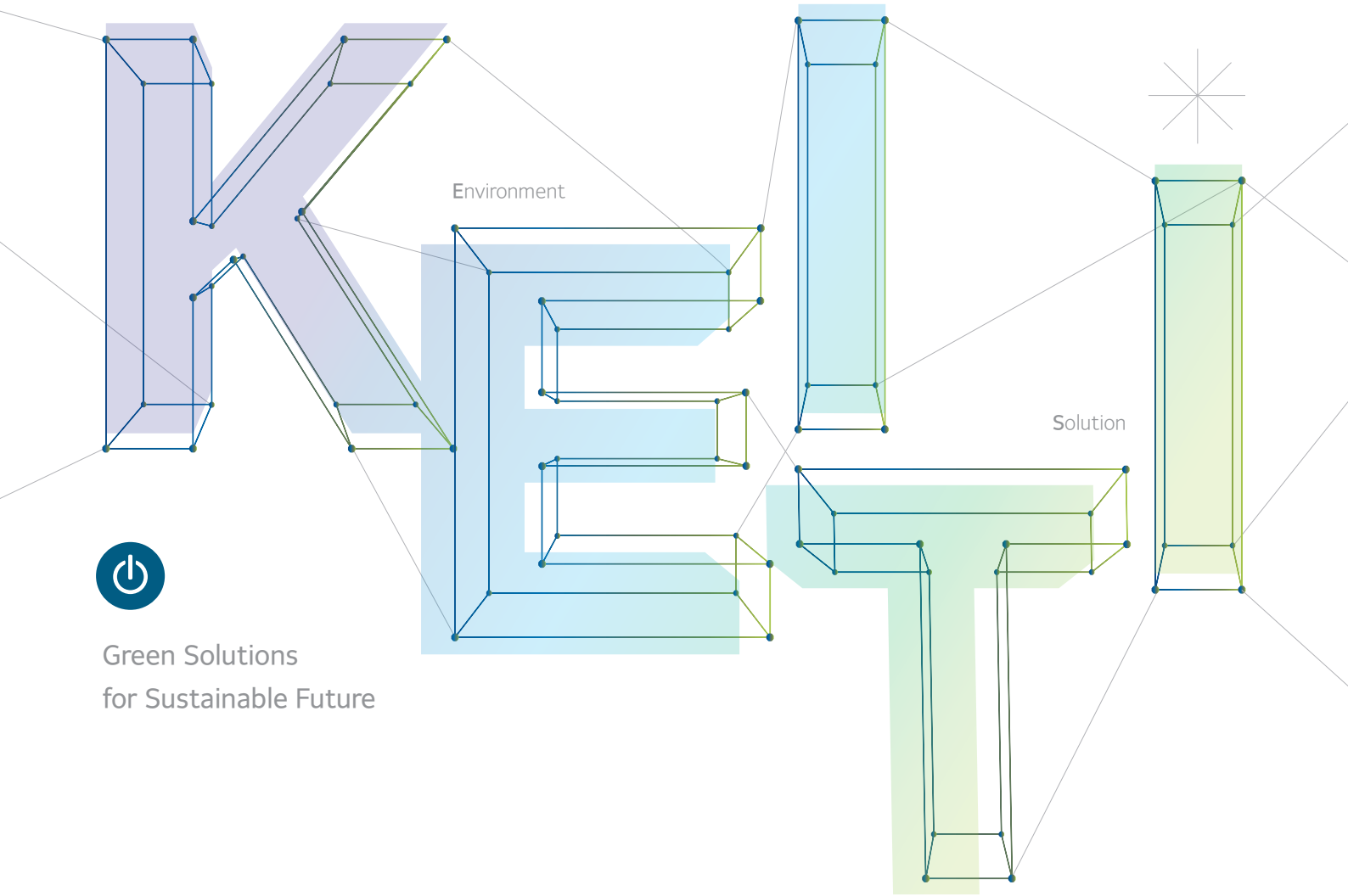


2022

# Sustainability Report

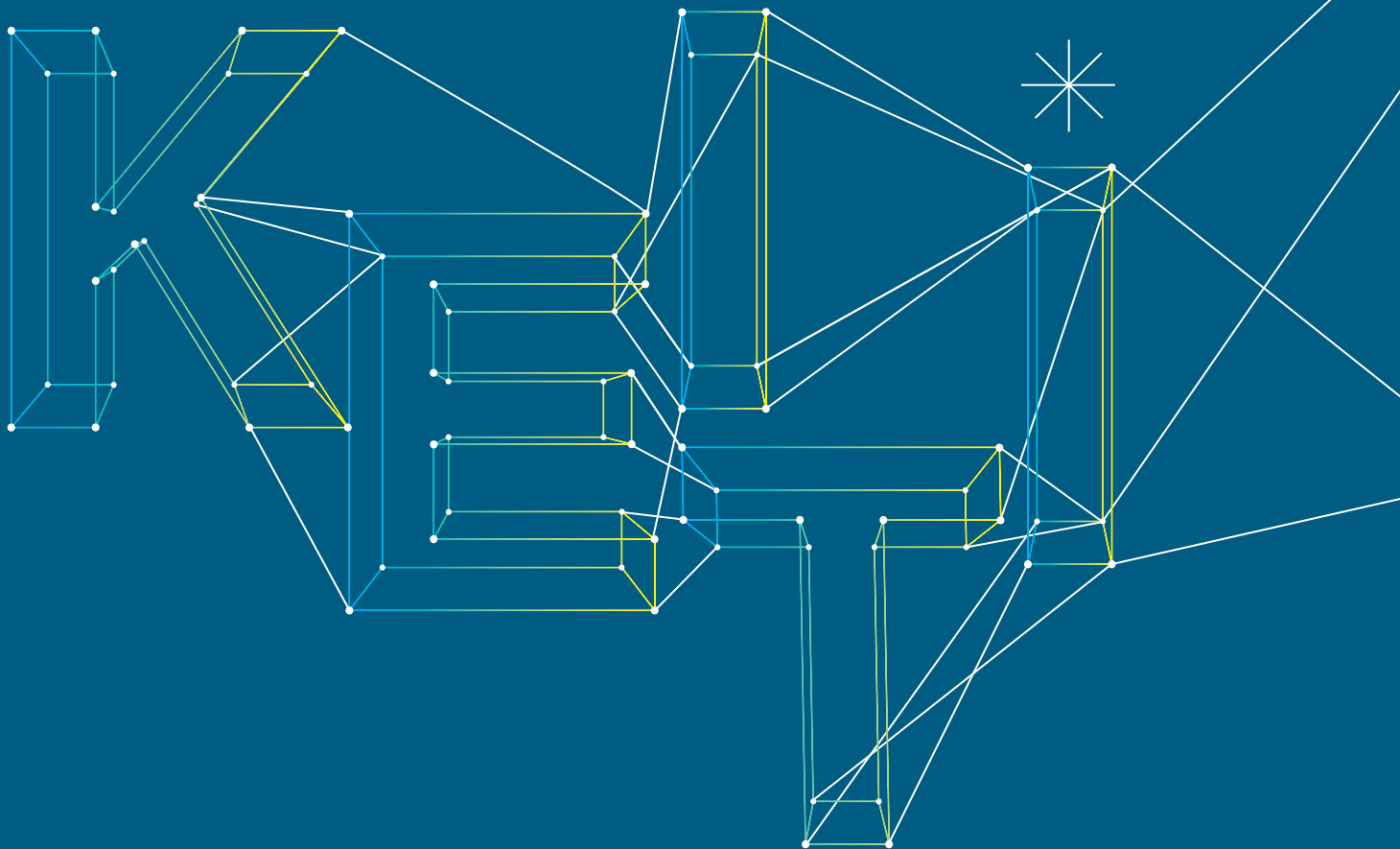


Green Solutions  
for Sustainable Future

# About this Report

<b>Report Overview</b>	The Korea Environmental Industry & Technology Institute (KEITI) is a quasi-governmental organization under the Ministry of Environment and published the 2022 Sustainable Management Report to transparently disclose the activities and achievements of the past two years and communicate with our stakeholders. This is the third report published by the KEITI, and we promise to continue to publish our sustainability reports on a regular basis to communicate with our internal and external stakeholders.
<b>Reporting Period and Scope</b>	This report qualitatively and quantitatively describes and reports activities and achievements from January 1, 2021 to December 31, 2022. Quantitative performance records the three-year performance on the environment, society, and governance of the institution.
<b>Reporting Principles</b>	This report complies with the core standards of the Global Reporting Initiative (GRI) Standards and reflects the contents of the International Standards for Social Responsibility (ISO 26000), the ten principles of the United Nations Global Compact, and the United Nations Sustainable Development Goals (SDGs).
<b>Assurance</b>	To ensure the reliability of the reporting information, the report was verified by BSI Group Korea, an independent third-party external assurance agency.
<b>Inquiries Related to the Report</b>	The report has been published in Korean and English and can be downloaded from the website of the Korea Environmental Industry and Technology Institute ( <a href="http://www.keiti.re.kr">www.keiti.re.kr</a> ). If you have any questions about the report, please contact us at the contact information below.

