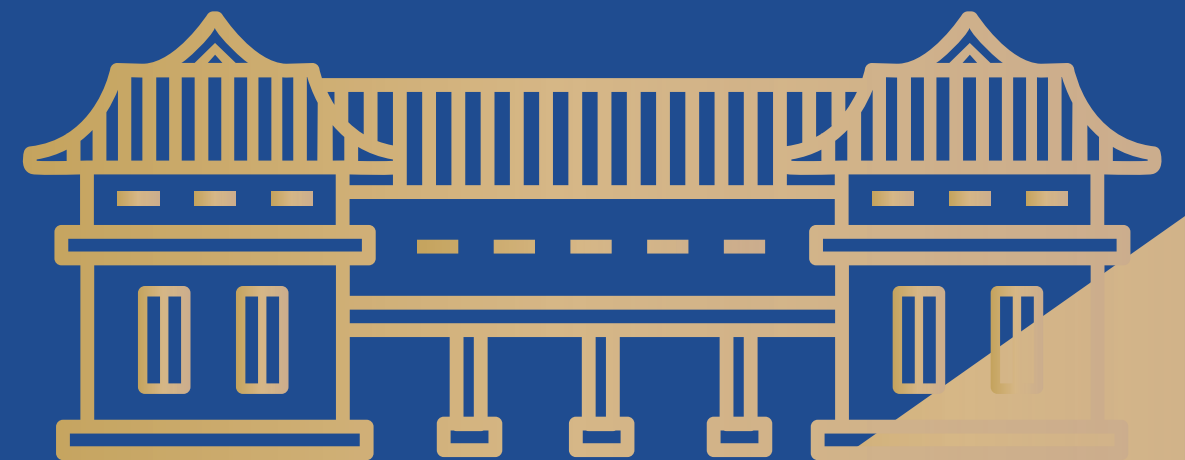
JEONBUK
NATIONAL
UNIVERSITY

SUSTAINABLE
DEVELOPMENT
GOALS
2024

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SUSTAINABLE DEVELOPMENT GOALS REPORT





END TO POVERTY

JBNU Alleviates Poverty Through Research, Internal University Policies, and Community Support Activities

JBNU contributes to breaking the vicious cycle of poverty, achieving economic independence, and gaining financial stability in developing countries.

 **10,680**
Students received financial aid



Research Highlight

Multi-Morbidity Affects Over 60% of U.S. Adults Aged 50+, With Lifestyle and Social Determinants Playing Key Roles

From the National Health and Nutrition Examination Survey (2011–2018), 4,552 participants were included in the study. The research findings have reported high cholesterol and hypertension as the most prevalent health conditions and underscored the need for preventive strategies, such as smoking cessation and weight management.

Research



30 Scholarly Output



0.76 Field-Weighted Citation Impact



135 Citation Count

Data period: 2020–2024 |
Data source: SciVal (as of September 24, 2025)

JBNU Activities

JBNU Hospital Medical Volunteer Mission to Africa

A five-member team from JBNU Hospital provided a 12-day medical volunteer service in Antananarivo, Madagascar.

This program aimed to strengthen the local healthcare conditions and eliminate health disparities associated with poverty.



Dodum Scholarship for Students in Financial Hardship

Eligible students from low-income families receive the scholarship through a tuition invoice deduction system (deduction of tuition fees in advance), thereby reducing their financial burden. In 2024, the university spent KRW 5,134,168,000 for 9,229 students through Dodum scholarship.



2024 Blue Lighthouse Donation Scholarship (Pureundeungdae Scholarship)

A scholarship amount of KRW 1,000,000–5,000,000 per semester was granted to students from households with disabilities, student heads of households, grandparent-headed families, basic livelihood security recipients, second-lowest income households, and multicultural families, who had a minimum overall grade of 80 (on a 100-point scale) and had completed at least 12 credits per semester.



Disinfection of Households

A collaboration between JBNU Hospital and Jeonju Residential Welfare Center aimed to assist with disinfection and pest control in vulnerable households.

Through this program, the hospital contributed to improving the hygiene and the quality of life of six families.



Free Snacks to Students

JBNU President Yang O-Bong personally welcomed students with free snacks (bread, chocolate, and drinks) allowing for a close interaction with each student contributing to the emotional stability, social support system, and alleviation of financial burden.



Mentor–Mentee Program for Students in Agricultural Startups

In collaboration with the Maju Local Job Center, JBNU's Specialized Group for Farming Startups provided field training and mentoring on cultivation of crops for students from 10 prospective farming startup colleges. This program promotes economic independence and revitalization to alleviate poverty among vulnerable groups.





ERADICATE HUNGER

JBNU Provides Its Members with Healthy and Balanced Meals through Diverse On-Campus Dining Programs, Including Eco-Friendly and Vegetarian Options

JBNU operates a sustainable food waste management and recycling system, collaborates with local farmers to promote the use of regional agricultural products, and offers practical education and research programs that enhance food security and sustainable agriculture in the community.



₩1,000
Breakfast Program served
24,000 students



Research Highlight

Mo₃Se₄-NiSe Heterostructure Nanowires Deliver Efficient, Stable, and PGM-free Electrocatalysis for Hydrogen Production from Alkaline and Seawater Electrolysis

This study reports a Mo₃Se₄-NiSe heterostructure core-shell nanowire array on nickel foam, synthesized via a single-step hydrothermal process, as an efficient electrocatalyst for the hydrogen evolution reaction (HER). Both experimental and theoretical analyses confirm that the Mo₃Se₄-NiSe interface offers abundant active sites, optimizes binding energies, and lowers reaction barriers. These findings provide a promising route for designing PGM-free, stable, and efficient catalysts for large-scale hydrogen generation.

JBNU Activities

KRW 1,000 Breakfast and Dinner Programs

As a collaborative initiative of the Ministry of Agriculture, Food and Rural Affairs, and JBNU, a high-quality breakfast is provided for JBNU students, fostering nutritious and healthy eating habits. As an extension, JBNU and NongHyup signed a KRW 1,000 Breakfast Program supporting rice consumption and promoting the use of local agricultural products.

JBNU provides balanced meals for its students prepared by professional nutritionists using fresh and clean domestically sourced ingredients.

Retraining Contract Departments for Local Farmers and Food Producers

Department of Agricultural Life Sciences, in partnership with Gochang-gun, conducted training in crop production, livestock, eco-friendly farming.

Department of Agricultural Systems, in partnership with Jangsu-gun, conducted training on paradigm shifts in farming, climate adaptation, new cultivation techniques, and eco-friendly/organic production methods.

Department of Eco-Agricultural Venture Systems, in partnership with Buan-gun, conducted training in advanced agricultural technologies and agribusiness development.

Department of Food Technology conducted training in the food and allied industries.

Campus Garden for Urban Agriculture Experiences

JBNU allocated 114 plots and 5 raised garden beds to local residents, offering them the chance to not only grow their own safe food but also strengthen community ties through interaction and cooperation.

Overseas Study Tours

To broaden students' perspectives on agricultural technology and distribution systems, JBNU's Agro-Bio and Food-Related contract departments (Department of Agricultural Life Sciences and Department of Agricultural Systems) visited international farms and shared the knowledge acquired with local farmers and food producers. The purpose of overseas field trainings conducted in Thailand, Tokyo (Japan), Central Vietnam, and Yunnan Province (China) was to study advanced agricultural technologies in response to climate change, agricultural product distribution channels, and local vegetation and current state of agriculture worldwide.

Research



165 Scholarly Output



1.13 Field-Weighted Citation Impact



1,778 Citation Count

Data period: 2020-2024 |
Data source: SciVal (as of September 24, 2025)





SECURE GOOD HEALTH

JBNU Promotes Good Health and Well-Being by Providing Comprehensive Physical and Mental Health Programs, Including Fitness Facilities, Psychological Counseling, and Preventive Health Check-Ups

JBNU collaborates with local health institutions to improve access to medical and welfare services, raises awareness through various health promotion campaigns, and fosters a safe, inclusive campus environment that supports the overall well-being of students and staff.



4,490

Students, staff, and faculty received psychological counseling



Research Highlight

The Toxicity and Ecological Risks of Metal Oxides, Dyes, and Dissolved Organic Matter in Water Systems: Implications for the Environment and Human Health

This review addresses water pollution from metal oxides, synthetic dyes, and dissolved organic matter, examining their sources, environmental persistence, and toxicological effects. These contaminants, common in industrial and consumer processes, pose risks to microbial communities, aquatic life, and overall ecosystem balance. The study emphasizes their human health impacts and ecological consequences, offering a unique focus on toxicity for clearer accessibility of findings.

JBNU Activities

JBNU's Overseas Medical Missions with Korea Association of Health Promotion

As part of this mission, a healthcare team was dispatched to Cambodia to implement the Non-Communicable Disease (NCD) Management Project utilizing mHealth (through internally developed mobile applications), annual medical checkups, and health awareness campaigns.

As a continuation of this program, a medical volunteer team comprising specialists from various divisions visited Kenya, Africa, where they went beyond therapeutic support and provided medical education training and cultural exchange programs.

JBNU Conducts Annual Violence Prevention Education

JBNU aims to foster healthy values in the university members regarding sexuality and prevention of sexual harassment on campus, as well as build a university culture that upholds human rights and gender equality. These programs help students protect their physical and mental health and concentrate on their studies in a safe environment.

JBNU Hospital's Oral Health Center Conducted Dental Checkups for People with Disabilities

This service provides preventive dental education and early screening to enhance regional healthcare standards while improving the effectiveness of dental treatment and welfare.

MoU Between Jangsugun Social Welfare Agency for All and JBNU Hospital

This agreement aims to reduce unfulfilled needs in rehabilitation services, improve service quality, mitigate regional disparities in rehabilitation care, and strengthen public healthcare functions.

Free Mental Health Support for Faculty, Staff, and Students

JBNU enhances quality of life and academic achievement on campus through free psychological counseling and mental health services for students, faculty, and staff. These initiatives help students improve access to counseling, as well as resolve psychological difficulties promptly and strengthen mental resilience.

Research



2,320

Scholarly Output



1.19

Field-Weighted Citation Impact



32,471

Citation Count

Data period: 2020–2024 |
Data source: SciVal (as of September 24, 2025)





ASSURE QUALITY EDUCATION FOR ALL

JBNU Provides Inclusive and Equitable Quality Education through Undergraduate, Graduate, and Lifelong Learning Programs

JBNU collaborates with local schools to reduce educational disparities, offers scholarships and mentoring for disadvantaged groups, and promotes both academic excellence and social responsibility through teaching and learning support.



33.9%

Papers with international collaboration

Data source: Scopus (as of October 8, 2025)



Research Highlight

Anatomy Education in Korea Faces Growing Challenges from Rising Student Numbers, Requiring Sustainable Solutions in Staffing, Cadaver Supply, and Infrastructure

This study reviews the historical development, current status, and challenges of anatomy education in Korea. The review proposes strategies to ensure sustainable anatomy education, including educator training, cadaver management, and improved facilities.

Research



63 Scholarly Output



0.76 Field-Weighted Citation Impact



389 Citation Count

Data period: 2020–2024 |

Data source: SciVal (as of September 24, 2025)

JBNU Activities

JBNU Developed Education-Related Activities in Thailand

JBNU's Internationalization Capability Development Group visited Thailand to recruit students and build partnerships with local education institutes through their cultural and educational exchange activities. These programs provide higher education opportunities for Thai students, open up new channels for international collaboration, and facilitates overseas education experience for JBNU students while developing global citizenship.



JBNU Signed an MoU with a High School in Quy Nhon, Vietnam, for Overseas Volunteer Service and Educational Cooperation

A 43-member cultural exchange team visited Vietnam in January 2024 to provide educational services, introduce the university, and organize an entrance examination briefing session. This program offers educational opportunities to international students and local residents while promoting cultural exchange and enhancing JBNU's international reach in education.



JBNU Signed an Agreement to Implement Glocal University 30 Innovation and Participated in the Strategy Forum

In collaboration with the Ministry of Education, Jeollabuk-do, and the National Research Foundation of Korea, JBNU participated in the Glocal University 30 Project and acted as a driver of the regional innovation by building strong communication and cooperation networks among the province, university, and industry. The Strategy Forum also provided a platform for universities, local government, industries, educators, and students to discuss the innovation expansion model and gather feedback from both on-site and online participants.



JBNU was Selected for the "Intelligent Innovation Talent Training Project"

JBNU was selected in 2024 for the Regional Intelligent Innovation Talent Training Project as the host institution for Korea's southwestern region in partnership with Wonkwang University and Jeonbuk Technopark. The project aims to strengthen regional industrial competitiveness by integrating intelligent information technologies into education and research.





EQUAL RIGHTS FOR ALL GENDERS

JBNU Recognizes Gender Equality and Empowerment of Women and Girls as an Important Responsibility

JBNU makes institutional efforts to reflect gender equality values across education, research, and administration through education for employees, operation of dedicated organizations, and academic activities.