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## President's Message

### “The Korea Environmental Industry & Technology Institute will create a way for people and nature to coexist.”

Thirty years have passed since the international community adopted the 1992 Rio Declaration, but the world is suffering from a surge in natural disasters due to unprecedented abnormal weather, and the very lives of the island nations in the Pacific Ocean are threatened by the rising sea levels. Now that the climate crisis is no longer a problem of the future ahead but a very real issue in the present, it has become a major task and a mission of the global community to solve together. In addition, we are facing various new environmental problems such as fine dust that has become common occurrence, increased waste due to our excessive use of plastic, and the safety of chemical products used in our daily lives, lacking detailed information and warning on its potential harm. Responding to the climate crisis and addressing environmental issues have become key to a sustainable future and an important factor in determining national competitiveness in the new international economic order. In this climate crisis era, the KEITI will do its best to solve environmental issues through constant innovation, secure competitive edge in the global market, and the best services regarding all things environmental.

#### **First, we will strive to secure competitive edge in future core technologies and promote innovative growth in the green industry.**

We support R&D to accelerate the realization of carbon neutrality and solve national environmental issues such as micro-plastic and household waste recycling. In particular, we will expand our support for key environmental technologies that can help the spread of ESG and the transition to carbon neutrality, such as climate change response, carbon reduction, and active promotion of recycling. In addition, in order to secure competitiveness in the global environmental market, we would like to contribute to green economic value creation by fostering the green industry as a future growth engine.

#### **Second, we will take the lead in establishing a green consumption culture that leads to value consumption.**

We operate a Korea Eco-label that encourages the public to trust and use green products and encourage companies to willingly produce green products. Through this, companies and consumers together are contributing to the establishment of a sustainable consumption and production culture by creating a virtuous cycle. In addition to expanding distribution channels to revitalize the private sector's supply of green products, we will lead the production of green products consumers choose and the overall public consumption that is environmentally friendly.

#### **Third, we will strive to provide more comprehensive environmental health services for the environmentally vulnerable.**

We are expanding practical support to actively find victims suffering from environmental pollution such as humidifier disinfectants and asbestos and for them to receive assistance more easily and quickly. In addition, we will provide environmental health services to the physically, socially and economically vulnerable groups such as children, and strengthen safety management so that people can confidently purchase and use household chemical products.

In the future, KEITI will continue to solve numerous environmental challenges and will develop into the best environmental specialized institution trusted by the public through responsible ESG management. We would like to ask for your continued interest and support in this endeavor.

March 2023

**Choi Heung-jin**  
President of the Korea Environmental Industry & Technology Institute





# KEITI Overview



The Korea Environmental Industry & Technology Institute was founded as a quasi-governmental organization affiliated to the Ministry of Environment. By developing environmental technologies, fostering environmental industry, and spreading eco-friendly lifestyles, KEITI is contributing to improving environmental welfare services for citizens and to achieving sustainable national development.

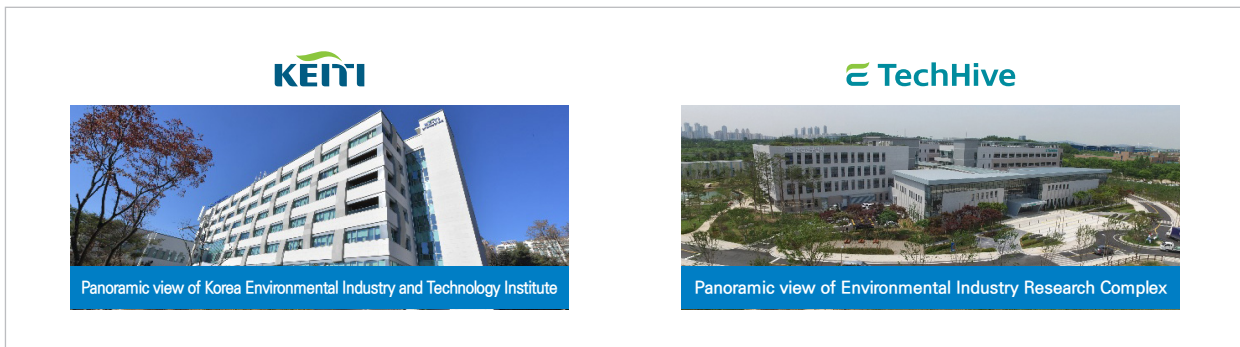
## General Information

As of December 2022

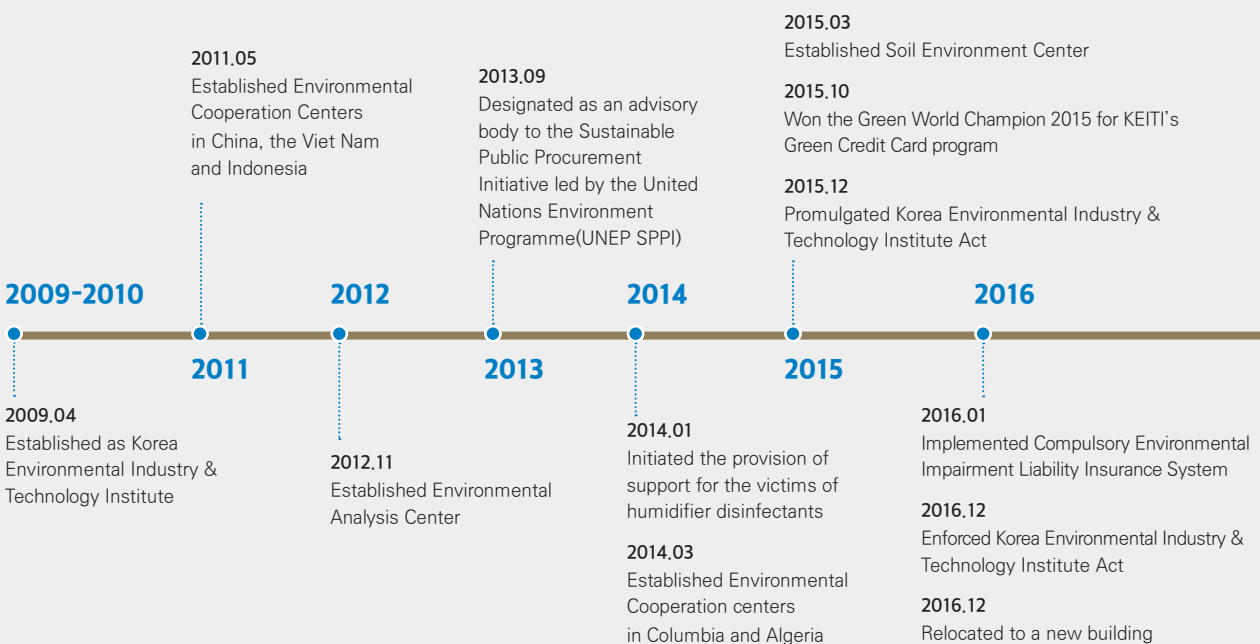
Institution Name	Korea Environmental Industry & Technology Institute	Location	215 Jinheung-ro, Eunpyeong-gu, Seoul
Date of Establishment	April 8, 2009	Governing Organization	Ministry of Environment
Legal Grounds	Korea Environmental Industry and Technology Institute Act	No. of Executives and Employees	688
Institution Type	Commissioned-service type quasi-governmental institution	Organizational Structure	2 headquarters, 5 divisions, 1 group, 35 offices-centers, and TF