International
collaboration
32%

Data source: Scopus (as of October 8, 2025)



Research Highlight

A Random Forest Model Identified Lifestyle and Substance-Use Behaviors as Key Predictors of Adolescent Sexual Experiences, Supporting Integrated Health Interventions

This study developed a predictive model for adolescent sexual experiences using the random forest method, based on data from the 2019–2021 Korea Youth Risk Behavior Survey (167,099 participants). The model incorporated 44 variables and showed strong performance across multiple evaluation metrics. The findings suggest that sexual health education should be integrated with interventions on internet use, smoking, and alcohol behaviors, and highlight the utility of random forest analysis in public health research.

Research



28 Scholarly
Output



0.4 Field-Weighted
Citation Impact



81 Citation
Count

Data period: 2020–2024 |
Data source: SciVal (as of September 24, 2025)

JBNU Activities

JBNU's LMS Online Violence Prevention Training Completion Guide

JBNU conducts mandatory annual violence prevention training for faculty, students, and staff to prevent sex trafficking, sexual assault, and domestic violence. JBNU also offers educational programs to cultivate the right values about sexuality and maintain dignity as members of the university. To ensure the active participation of its members in these programs, JBNU reflects the completion of these educational programs in faculty performance evaluations and personnel assessments.



Counseling and Reporting Channels for Sexual Violence and Sexual Harassment

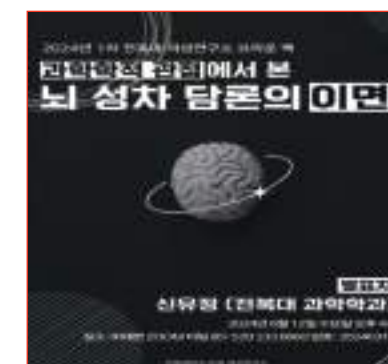
JBNU's Human Rights Center ensures that all members of the university can continue their studies and research in a safe and respectful environment by guiding them through victim protection procedures, investigations, and actions, as well as by providing educational materials and guidelines on sexual harassment and sexual violence prevention. By promoting a safe and trustworthy organizational culture, JBNU creates an environment that fosters equal leadership opportunities and decision-making participation of female faculty, students, and staff.



JBNU Center for Gender, Sexuality and Women's Studies Signed an MoU and Hosted an Online Seminar

Since its establishment in 2016, the JBNU Center for Gender, Sexuality and Women's Studies has pursued the goal of "research and practice for the realization of a gender-equal society," fostering an academic foundation and engaging in community-based activities.

Through the MoU, JBNU's Women's Studies Institute has taken a significant step towards establishing gender governance within the province and identifying practical policy alternatives to foster a sustainable culture of gender equality. They also conduct online seminars and forums aimed at knowledge dissemination and academic exchange. For instance, "2024 First Brown Bag Seminar: The Hidden Dimensions of Brain Sex Difference Discourses from a Science Studies Perspective," was organized in 2024, thereby sharing gender discourses both within and beyond the university.





ACCESS TO CLEAN DRINKING WATER

JBNU Maintains Onsite Water Quality Management, Installs Rainwater Harvesting and Purification Systems for Water Reuse, and Enhances Sanitation Facilities and Hygiene Education Across Campus to Ensure a Safe and Hygienic Environment

JBNU's sustainable water management system via collaboration with the local community to strengthen its management system provides equal benefits to university members and visitors.



Papers cited at least once
92.4%

Data source: Scopus (as of October 8, 2025)



Research Highlight

PVA/Carrageenan Hydrogel Membranes Demonstrated Highly Efficient, Reusable Adsorption of Methylene Blue, Offering a Sustainable Solution for Dye Removal from Water

This study demonstrated higher dye-removable rates (kappa 98.8%, iota 97.0%, and lambda 95.4%) for polyvinyl alcohol (PVA)/carrageenan membranes in comparison with PVA. The results highlight the role of steric hindrance and sulfate group composition in the adsorption performance of PVA/kappa-carrageenan (147.8 mg/g).

Research



266 Scholarly Output



1.52 Field-Weighted Citation Impact



6,595 Citation Count

Data period: 2020–2024 |
Data source: SciVal (as of September 24, 2025)

JBNU Activities

Improving Local Water Quality and Strengthening Water Management Capacity

The Jeonbuk Green Environment Support Center, hosted by JBNU, carries out a wide range of research and support activities to address environmental challenges and improve water management in local communities through evidence-based research and support projects in areas such as water quality management, waste treatment, and air quality improvement.



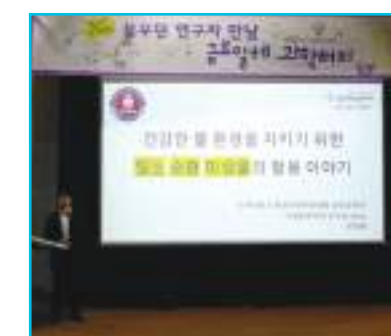
Contribution of JBNU's Water Environment Research Center to the Local Water Industry

JBNU actively participates in industry-academia-research-government collaborations to promote the development of the water industry in the Honam region. The Korea Water and Wastewater Works Association supports domestic water companies by promoting technologies, developing export markets, hosting the annual WATER KOREA exhibition, organizing Korean pavilions at overseas fairs, and arranging consultations with international buyers.



Lecture by Prof. Jeonghwan Jang, JBNU on Protection of Healthy Water Environment

The lecture on the topic '*Utilizing Nitrogen-Cycling Microorganisms to Protect a Healthy Water Environment*' highlighted nitrogen pollution in rivers and lakes leads to eutrophication, algal blooms, and declining water quality. The use of microorganisms involved in the nitrogen cycle was presented as a key strategy to address this issue; these microorganisms can naturally break down nitrates and ammonia, return nitrogen to the atmosphere, or convert toxic compounds in water into harmless forms.



Free Drinking Water for Students, Staff, and Visitors

JBNU has 23 water purifiers currently functioning within the campus, covering busy locations like the lobby, as well as student-use facilities such as club halls, the Buan Training Center, the Disability Rights Center, the Athletic Department facilities, etc. Through a service contract with a company specializing in water purifiers, monthly inspections are carried out, and hygiene management such as regular filter replacement, disinfection, and steam cleaning are implemented.





ENSURE AFFORDABLE AND CLEAN ENERGY

JBNU Advances Clean Energy Through
Research, Education Programs, and
Community-Based Initiatives

JBNU contributes toward expanding renewable
energy, fostering innovative human resources, and
achieving carbon neutrality for a sustainable society.



120
Students trained in
renewable energy programs

Data source: Scopus (as of October 8, 2025)



Research Highlight

Mo₃Se₄-NiSe Heterostructure Nanowires Deliver Efficient, Stable, and PGM-Free Electrocatalysis for Hydrogen Production from Alkaline and Seawater Electrolysis

This study reports a Mo₃Se₄-NiSe heterostructure core-shell nanowire array on nickel foam, synthesized via a single-step hydrothermal process, as an efficient electrocatalyst for hydrogen evolution reaction. Both experimental and theoretical analyses confirm that the Mo₃Se₄-NiSe interface offers abundant active sites, optimizes binding energies, and lowers reaction barriers. These findings provide a promising route for designing platinum group metal (PGM)-free, stable, and efficient catalysts for large-scale hydrogen generation.

JBNU Activities

Regional Energy Transition Policy Forum

JBNU co-hosted the 5th Citizen-Participation Regional Energy Transition Policy Forum to explore local strategies for expanding renewable energy and achieving carbon neutrality. Policy alternatives included solar panels in public parking lots, resident-participating energy cooperatives, and community energy governance.

Hydrogen Industry Talent Training

Selected for the Regionally Linked Hydrogen Industry Innovation Talent Project, JBNU fosters specialized talent for the hydrogen industry. The program collaborates with leading companies and research institutes, creating a localized hydrogen workforce linked to high schools, universities, and industry.

Energy New Industry Open Campus

JBNU operated a hands-on open campus program for students from five local universities and top nationwide universities. The training covered clean energy technologies, practical exercises, and industry mentorship to help students develop professional competencies.

2024 E-SynC Solar Camp

2024 E-SynC Solar Camp trained 40 students selected from local universities in Jeonbuk as well as major universities nationwide across two sessions in solar module manufacturing, solar cell education, and team-based projects, strengthening the clean energy capabilities of local students.

Jeonju Future Cities Forum

JBNU partnered with Jeonju City and UCLG ASPAC to discuss sustainable urban development and clean energy transitions. Sessions highlighted participatory energy governance, climate action strategies, and urban innovation based on renewable energy.

Jeonbuk Carbon Neutrality Forum

JBNU led discussions on regional energy transition, showcasing examples from European countries and emphasizing stakeholder engagement, institutional improvement, and policies for scaling renewable energy in Jeonbuk.

Natural History Museum Exhibition

The "Hotter Earth, Forests Are the Answer" exhibition raised awareness on climate change and carbon neutrality. Interactive programs and exhibits enabled the public to learn about carbon storage, renewable energy, and recognize the importance of small actions to reduce carbon footprints.

Research



1,032 Scholarly
Output



1.82 Field-Weighted
Citation Impact



26,842 Citation
Count

Data period: 2020–2024 |
Data source: SciVal (as of September 24, 2025)





SECURE WORK ENVIRONMENT AND ECONOMIC STABILITY

JBNU Promotes Fair Labor Practices, Equality, and Safe Work Environments

JBNU contributes to sustainable economic growth by protecting labor rights, fostering inclusive workplace policies, advancing gender equality research, and ensuring decent work conditions for faculty, staff, and students.



Employee Council supporting Freedom of Association

approx. **1,700** members



Research Highlight

The Impact of Perversity Rhetoric on Minimum Wage Reform Differs by How Governments Legitimize Reforms—Cognitively in Japan vs Morally in Korea

This study examines the role of perversity rhetoric—the claim that reforms worsen the conditions they seek to improve—in shaping minimum wage reforms in Japan and South Korea. In Japan, cognitive legitimation framed reform as apolitical and value-neutral, slowing change but limiting backlash. In Korea, moral legitimation accelerated early reform, but weak conflict management led to widespread perversity rhetoric and eventual reversal.

Research



124 Scholarly Output



1.53 Field-Weighted Citation Impact



1,700 Citation Count

Data period: 2020–2024 |
Data source: SciVal (as of September 24, 2025)

JBNU Activities

Union and Collective Bargaining

JBNU guarantees labor rights and freedom of association for its faculty and staff, with various official organizations and unions existing for this purpose. This demonstrates the implementation of the International Labour Organization (ILO) core conventions that stipulate “freedom of association and the right to collective bargaining.” In 2024, emotional labor leave and cumulative night shift leave were established through wage and collective bargaining at JBNU hospital. This demonstrates improvements in working conditions as a result of labor-management dialogue and negotiation.

Human Rights Center

The Human Rights Center ensures a safe and respectful environment for faculty and students. It handles counseling, fact-finding, remedial measures, and education regarding human rights violations and harassment. This systematic approach supports the elimination of workplace discrimination and guarantees labor rights.

Violence Prevention Education

JBNU conducts annual legally-mandated violence prevention education for all faculty, staff, and students. Produced by expert institutions, the training addresses harassment and discriminatory behavior, with participation strictly monitored. This program demonstrates the university's proactive role in protecting the human rights of its employees and fosters a safe, inclusive, and respectful workplace and learning environment.

Gender Equality Research Collaboration

The Women's Research Institute of JBNU partnered with the Jeonbuk Women and Family Foundation in October 2024 to promote joint research, host seminars, and support community initiatives advancing gender equality. Co-hosting academic events, such as seminars and workshops promotes academic exchange and discourse on the culture of non-discrimination. These efforts address discrimination and exclusion, foster inclusive policies, and contribute toward narrowing the gender pay gap.





RESILIENT INFRASTRUCTURE, INNOVATION AND INDUSTRIALIZATION

JBNU Strengthens Industrial Innovation
Through Research, Entrepreneurship, and
Global Collaboration

JBNU supports the building of resilient infrastructure,
promotes sustainable industrialization, and fosters
innovation that drives inclusive economic growth at
both regional and global levels.



Annual economic
value generated

₩6.3 trillion



Research Highlight

Cementless UHPC Using Alkali-Activated Materials Achieves High Performance with up to 75% CO₂ Reduction, Advancing Sustainable Construction

This paper reviews cementless ultra-high-performance concrete (UHPC) developed with alkali-activated materials and industrial byproducts. As per the findings, the cementless UHPC can reduce CO₂ emissions by 70–75%, offering significant environmental benefits. Recent advances include strain-hardening UHPC with improved tensile performance and innovative formulations using hydrated lime and calcium oxide without traditional alkali activators.