## Personnel Status (as of December 2022)

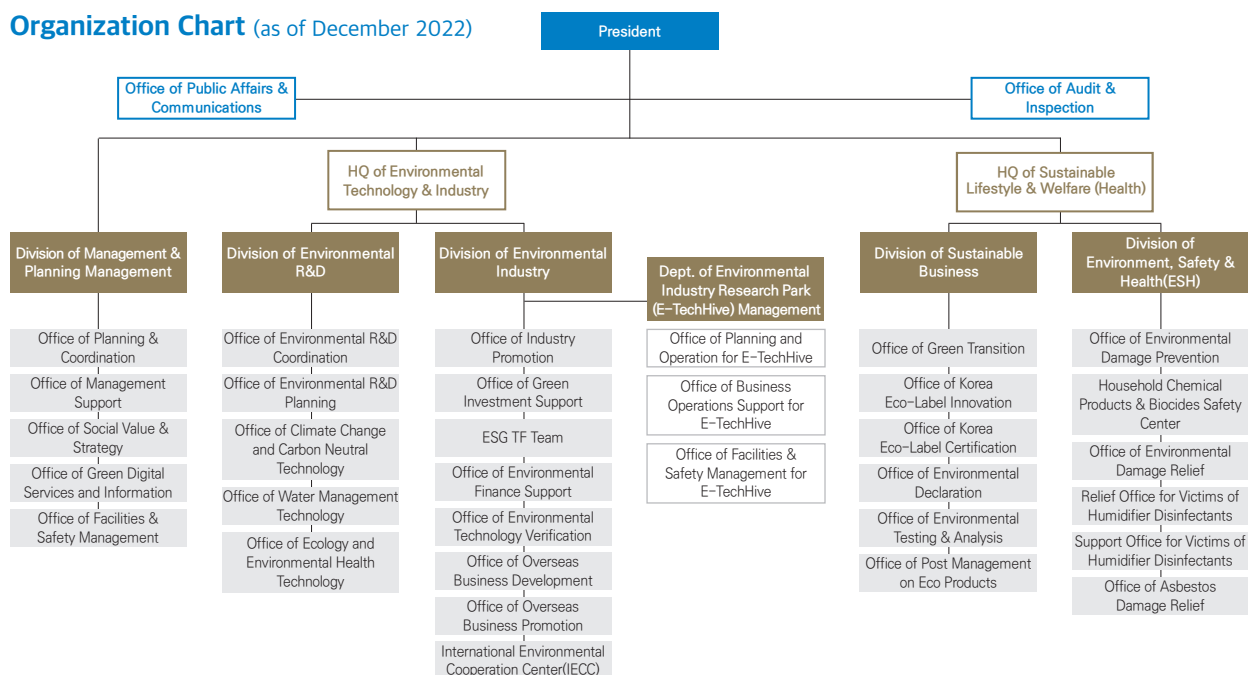
**3** executive directors   **398** regular workers   **287** indefinite-term contractors   **25** non-regular workers   **297** female employees



## History



### Organization Chart (as of December 2022)

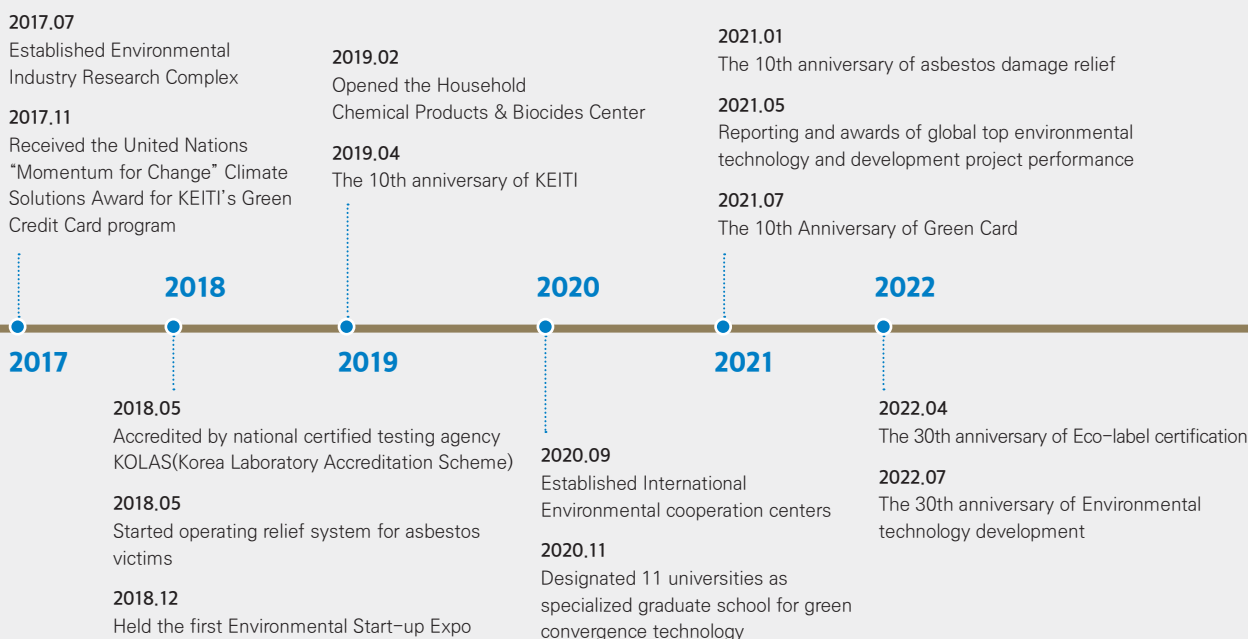


**Overseas Offices** China Office, Vietnam Office, Indonesia Office, Algeria Office, Colombia Office

### Budget Status

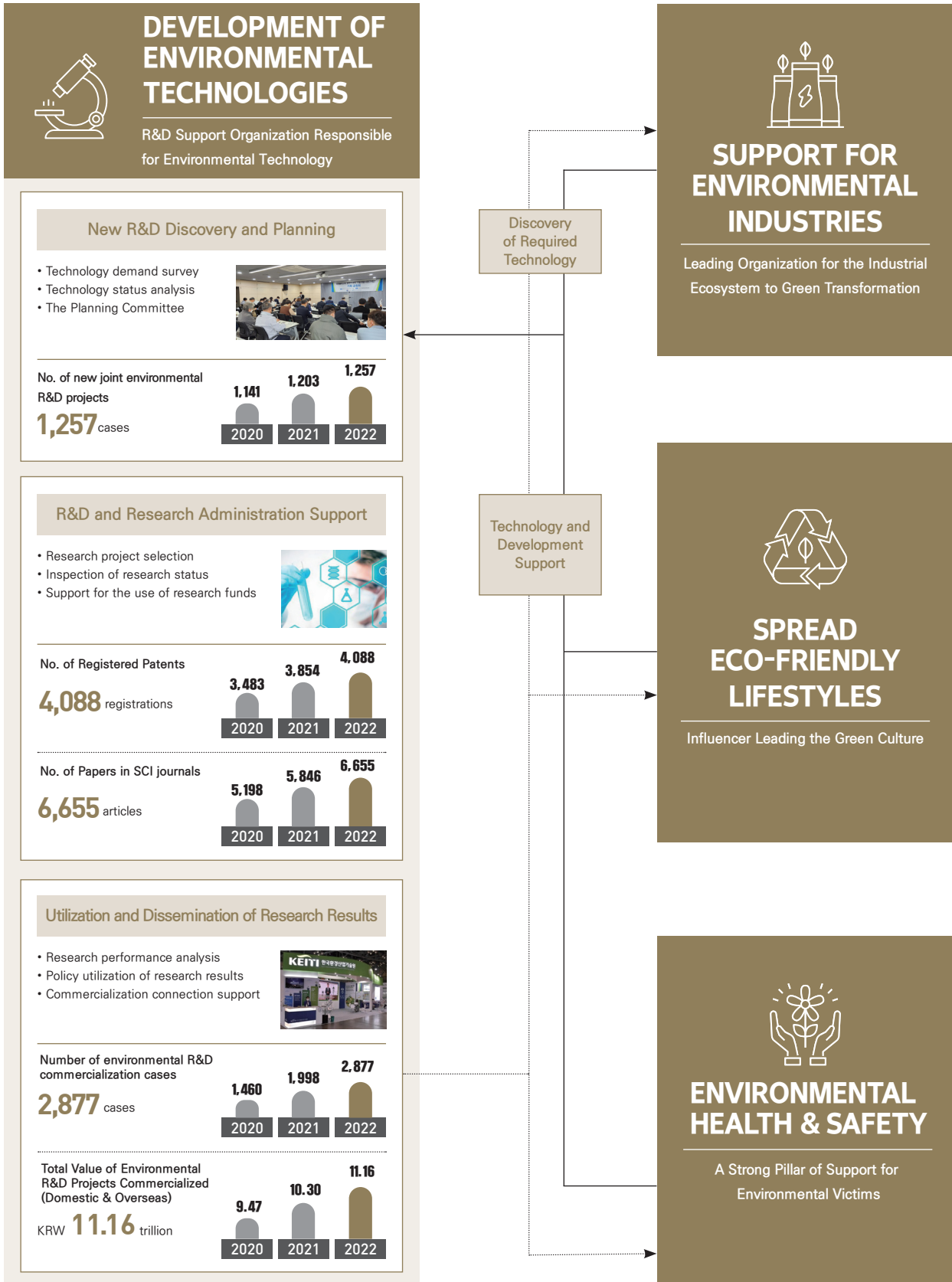
(KRW Million, %)