Research



335 Scholarly
Output



1.20 Field-Weighted
Citation Impact



5,392 Citation
Count

Data period: 2020–2024 |
Data source: SciVal (as of September 24, 2025)

JBNU Activities

Economic Impact and Regional Development

JBNU generates an estimated 6.3 trillion KRW annually. In 2024, it produced KRW 1.3128 trillion in production-induced effects, KRW 752.6 billion in value-added effects, and supported 16,655 jobs in the Jeonbuk region, accounting for 1.34% of the region's gross regional domestic product (GRDP). With over 5,000 graduates annually, their projected future earnings total KRW 134.451 trillion. These impacts are strengthened through the RISE System and the Glocal University 30 Project.



Nurturing Startups and Technological Growth

JBNU's Business Incubation Center fosters local startups, strengthening industrial competitiveness and innovation. Nine companies were recognized as excellent SMEs by the Ministry of SMEs and Startups, developing products in biotechnology, materials, and renewable energy. These startups create jobs, boost the regional economy, and exemplify the focus on inclusive industrial development and innovation ecosystems.



Global Collaboration with Vietnam

JBNU established an Industry-Academia Cooperation Center at Vietnam's Vinh University to enhance education and research in veterinary science and animal husbandry. The partnership focuses on professional training, technology development, and R&D capacity-building, supporting universities with limited infrastructure, strengthening local innovation ecosystems and practical international cooperation.



Developing K-Medical Devices

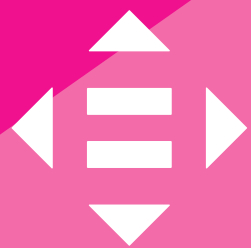
JBNU Hospital partnered with Hue University of Medicine and Pharmacy in Vietnam to develop K-medical devices and train local healthcare staff. The project introduces advanced medical technology, strengthens healthcare infrastructure, and builds a sustainable medical ecosystem, laying the foundation for future innovation and industry growth.



Enhancing Water Infrastructure

JBNU's International Development Cooperation Center was selected to evaluate water supply projects in Vietnam and Sri Lanka, worth over US \$99 million combined. The projects improved industrial and public water access, supported economic growth, and reduced disease incidence, demonstrating JBNU's role in strengthening infrastructure and fostering sustainable development.

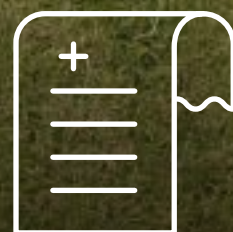




GUARANTEE EQUALITY

JBNU Promotes Equity Through Research, Community Programs, and Inclusive Healthcare Initiatives

JBNU supports socially disadvantaged groups by improving access to healthcare, cultural programs, and welfare services, fostering an inclusive society and reducing social and economic disparities.



Non-paid medical expenses provided

₩380 trillion



Research Highlight

The Impact of Perversity Rhetoric on Minimum Wage Reforms Depends on Whether Governments Use Cognitive or Moral Legitimation Strategies

This study investigates how perversity rhetoric—claims that reforms worsen the conditions they aim to improve—influence policy outcomes. By comparing minimum wage reforms in Japan and South Korea, it shows that differences stem from how governments legitimize reforms. In Japan, cognitive legitimation framed reform as neutral and apolitical, limiting backlash but slowing progress. In Korea, moral legitimation accelerated early reform but, without institutional conflict management, allowed perversity rhetoric to spread and eventually reverse the reform.

Research



59 Scholarly Output



1.09 Field-Weighted Citation Impact



595 Citation Count

Data period: 2020–2024 |
Data source: SciVal (as of September 24, 2025)

JBNU Activities

Human Rights Survey

JBNU Human Rights Center conducts annual surveys on discrimination based on gender, disability, and origin. Results guide policies and customized training to protect vulnerable groups and ensure equal rights on campus.

Barrier-Free Movie Screening

JBNU Museum hosted accessible screenings of Spring in Seoul and Escape with subtitles and voiceovers for hearing- and visually-impaired audiences, reducing cultural barriers and promoting equal participation.

Dental Care for Low-Income Children

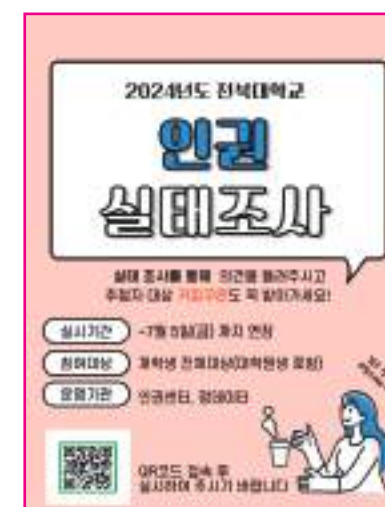
The College of Dentistry ran summer volunteer programs for children from low-income and multicultural families, providing equitable dental care and reducing health disparities in the community.

Mobile Dental Check-Ups for Disabled

The Oral Health Care Center conducts mobile check-ups and public health programs for people with disabilities. In 2023, 8,217 people received treatment, with KRW 380 million provided in unpaid medical expenses.

Healthcare Collaboration with Welfare Center

JBNU Hospital and Jangsu-gun Welfare Center signed an MoU to improve medical access for elderly and disabled residents in rural areas, deploying specialized personnel for home visits and health programs to reduce service disparities.





SUPPORTING LOCAL COMMUNITIES AND CULTURAL HERITAGE

JBNU Is Involved in City and Community Development and Sustainability Through Community Outreach, Expanded Cultural Accessibility, and Support for Arts and Cultural Heritage

JBNU contributes to supporting community education, maintaining and repairing cultural heritage and infrastructure, as well as supporting and incorporating local community in university activities.



JBNU's Western Jeonbuk Cultural Heritage Care Center was ranked

#1 nationwide in 2024



Research Highlight

Toxicity and Ecological Risks of Metal Oxides, Synthetic Dyes, and Dissolved Organic Matter in Water Systems

This review addresses the issue of water pollution caused by metal oxides, synthetic dyes, and dissolved organic matter, highlighting their persistence and toxic effects. It examines their sources, environmental fate, and prevalence in natural waters and wastewater effluents. The study emphasizes their impacts on human health, microbial communities, aquatic flora and fauna, and overall ecological balance. Its novelty lies in presenting a clear and accessible overview of the toxicity of these contaminants.