Category	2021(A)	2022년(B)	Increase and decrease (C=B-A)	Change rate (C/A)
<b>Total</b>	1,106,961	1,036,618	▲ 70,343	▲ 6.4
1. Development and Use of Green Technologies	283,830	313,875	30,045	10.6
2. Green Industry Activation	653,077	542,268	▲ 110,809	▲ 17.0
3. Eco-friendly Products and Lifestyles Support	25,676	29,756	4,080	15.9
4. Environmental Health and Safety Support	109,279	108,797	▲ 482	▲ 0.4
5. Institutional Operation	35,099	41,922	6,823	19.4



# KEITI's Main Businesses


We strive to become an institution that prepares for a new future by continuously providing environmental solutions to create a sustainable national foundation.





### Fostering Environmental Companies and Human Resources

- Environmental start-up support
- Business scale expansion
- Nurturing environmental workforce manpower




Sales of environmental companies

KRW **3.68** trillion

Year	2020	2021	2022
Sales (trillion KRW)	1.73	2.79	3.68

### Green Finance Support and Management

- Green financing support
- Scale-up Support Program
- Financial support for green companies



Total Amount of Loans Taken Out from Environmental Policy Funds (cumulative)

KRW **3.45** trillion

Year	2020	2021	2022
Loans (trillion KRW)	2.42	2.88	3.45

### Green Companies Overseas Expansion

- Consulting for overseas expansion
- Trade shows with overseas buyers
- Provision of international environmental data and information



Export Volume led by KEITI's Export Support Activities

KRW **1.78** trillion

Year	2020	2021	2022
Export Volume (trillion KRW)	1.15	1.53	1.78


Certification Acquisition Support

Product Improvement Recommendation

Green Product Production

### Operation of Environmental Certification System

- Korea Eco-Label
- Environmental Product Declaration (EPD)
- Testing and analysis of product eco-friendliness



Eco-label certified product

**18,765** products

Year	2020	2021	2022
Products	17,969	18,171	18,765


Environmental product declaration certified products

**1,867** products

Year	2020	2021	2022
Products	1,333	1,455	1,867

### Assessment of Resource Circular Utilization

- Assessment of Circular Utilization
- Circular Utilization Consulting




Circular utilization assessment product improvement rate

**33.7%**

Year	2020	2021	2022
Improvement Rate (%)	33.3%	31.1%	33.7%

### Promotion of Eco-Friendly Consumption

- Green Credit Card
- Designation of Green Stores
- Expansion of eco-friendly products



No. of Green Credit Cards Issued (cumulative)

**21.96** million cards

Year	2020	2021	2022
Cards Issued (million)	20.21	21.08	21.96


Sharing Product Information

Promoting the Use of Safe Products

Supporting Green Product

### Household Chemical Product Safety Management

- Chemical product safety check
- Danger risk assessment
- Safety management implementation support




No. of reported household chemical product safety standards (Regulation compliance rate)

**97,878** reports (79%)

Year	2020	2021	2022
Reports	51,205 (67%)	94,574 (69%)	97,878 (79%)

### Environmental Damage Relief System

- Registration and review of damage relief
- Damage recovery support



Environmental damage prevention and relief (Visiting service)

**45.0%**

Year	2020	2021	2022
Prevention Rate (%)	37.7%	43.3%	45.0%

### Environment & Health Services in Every life

- Prevention of environment-related diseases
- Inspection of children's facilities
- Management of environmental risk factors



Diagnose, offer consulting indoor environment of the vulnerable class

**1,902** locations

Year	2020	2021	2022
Locations	1,760	1,756	1,902

# KEITI ESG HIGHLIGHT

## [E] From Green Technology Development to Address Environmental Issues to Support for Green Industry Growth

KEITI supports the development of green technology, the spread of performance through actual field application, and the promotion of commercialization so that promising environmental companies with excellent technology can solve global climate and environmental issues and lead the future green industry. The technologies will lead the green transition, while the spread of research findings can be applied and utilized in the actual field. In connection with this, KEITI provides a foundation for growth so that environmental companies with excellent technology can grow through commercialization and market development.

### Support for Technology Development to Convert Waste Plastic into High-Quality Clean Recycled Oil: Eco-Creation

KEITI has made efforts to secure technical skills to solve the problem due to intensified environmental pollution caused by waste plastics, amounting to more than 3 million tons a year, and social problems such as incineration and disposal. As a key task for 2050 carbon neutrality, we promoted developing the technology of turning waste plastic-used materials into fuel to support the growth of the company we sponsor in areas such as technology development, new technology certification, investment attraction, and securing business demand. Through these efforts, this company is growing into a leading organization in the future green industry.

<p><b>Support for Waste Plastic Recycling Research</b></p> <p>A total of 29.7 billion won in research funds</p> <p>Support for attracting investment and securing demand sources (District Heating Corporation, etc.)</p> <p>* A total of 2.6 billion won provided to the companies concerned.</p>	<p><b>Securing the Highest Quality Renewable Oil Technology in Korea</b></p> <p>Certified as new environmental technology</p> <p>Link to KRW 6.8 billion in private investment attraction</p> <p>KRW 1.3 billion in overseas exports including the U.S.</p>	
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Size of environmental R&D support (2022)

KRW **351.4** billion

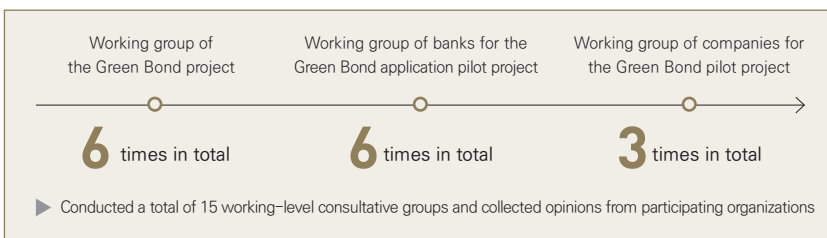
Environmental R&D commercialization performance (2022, cumulative)

KRW **11.16** trillion



## [E] Creating a Green Finance Market Based on the K-taxonomy

In 2020, in line with the global climate change response trend, Korea declared its national vision of “2050 greenhouse gas carbon neutrality” to reduce greenhouse gases, with carbon-neutral legislation. In response, KEITI is expanding the green bond system by developing and piloting a “K-taxonomy” to make green economic activities a new growth engine. KEITI presented clear principles and standards for green economic activities and went through social consensus and communication, including the operation of a joint consultative body to establish a successful system. Based on this, the guidelines for the K-taxonomy were announced in 2021, and they are being continuously improved and supplemented. Through the operation of the K-taxonomy, KEITI will be able to induce investment in eco-friendly projects and create a healthy green financial market that companies and the public can trust.



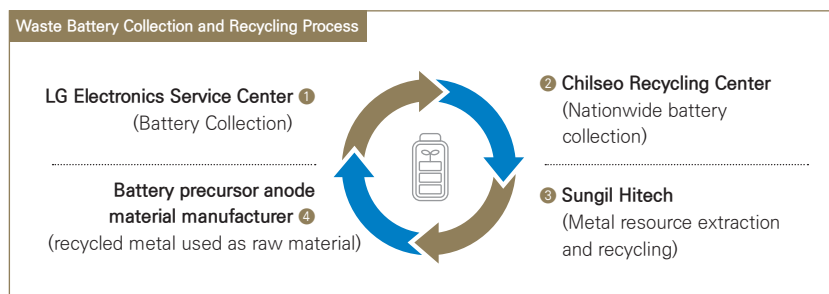
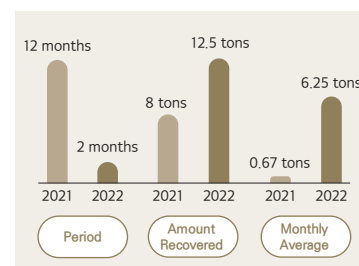
## [E] Joint Campaign for Resource Circulation for Transition to a Green Society

The national lifestyle is changing into a non-face-to-face consumption culture in the post-COVID era. Along with this, the increase in household waste is emerging as a serious environmental problem.

※ ↑ 18.1% of recycled waste ↑ 9.1% of plastic waste compared to pre-COVID level (Statistics Korea)

In order to build a sustainable circulation society, KEITI established a cooperative system with LG Electronics, to organize a “wireless vacuum waste battery collection campaign” under the slogan “Resource circulation in my life first.” By encouraging local residents to participate and providing rewards to returning customers in connection with Green Purchase Support Centers nationwide, despite 2 month of the short campaign period, 12,638 people participated in the campaign to collect about 12.5 tons of waste batteries. The collected waste batteries are being used to manufacture new batteries through a resource circulation process.

Comparison of Waste Battery Collection Increase Rate



Encouraged by the great participation from the public, we will strive to operate these endeavors through holding the campaign additionally from September 2022 to lead to a sustainable resource circulation culture instead of having this be a one-off campaign.

## [S] ‘ESG Open Innovation’ to Solve Local Environmental Issues

The Environmental Industry Research Complex houses companies with excellent environmental technology, but there are many difficulties in commercializing technology. The KEITI has piloted the ESG Open Innovation system, in which local communities and businesses work together to develop markets for environmental SMEs with promising technologies and solve local environmental issues at the same time. Open Innovation means the creation of new products and services in collaboration with external companies and institutions, not just within the company. It provides solutions in environmental problems for demand companies and local communities, while environmental companies gets chance of funding and technology partnerships.

We selected outstanding environmental companies with the ability to solve waste plastic problems arising from local districts and provided commercialization funds and opportunities for business collaboration with demand companies, Lotte Precision Chemicals. KEITI will continue to support small and medium-sized enterprises and solve local environmental problems to coexist together.






▲ ESG Open Innovation Business Agreement Ceremony (2022.08.)



[S] Providing Customized Support for Victims of Humidifier Disinfectant

KEITI continues to make efforts to quickly and fairly relieve victims and bereaved families who have suffered losses of life or health damages due to the use of humidifier disinfectants. In addition, the KEITI operates support service to overcome the difficulties and anxiety that victims face in their daily lives as well as provide damage relief. We are supporting personalized healthcare counseling by analyzing the victim's health and psychological status, and through cooperation with the Korea Legal Aid Corporation, we are filing a lawsuit against the perpetrators on behalf of the victim. Furthermore, in order to actively communicate with the victims and understand their needs, we are actively collecting their opinions and reflect them through community operation.



<p><b>Legal Support</b></p>  <p>In collaboration with the Korea Legal Aid Corporation, legal counseling, litigation representation, and litigation guidelines are supported for victims to be able to conduct the litigation process themselves.</p>	<p><b>Counseling Support (Calling U)</b></p>  <p>In collaboration with the Korean Association Of Occupational Health Nurses, professionals analyze the victim's health status and conducts personalized health care to provide close consultation.</p>	<p><b>Collaboration Support with Relevant institutions</b></p>  <p><b>(Ministry of Defense)</b> Ensuring medical treatment, educational training during service</p> <p><b>(Ministry of Education)</b> Academic administration support for elementary, middle and high school students</p> <p><b>(Fire Services Agency)</b> 911 relief calls for the severely ill and the elderly.</p>
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KEITI will continue to support victims of humidifier disinfectants to recover from the damages and return to their daily lives as soon as possible.

[G] Anti-bribery Management Systems(ISO 37001) Certification

As social demands for transparency and integrity in the public sector increasing, KEITI is actively striving to practice ethical management by establishing an institution-specific ethical and integrity model based on the "Standard Model for Ethical Management of Public Institutions" announced by the Ministry of Economy and Finance.

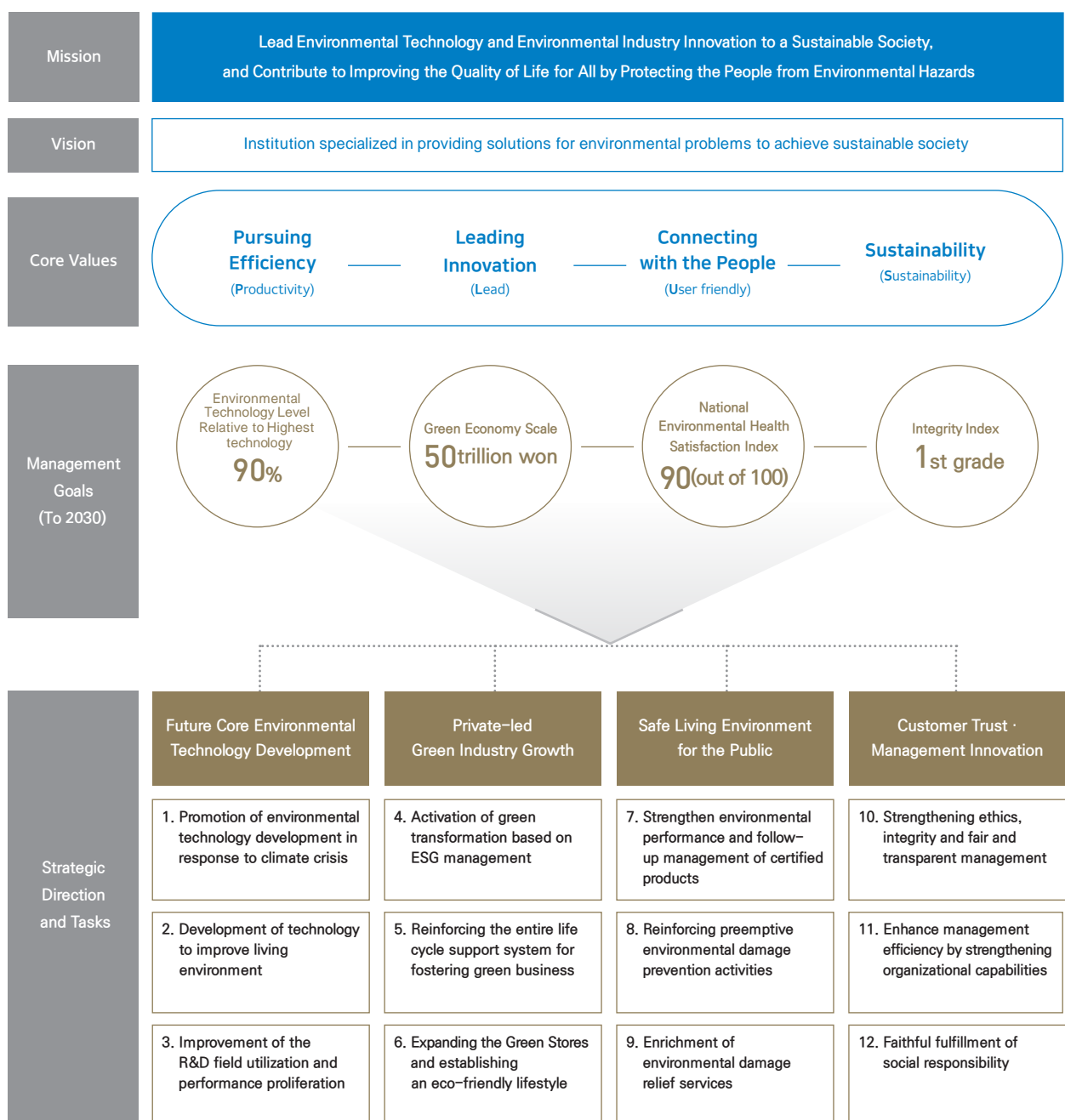
KEITI developed a corruption prevention management system manual, corruption risk assessment work guideline, etc., and identified corruption risk for each project and prepared a management system accordingly. Based on these efforts, KEITI has obtained the ISO 37001 certification in 2022 that meets international standards.