Research



107 Scholarly Output



1.42 Field-Weighted Citation Impact



1,964 Citation Count

Data period: 2020–2024 |
Data source: SciVal (as of September 24, 2025)

JBNU Activities

JBNU Museum Education Programs

In July 2024, JBNU Museum offered a cultural heritage experience by providing exhibitions and hands-on educational programs for school students. In addition, the museum led a humanities education program, "Opening Punngammun Gate and Entering Jeonju Fortress" and "Thursday Cinema Muse" to ensure the participation and contribution of local community members in cultural life.



JBNU-Operated Western Jeonbuk Cultural Heritage Care Center

Being selected as the top center nationwide, Western Jeonbuk Cultural Heritage Care Center manages the monitoring, routine maintenance, and minor repairs of approximately 385 cultural heritage sites in the western region. These activities provide an institutional foundation for cultural heritage preservation and safety management while strengthening a collaborative framework with local communities.



Special Exhibition of Purchased Artifacts at JBNU Museum

JBNU Museum held a special exhibition in 2024, "Entering: Accepted and Received," to share artifacts acquired between 2020 and 2023 with the local community. This program provided the cultural enjoyment opportunities for students and local residents.



Community Spatial Welfare Realization Project

- 10 Faculty members and undergraduate students participated in the project
- Space improvement project for the Yeongsaeng Senior Center in Jeonju and the Yangjitteum Youth Group Home in 2024



JBNU Central Library's "Forest of Contemplation, Embracing Art" Program

This event aimed to facilitate cultural exchange with the local community, and included reading booths, performances and lectures, and a flea market featuring local artistic creations and small businesses. Humanities lectures for students and local communities were also conducted, expanding the library's social role as a space for knowledge and cultural sharing.



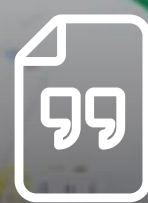


REDUCING WASTAGE THROUGH SUSTAINABLE PRACTICES

JBNU Takes Initiatives to Reduce Consumption and Wastage of Resources

JBNU adopts a multilayered approach for realizing international goals of responsible consumption and production on campus and in the community.

Bye Bye Plastic



Papers cited at least once
85.5%

Data source: Scopus (as of October 8, 2025)



Research Highlight

Mechanochemical Ball-Milling Enables Solvent- and Catalyst-Free Recycling of Plastics into Valuable Monomers Through a Green, Economical Process

This study introduces a green and economical method for chemical recycling of commercial polycarbonates and polyesters, including poly(bisphenol A carbonate), poly(ethylene terephthalate), and poly(lactic acid). Using mechanochemical ball-milling with methanol, the process achieves quantitative depolymerization into monomers or valuable chemical units without solvents or catalysts. The key energy requirement lies in creating physical contact between plastics and methanol, which ball-milling effectively provides. The method offers a sustainable, low-input recycling strategy with simple outputs, and a broad practical potential.

JBNU Activities

Environmental Protection Activities of JBNU's Volunteer Club Oasis

Oasis regularly organizes plogging (picking up trash on the side of the road while jogging) campaign on campus and in nearby areas, demonstrating that environmental protection can be adopted as a daily practice for all university members.

JBNU Undergraduate Student's Research on Plastic Recycling

The research article titled, "Optimized mechanical properties of carbon fiber reinforced thermoplastics by tuning polymer chain length based on quad-screw extrusion," discusses the challenges of plastic recycling and has been published in the latest issue of the SCIE-indexed journal, Polymer Composites.

"Bye Bye Plastic Challenge"

As an active step toward reducing the use of single-use plastics and spread a sustainable consumption culture, JBNU's hospital director Hee Chul Yu joined the nationwide campaign, demonstrating the effectiveness of engaging educational and medical institutions in reducing plastic use through a national campaign.

JBNU's Dangerous Substances and Experimental Waste Disposal Policy

Since June 2024, JBNU has adopted a waste transport system in which a professional company weekly collects liquid waste and designated hazardous waste. This initiative reduces the risk of safety accidents and minimizes the environmental burden.

JBNU's Waste Generation Measurement and Recycling Management Policy

JBNU systematically manages recyclable waste generated on campus in compliance with Articles 13 and 14 of the Wastes Control Act and Article 7 of the Enforcement Decree of the Act. Through the institutional system of waste management, the university is demonstrating its sustainable campus operations and responsible consumption and production practices.

Research



190 Scholarly Output



0.99 Field-Weighted Citation Impact



3,124 Citation Count

Data period: 2020–2024 |
Data source: SciVal (as of September 24, 2025)





STRENGTHEN CLIMATE CRISIS RESPONSE

JBNU Functions as a Knowledge Base and Action Platform for Climate Crisis Through Concrete Actions in Academia, Policy, and Education

JBNU paves the way for climate action with local and international universities through exhibitions, research, and collaborations between the university, local government, and the international community.



Top journal publications
103

Data source: Scopus (as of October 8, 2025)



Research Highlight

CuS@1T-N-WS₂/WO₃ Nanohybrids Enable Efficient and Selective CO₂ Reduction to Formate with High Activity and Stability

This study reports a novel CuS-decorated 1T-N-WS₂/WO₃ nanohybrid electrocatalyst for the selective electrochemical reduction of CO₂ (ECO₂RR). The catalyst favors the *OCHO pathway, efficiently converting CO₂ to formate (HCOO⁻) as the primary product. At -1.3 V vs. RHE, it achieves a Faradaic efficiency of 55.6% ± 0.5 with a current density of -125.05 mA cm⁻². The system demonstrates excellent activity, selectivity, and stability, highlighting material choice as crucial for advancing selective ECO₂RR technologies.

Research



217 Scholarly Output



1.66 Field-Weighted Citation Impact



4,238 Citation Count

Data period: 2020–2024 |
Data source: SciVal (as of September 24, 2025)

JBNU Activities

Special Exhibition “Hotter Earth, Forests Are the Answer” Conducted by JBNU Museum of Natural History

The exhibition was part of an educational program to raise awareness of the climate crisis and spread the importance of carbon neutrality to the local community. It provided an opportunity to experience and learn about climate crisis response and the importance of carbon neutrality.



Strengthening Government–Local Cooperation and Climate Response Capacity

- The E-SynC special lecture was organized in collaboration with the Jeonju Institute for Local Governance, under the theme “The Case of Jeonju City and the Current Status of Climate Technology.”
- An industry–government–academia seminar was hosted by the College of Agriculture and Life Sciences under the theme “Digital Agriculture and the Promotion of the Smart Farm Industry for Climate Change Response.”
- The Jeonbuk state established the “Carbon Neutral and Green Growth Basic Plan (2024–2033)” to prepare a long-term climate response strategy at the regional level.