We will do our best to continue to be a transparent organization that is trusted by the public.

# Long-term Management Strategy

In 2021, KEITI declared a new vision of "Institution Specialized in Environment Solution for Sustainable Society" to lead the green transition for a sustainable society and to provide solutions for various environmental issues. In 2022, KEITI presented PLUS+ (Productivity, Lead, User-friendly, Sustainability), which means adding value to the environment, by emphasizing the balance of public benefit and efficiency. To achieve the new vision, we set four major management goals to be achieved by 2030 such as scaling up the size of green economy and reflecting on the status quo of the current green technology environment, and came up with 12 strategic tasks, reflecting the new government's policy directions such as expansion of the marketability of technology development, spread of ESG management base in the private sector, and improvement of institutional management efficiency. KEITI will secure public trust through sustainable management based on global level environmental expertise and establishment of responsible management.



### ESG Management Strategy

KEITI has established a strategic system that reflects ESG management elements throughout the entire business operation and has established and implemented ESG management strategies by combining ESG management capabilities. Reflecting the rapidly changing external environment, institutional capabilities, and requirements of stakeholders, we have set six strategic goals for the future of green society, safe social environment, and transparent management of public trust. To achieve the strategic goals, KEITI set with three strategic directions and ten tasks, and formed an ESG committee to continue to communicate with stakeholders such as citizens and companies.

Mission	Leading Innovation in Environmental Technology Industry Protecting People from Environmental Hazards					
Vision for the Institution	Institution specialized in providing solutions for environmental problems to achieve sustainable society					
ESG Vision	Environmental		Social		Governance	
	Green management practices for businesses, eco-friendly lifestyle for people		Preventing environmental disasters and coexistence with local businesses		Public reliability and trust for ethical and transparent management	
Strategic Goals (To 2025)	Leading the Green Economy	Reduction of Greenhouse Gases	Creating a Safe Environment	Shared Growth and Cooperation	Improving Integrity	Transparent Management Disclosure
	Global Level Green Classification System	15 million tons tCO <sub>2</sub> -eq Reduction	Safe Environment Improving Public Sentiment	Shared Growth Evaluation 1st Grade	Anti-Corruption Assessment 1st class	Disclosure Violation 0 cases
Strategic Direction	Leading Carbon Neutrality by Developing Green Technology Industry		Creating a Safe Living Environment and Revitalizing the Local Economy		Efficient and Systematic Organizational Operation Based on Fairness and Communication	
Strategic Tasks	<ol style="list-style-type: none"> <li>Establishment and revitalization of green management and industry standards</li> <li>Development of environmental improvement and carbon reduction technology</li> <li>Expansion of eco-friendly lifestyle throughout the country</li> <li>Resource circulation and energy independence practice</li> </ol>		<ol style="list-style-type: none"> <li>Development of environmental disaster response and health protection technology</li> <li>Reinforcing the safety of the people and employees</li> <li>Creating a shared growth ecosystem in the enterprise area</li> </ol>		<ol style="list-style-type: none"> <li>Practice of ethical management to improve public trust</li> <li>Open innovation organization operations based on communication</li> <li>Transparent disclosure of information</li> </ol>	

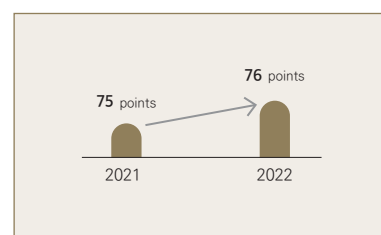
### Operation of the ESG Committee

KEITI has designated a dedicated organization to strengthen and internalize ESG management. In order to gather opinions from various stakeholders, the ESG Committee consisting of top management and external experts was established in 2021 to discuss the direction of ESG management performance creation and examine its performance.



### ESG Management Performance Index

ESG management has become an important factor in corporate valuation, but the institutional basis for ESG management performance in the public sector has not yet been established. Accordingly, KEITI developed its own ESG management diagnosis measurement tool consisting of 50 indicators by applying the 2021 World Federation of Exchanges ESG Metrics. Since then, the ESG Management Performance Index has been reorganized in 2022, reflecting the K-ESG guidelines and ESG management disclosures of public institutions, and ESG performance is continuously managed in a systematic manner.



# Stakeholder Communication

KEITI identified all stakeholders who directly or indirectly influence management activities, including employees, the people, the government, and the community, and operates customized communication channels of each groups for efficient communication.

## Communication Strategies for Each Stakeholder

Stakeholder	Main Issues	Communication channel	Communication performance
<b>Government and National Assembly</b>	<ul style="list-style-type: none"> <li>Implementation of national tasks and policy cooperation</li> <li>Strengthening public and efficiency</li> </ul>	<ul style="list-style-type: none"> <li>Environmental management consultative body</li> <li>Policy meetings and public hearings</li> </ul>	<ul style="list-style-type: none"> <li>Environmental management council meeting (1 time/quarter)</li> <li>Environmental R&amp;D policy meeting (2 times), Technology planning public hearing (3 times)</li> </ul>
<b>Relevant organizations/ partners</b>	<ul style="list-style-type: none"> <li>Creating a shared growth value chain</li> </ul>	<ul style="list-style-type: none"> <li>Institutional consultative body-meeting</li> <li>Performance sharing and profit sharing</li> </ul>	<ul style="list-style-type: none"> <li>Joint declaration of ESG management practice by R&amp;D specialized institutions (12 institutions)</li> <li>Performance sharing agreements (26 cases) and cooperative profit sharing (10 cases)</li> </ul>
<b>Employees</b>	<ul style="list-style-type: none"> <li>Implementing a healthy organizational culture</li> <li>Strengthening job competency and expertise</li> </ul>	<ul style="list-style-type: none"> <li>Monthly meeting and employee communication bulletin board</li> <li>Management strategy meeting</li> <li>Ethical business practice management committee and labor council</li> </ul>	<ul style="list-style-type: none"> <li>Conference day (4 times), Communication bulletin board (185 cases)</li> <li>Meeting of organizational culture innovation (4 times)</li> <li>Ethical management working committee (4 times) and Labor council (1 time/quarter)</li> <li>Joint 'Healthy Organizational Culture' campaign of labor and management (12 times)</li> </ul>
<b>Labor Union</b>	<ul style="list-style-type: none"> <li>Creating a co-prosperity culture between the employees and the management</li> </ul>		
<b>Customer (companies, research institutes, etc.)</b>	<ul style="list-style-type: none"> <li>Supporting corporate growth</li> <li>Creating a research-focused environment</li> </ul>	<ul style="list-style-type: none"> <li>Business meetings and research reports</li> <li>Expert forums and councils</li> </ul>	<ul style="list-style-type: none"> <li>Council of research complex tenants (1 time/quarter)</li> <li>Environmental labelling Regulatory Innovation Group (14 companies, 1 time/quarter)</li> <li>Environmental R&amp;D expert forum (5 times)</li> <li>Technology Policy Utility Committee (71 meetings)</li> </ul>
<b>Citizens</b>	<ul style="list-style-type: none"> <li>A safe and reliable living environment</li> <li>Low carbon transformation and ESG management</li> <li>A green culture to practice</li> </ul>	<ul style="list-style-type: none"> <li>Online channels such as homepage, SNS, etc.</li> <li>Environmental technology and environmental exhibition</li> <li>Public communication channels (supporters, market watchdog, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>Environmental R&amp;D performance exhibition and ECO-EXPO KOREA</li> <li>Environmental R&amp;D National Participation Group (70 people), Household chemicals market watchdog (102 people), Green washing market watchdog (56 people)</li> </ul>
<b>Press</b>	<ul style="list-style-type: none"> <li>Response to climate change and environmental issues</li> </ul>	<ul style="list-style-type: none"> <li>Opinions, press reports, meetings</li> </ul>	<ul style="list-style-type: none"> <li>Excellence and media coverage (46 cases)</li> <li>Interview with the president of the agency (3 cases)</li> </ul>
<b>Local residents and local governments</b>	<ul style="list-style-type: none"> <li>Social contribution and revitalization of the local economy</li> <li>Addressing local environmental issues</li> </ul>	<ul style="list-style-type: none"> <li>Community council</li> <li>Residents meeting</li> </ul>	<ul style="list-style-type: none"> <li>Local consultative body for public institutions (4 times)</li> <li>Regional shared growth council (6 times)</li> </ul>



## Stakeholder Opinion Reflection Performance

Through active communication with stakeholders, KEITI strives to enhance transparency in the overall operation of the institution, including business promotion and management, and to provide customized services to consumers.