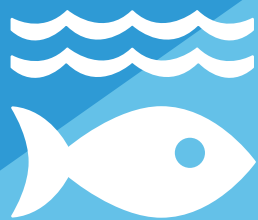
Hosting the International Symposium EREM 2024 and Exchanging Climate Change Response Technologies

The symposium aimed to assemble scholars and experts worldwide to discuss environmental pollution problems that leads to climate change and the technologies to respond to them.

Han Kyoung Kim, at Climate Modeling Laboratory, conducted a study to analyze the impact of marine ecosystem on the future tropical cyclone activities using climate models.

Raising awareness of the climate crisis in the local community by hosting environmental health film screening and talk concerts.





PROTECTING LIFE BELOW WATER

JBNU's Substantial Contributions to the Sustainable Use and Conservation of Marine Ecosystems by Using the Ocean as a Base for Knowledge and Innovation

JBNU is engaged in the preservation of marine biodiversity, sustainable utilization of marine resources, and conservation activities through international cooperation.



Alternative Seaweed Meat and Aquaculture Meat Technology Development Project

₩6.25 billion



Research Highlight

Aloe Vera-Derived Biochar Electrodes Achieved Highly Sensitive and Stable Electrochemical Detection of Microplastics, Outperforming Starfish-Based Biochar

This study developed two biochars from starfish (SF-1) and aloe vera (AL-1) via carbonization and applied them as electrode materials for electrochemical detection of ~100 nm polystyrene microplastics. Structural and morphological analyses confirmed their suitability, and electrochemical studies revealed high sensitivity. AL-1 showed excellent repeatability and stability, highlighting its potential for reliable microplastics detection. The enhanced sensitivity was attributed to the metal-carbon framework present in AL-1.

Research



76 Scholarly Output



1.35 Field-Weighted Citation Impact



1,273 Citation Count

Data period: 2020–2024 |
Data source: SciVal (as of September 24, 2025)

JBNU Activities

Preserving Marine Biodiversity by Securing Rare Marine Fish Specimens

JBNU Professor Emeritus Ik-Soo Kim systematically donated type specimens of unique marine fishes discovered along Korea's west coast to the National Marine Biodiversity Institute of Korea (MABIK), contributing to the conservation of marine biodiversity.



Participating in Microalgae-Based Alternative Seafood Meat Technology Development

JBNU participated as a co-research institution in the project, which was led by Pukyong National University and supported by the Ministry of Oceans and Fisheries. JBNU also participated in an industry-academia consortium for developing eco-friendly binding agents and tissue proteins from marine sources.



Development of Innovative Marine Control Material for Low-Sulfur Oil Spill Response

JBNU's research team led by Professor Nam Chang-Woo, in collaboration with Chonnam National University, has developed an exothermic oil-absorbing material that can effectively respond to low-sulfur oil spills used in marine vessels, and has been proposed for international collaborative research on marine spill prevention materials.

MoU Signed for Global Cooperation on Utilization of Ocean Deep Water

Through this MoU, the Korean community in the Africa-Middle East region will actively use and promote "Saranghae 300," a premium bottled water of Deepbada Ltd., spreading the value of sustainable utilization of marine resources as well as Korea's national defense to the world.



JBNU Incubator to Support Marine Bio Startups

Coolbears, a tenant company of the JBNU Incubator, received the Minister of Oceans and Fisheries Award for developing and commercializing marine biological-based functional processing agent textile application technology at the "Marine Bio Commemoration Ceremony" in 2024.





CONSERVING LIFE ON LAND

JBNU Provides a Practical Model for Protecting Terrestrial Ecosystem and Sustaining Biodiversity

JBNU is spreading the value of life conservation with the local community, focusing on endangered species protection, wildlife welfare, and ecosystem education.



Funding for Graduate School of Wild Life Disease Characterization

₩1.05 billion



Research Highlight

CN@CNP-Pt Nanonetworks with Ultralow Pt Loading Enable Highly Efficient Freshwater and Seawater Electrolysis, Outperforming Conventional Catalysts

This study presents an efficient electrocatalyst, CoNi@CoNiP heterostructure nanonetworks implanted with ultralow Pt single atoms (CN@CNP-Pt), for hydrogen evolution via water electrolysis. CN@CNP-Pt shows remarkable performance with low overpotentials of 22 mV (HER) and 75 mV (OER) at 10 mA cm⁻², significantly outperforming CN@CNP alone. The enhanced activity arises from the large active surface area, abundant active sites, superior charge transfer, and Pt-induced electronic structure modulation, demonstrating strong potential for economical and sustainable hydrogen generation.

Research



79 Scholarly Output



1.01 Field-Weighted Citation Impact



864 Citation Count

Data period: 2020–2024 |
Data source: SciVal (as of September 24, 2025)

JBNU Activities

Wildlife Hospital Experience Event for Local Children

As part of the National University Education Project, the Jeonbuk Wildlife Rescue and Management Center of JBNU provided wildlife protection and work experience education to local elementary school children in 2024. The program helped the children understand the importance of wildlife and the need for biodiversity conservation.



Pet Hanmadang 2024

The Pet Fair “2024 Pet Hanmadang” was held to spread pet culture and raise awareness regarding animal welfare. The event was organized as a festival for the community, academia, and industry, with many animal-related companies participating as sponsors and directly linked to the targets of SDG 15 by promoting the protection and adoption of abandoned animals, raising awareness of companion animal welfare and health management, and fostering collaborative participation with the local community.



Winter Bird Watching Experience Event with Local Residents

The Jeonbuk Wildlife Rescue and Management Center, operated by JBNU and led by Professor Jae Ik Han, organized a winter migratory bird observation program for local residents and students in November 2024, allowing participants to visit key migratory bird habitats in the region, observe wintering birds and their environments firsthand, and receive education on wildlife protection and ecological conservation based on these observations.



The 2nd Graduate School of Wildlife Disease Characterization

This three-year graduate program led by the Ministry of Environment will systematically train master's- and doctoral-level specialists. The program aims to cultivate experts with capabilities in the diagnosis, treatment, prevention, and management of wildlife diseases.



Forest Experience Education

This program is held in the Deokjin Academic Forest (Geonjisan), targeting local kindergarten, elementary, middle, and high school students. Through activities such as forest exploration, treasure hunts, hammock play, and planting, the program helps participants connect with nature and learn the importance of environmental protection, cooperation, and community spirit.





BUILDING STRONG AND JUST INSTITUTIONS

JBNU Aims to Build Peaceful and Just Institutions

JBNU's multilayered efforts toward demonstrating the university's role as a social institution that embodies publicness, transparency, and participation in practice.