Stakeholder	Main Opinions	Implementation
<b>Environmental R&amp;D Citizen Participation Group</b>	System improvement through participation in the overall environmental R&D process	<ul style="list-style-type: none"> <li>The 6th People's Participation Group (2020-2022) - Evaluation observation and task monitoring (911 times)</li> <li>The 7th People's Participation Group (2022-2024) in progress</li> <li>Environmental R&amp;D Excellence, 20 Selection Committee, R&amp;D Technology Online Showroom, etc.</li> <li>Presenting and reflecting opinions on system improvement (50 cases in total)</li> </ul>
<b>Pre-Entrepreneurs and Start-up Companies</b>	Support for discovering environmental start-up items that reflect public demand	<ul style="list-style-type: none"> <li>Conducting a national demand survey to support the discovery of environmental start-ups that the people need (about 20,000 people)</li> <li>Beneficial company won the Presidential Prize in the Integrated Start-up Competition in the waste recycling field and supporting technology development</li> </ul>
<b>Eco-Label System Regulatory Innovation Group</b>	Companies participate in discovery and improvement activities in regulatory areas	<ul style="list-style-type: none"> <li>Improvement of certification system in participation of representative certification companies (associations)</li> <li>Discover 39 improvement tasks, including simplifying procedures, expanding certification units, and clarifying standards</li> <li>Reduce the burden by reducing application fees and usage fees for SMEs (KRW 1 billion per year)</li> </ul>
<b>Consumer Market Watchdog</b>	Consumers monitor the market for illegal household chemicals and Greenwashing products	<ul style="list-style-type: none"> <li>Preventing illegal products by operating the consumer market watchdog</li> <li>Preventing violating advertisements for household chemical products (11,691 cases)</li> <li>Prevention of the spread of Greenwashing products (1,874 cases)</li> </ul>
<b>Civil Society Coalition</b>	Selection of best practices for safety management of household chemical products	<ul style="list-style-type: none"> <li>Green Consumer Solidarity, Green Purchase Network, and Labor Environmental Health Research Institute, associated to select 43 exemplary chemical reduction products</li> <li>Release of information on all 1,617 household chemical products to the public</li> </ul>

### Case Study : Reflection of Consumer Market Watchdog Opinions

#### Complete Withdrawal of the Violating Household Chemical from the Product Market through Direct Participation of Consumers

- For close management of the growing number of household chemical products, a year-round operation of citizen observers and expansion of voluntary participation in improvement by companies

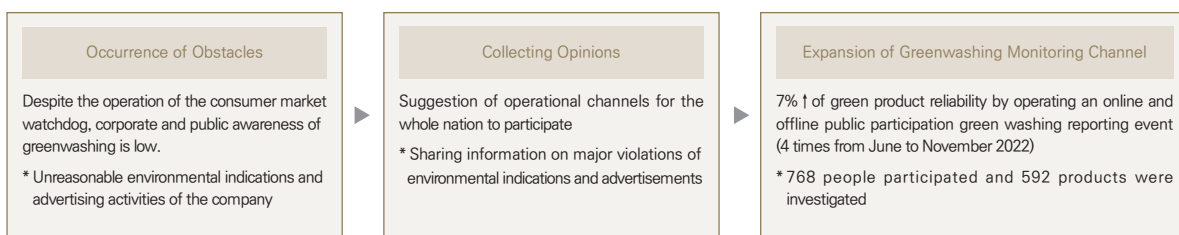
- ① 67% consumers are still anxious about household goods ② Continued increase in new chemical products ③ Diversification of distribution channels



#### Establishment of Order in the Green Product Market by Monitoring Greenwashing of Products

- Deploy market observing activities such as Greenwashing products and operate channels for public participation

- ① Increasing consumer interest in eco-friendly products ② Increasing corporate eco-friendly marketing ③ Consumer confusion due to greenwashing





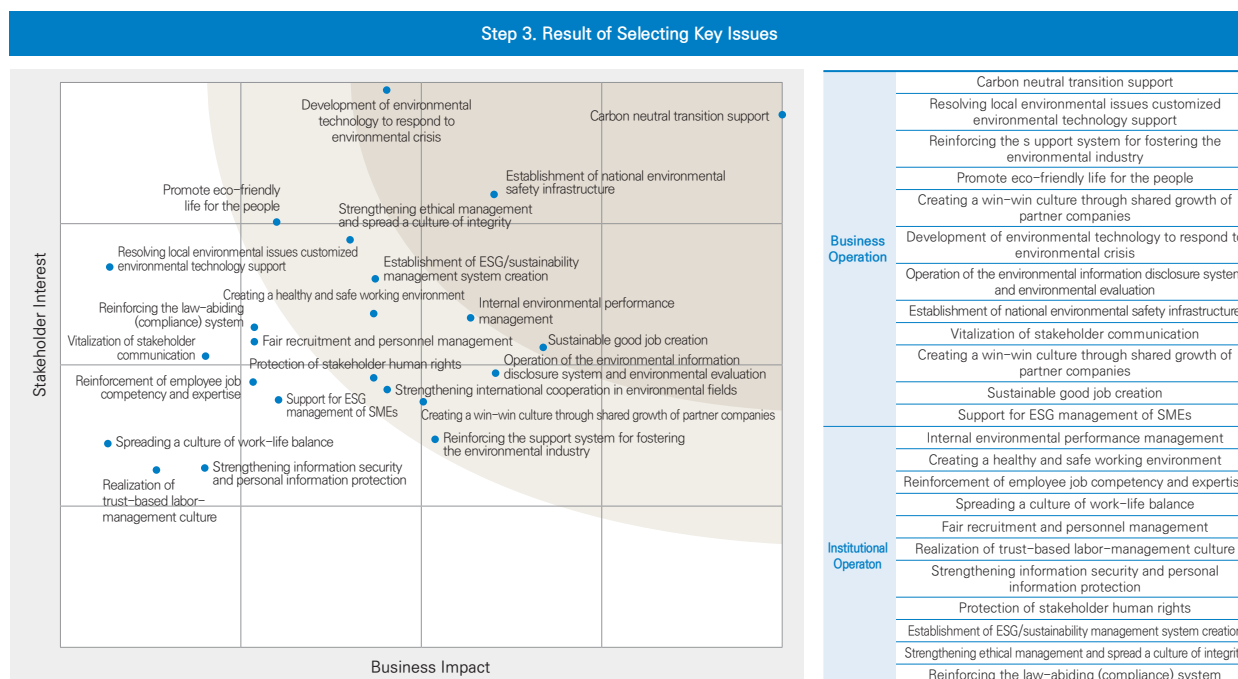
# Sustainability Management Issues

KEITI formed an issue pool based on the GRI Standards and conducted a criticality assessment based on the principle of gravity, such as analyzing stakeholder interest and business impact. As a result, 23 major issues of sustainable management were identified.