Papers have been
cited at least once
78.6%

Data source: Scopus (as of October 8, 2025)



Research Highlight

Both Perceived and Actual Bullying Norms Shape Student Roles, and Correcting Misperceptions Can Reduce Bullying and Strengthen Defending Behaviors

This study examined the roles of perceived and actual bullying norms, and their misperceptions, in shaping elementary school students' behaviors in bullying situations. Data from 890 students across 34 classrooms in South Korea revealed that empathy, perceived norms, and actual anti-bullying norms each had unique effects on bullying roles. The study results suggest that interventions should focus on correcting misperceptions of peer attitudes to reduce bullying and promote prosocial responses.

JBNU Activities

Operation of Student Representative Councils

On September 26, 2024, the 56th Student Council announced the convening of the 3rd General Student Representative Meeting as an official body which ensured democratic decision-making.

Operation of the Finance Committee

To ensure transparency and accountability in the university's financial operations, budget data and revenue, and expenditure details for the 2024 and 2025 academic years and the minutes of the Finance Committee meetings are made available for download on the budget status page of the university's website.

Local Government Policy Advisory

JBNU contributes directly to the formulation of policies in local communities and government by leveraging its academic expertise and research capabilities. In 2024, the University Industry-Academic Cooperation Foundation was selected as the executing institution for the "2024 Budget Performance Management Research Project."

Local Council Ethics and Code of Conduct

JBNU actively contributes to the enhancement of institutional governance and public administration within the local community. This year, the Jeonbuk State Council newly established the 6th Ethics and Code of Conduct Advisory Committee and held its appointment ceremony.

Participation in Local Policy Forums

In 2024, the Agriculture, Welfare, and Environment Committee of the Jeollabuk-do Provincial Council and the Economic Committee of the Jeollabuk-do Sustainable Development Council jointly hosted the "Sustainable Labor Policy Forum" to address the high proportion of non-regular employment. Professor Jun Ho Chae of the Department of Business Administration at JBNU was invited as the keynote speaker to deliver a presentation on "Labor Policy Considerations for a Sustainable Job Model."

Democratic Public Forums

On November 8, 2024, the International Center at JBNU hosted a lecture titled "Regional Extinction: What Should Be Done and How?" which addressed regional extinction crisis.

Research



28 Scholarly
Output

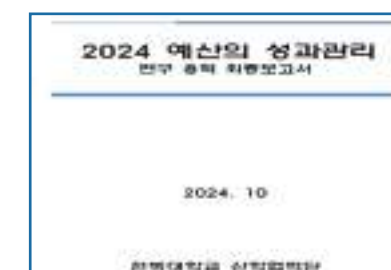


0.77 Field-Weighted
Citation Impact



178 Citation
Count

Data period: 2020–2024 |
Data source: SciVal (as of September 24, 2025)





PARTNERSHIPS TO ACHIEVE GOALS

JBNU Develop Local and Global Collaboration
to Achieve the Sustainable Goals

JBNU demonstrates the core values of SDG 17
in terms of collaborating with governments
and NGOs, educating students on the SDGs,
expanding community engagement, and
providing experiences in sustainability practices.



1st
in Korea to conduct
'INDICODE'
for international development
cooperation experts



Research Highlight

Forest Fire and Smoke Detection Using Deep Learning-Based Learning Without Forgetting (LwF)

This study focuses on AI-based automatic forest fire and smoke
detection using image recognition techniques. To address the
limitations of pre-trained CNN models with small datasets, transfer
learning and LwF were implemented on different models. Among all
the models, the Xception model achieved the highest accuracy and
LwF, effectively maintaining classification ability across tasks.
The findings demonstrate that LwF-enhanced transfer learning
significantly improves performance for early forest fire detection,
outperforming existing methods.

JBNU Activities

Development Cooperation Week Events

The JBNU hosted events that aimed to give local residents and university members
the opportunity to directly learn about and experience international development
cooperation (ODA) as well as the SDGs.

Partnership with Hyundai Research Institute

Through an MoU with Hyundai Research Institute, JBNU is strengthening its
expertise in the field of international cooperation. In addition, the Korea International
Cooperation Agency (KOICA) provides various opportunities for students through
this agreement.

Korea's First International Development Cooperation Expert Relay Seminar Series "INDICODE"

JBNU launched INDICODE in November 2022 as a monthly seminar series on
development cooperation, and it has been held consistently, totaling 17 sessions by
November 2024.

JBNU as Evaluation Agency

JBNU has been selected as the evaluation agency for water supply projects in
Vietnam and Sri Lanka, totaling USD 99 million, constructed under the Korean
government's Economic Development Cooperation Fund (EDCF) program and for
bridges in Tanzania and Vietnam worth approximately KRW 400 billion last year.

Multisensory Therapy Room

In collaboration with global NGO Asia Exchange Association, JBNU established a
multisensory therapy room at Laos' National Rehabilitation Center, to support
children in urgent need of sensory development.

Sustainable Labor Policy Forum

This forum addresses the non-regular workers and measures for creating quality
jobs. Senior Researcher Si-Baek Kim of the Jeonbuk Research Institute delivered a
presentation on the "Monitoring Report on Youth Start-up Rates and Closure Rates,"
following the keynote presentation by JBNU professor Jun Ho Chae (Department of
Business Administration) on "Labor Policy Considerations for Sustainable Job
Models."

Research



3,983 Scholarly
Output



1.3 Field-Weighted
Citation Impact



88,650 Citation
Count

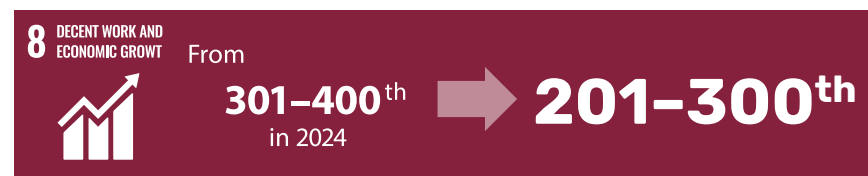
Data period: 2019–2023 |
Data source: SciVal (as of October 22, 2025)





Times Higher Education Impact Rankings 2025

101–200th



2024

**SUSTAINABLE
DEVELOPMENT
GOALS REPORT**



JEONBUK NATIONAL UNIVERSITY

567 Baekje-daero, Deokjin-gu, Jeonju-si,
Jeonbuk State, 54896 Republic of Korea
T.+82.63-270-2114 F.+82.63-270-2188



<https://www.jbnu.ac.kr/eng>