## Materiality Assessment Process



Identified a total of **23** major issues



## Core Issues

Material Issue	Report subject	Page
Carbon Neutral Transition Support	Inducing Low-Carbon Transition in the Industry / Establishment of a Carbon-Neutral Lifestyle / Carbon Neutral Practice to Save the Earth	22-25/28-30/31-33
Establishment Of National Environmental Safety Infrastructure	Public Safety, Environment Improvement Technology in Daily Life / Environmental Welfare without Blind Spots	35-36/37-38
Development Of Environmental Technology to Respond to Environmental Crisis	Future Core Technologies for Carbon Neutrality / Innovative Growth of the Environmental Industry Led by the Private Sector	19-21/26-27
Sustainable Good Job Creation	Sustainable Job Creation and Talent Development / Safe, Trustworthy Workplace / Happy Workplace	43-46/47-48/49-51



# KEITI Environment

Future Core Technologies for Carbon Neutrality  
Inducing Low-Carbon Transition in the Industry  
Innovative Growth of the Environmental  
Industry Led by the Private Sector  
Establishment of a Carbon-Neutral Lifestyle  
Carbon Neutral Practice to Save the Earth



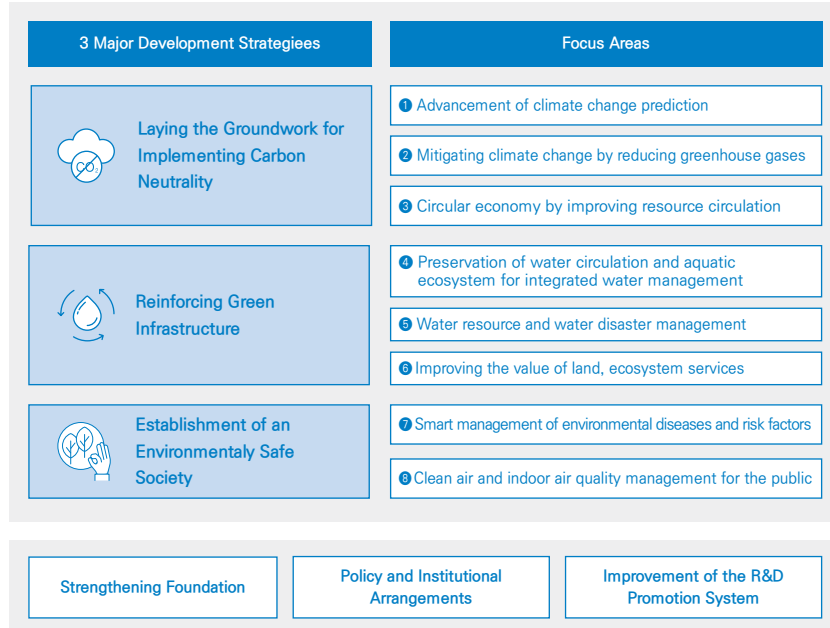
# Future Core Technologies for Carbon Neutrality

## Green Technology Development Strategy for the Future

KEITI continues to promote environmental technology to achieve 2030 national greenhouse gas reduction goals and 2050 carbon neutrality, contributing to improving the domestic technology level and living environment. In 2021, we have established a 'Environmental Technology Development Strategy (2021-2030)' that contains long-term R&D directions, to lead a sustainable green society and preemptively respond to future environmental issues.

Vision	Leading a Sustainable Green Society through Environmental Technology Innovation		
Core Goal			
Securing Global-Level Environmental Technology	Expansion of Green Industry Growth	Realization of Technology-based Environmental Policy	
Technology Level compared to Top Technology Countries ( '20) 81.1% → ('30) 90%	Commercialization Technology Commercialization Performance ( '11~'20) KRW 6.7 trillion → ('21~'30) KRW 9 trillion	Public Technology Policy Reflection ( '17~'19) 75% → ('30) 90%	

Current	Improved
Focus on short-term issues	Focus on future perspectives
Focused on single technology	Multi-disciplinary convergent technology
Only listing developed technologies	Includes R&D system improvement



## Technology Development for Climate Change Response and Carbon Neutrality

### Climate Change Mitigation / Adaptation and Greenhouse Gas Reduction Technology

In order to realize carbon neutrality, KEITI is focusing on technologies that can contribute to climate change mitigation by upgrading climate change prediction and reducing greenhouse gases. In 2022, 14 projects including the demonstration of blue hydrogen charging stations, the responding to new climate regime, and the proving Non-CO<sub>2</sub> greenhouse gas reduction, in amount of KRW 17.8 billion were conducted.

### Case Study

**Carbon dioxide capture system for manufactured hydrogen charging stations (Korea Institute of Energy Research)**

Development of collection system to minimize carbon dioxide emissions in urban bus garage manufacturing type hydrogen charging stations



**Circulation Usage and High Value-added Recycling Technology**

In order to transform into a circular economy society through resource circulation, we are developing the technology for the life cycle of waste circulation, from reducing waste generation to sorting, separating, raw materializing and reusing. In 2022, we invested KRW 18.6 billion for 24 projects, including improved circular utilization of products that inhibit recycling, developing the technology of turning waste plastic-used materials into fuel, promoting the recycling of waste resources generated in the future.

**Hydrothermal Utilization and Low-Energy Equipment Technology Development**

We are also making efforts to produce green energy and develop low-energy and high-efficiency core equipment technologies using water resources. In 2022, we invested KRW 20.9 billion in 14 projects, especially in developing of hydrothermal heating/air conditioning that can save 20% of energy used compared to the previous system, and innovating sewage and water supply system.

**Carbon Sink Management Technology**

KEITI has newly started the development of quantified evaluation technologies such as standardization of carbon absorption and storage capacity and valuation for wetland ecosystems in 2022. The project is expected to contribute to the improvement in coping with climate change and carbon absorption capacity as well as evaluation the value of wetland ecosystem and increase the value of carbon absorption.

**Climate Change Response and Carbon Neutral Realization Technology Development Promotion Project**

Area	Projects	2022 budget
Climate Change	Blue hydrogen charging station demonstration project	KRW 3.4 billion
	Responding to new climate regime	KRW 10.4 billion
	Proving Non-CO <sub>2</sub> greenhouse gas reduction technologies	KRW 4 billion
Resource Circulation	Improving circular utilization of products that inhibit recycling	KRW 2.7 billion
	Recycling of waste resources generated in the future	KRW 4.1 billion
	Conversion of waste resources-used energy	KRW 3.6 billion
	Turning waste plastic-used materials into fuel	KRW 5.2 billion
	Turning waste organic matter into high value-added basic materials	KRW 3 billion
Water Management	Hydrothermal utilization expansion and environmental suitability technology	KRW 1.9 billion
	Water and sewage low-energy high-efficiency equipment	KRW 19 billion
Carbon Sink	Wetland ecosystem valuation and value enhancement	KRW 3.7 billion

**Case Study**

**High-quality renewable raw materials from rural waste plastic bags (Dongmin Industrial Cooperative)**

Development of low-energy, high-quality recycled raw material production technology using low-quality rural waste plastic bags and wrap



**Case Study**

**Developed high-efficiency blower and diffuser at sewage treatment plant (Namwon Turbo One)**

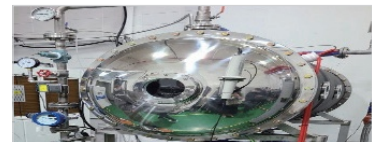
Installed high-efficiency turbo blower at Yeokgok sewage treatment plant in Bucheon



**Case Study**

**Low-energy ozone generator and demonstration plant (Haesung Engineering Inc.)**

Supplied low-energy ozone disinfection device to wastewater treatment plant

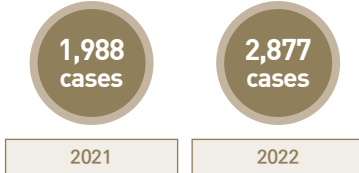


### Linked Support to Allow Commercialization of Research Findings

KEITI is promoting various commercialization support activities in connection with R&D, such as research performance patent application, technology transfer, performance promotion, and investment attraction, so that excellent technology can be successful in commercialization.

Patent Value Enhancement	Finding Demand Sources for Technology Transfer	Overseas Expansion of Exemplary Technology and Products
<ul style="list-style-type: none"> <li>Evaluate the economic value of a technology by evaluating it</li> <li>IP-R&amp;D Support for Patent Application Strategy</li> </ul>	<ul style="list-style-type: none"> <li>A technical demonstration road show for consumers</li> <li>Support for entering the public procurement market for exemplary R&amp;D products</li> </ul>	<ul style="list-style-type: none"> <li>Trade shows with overseas buyers</li> <li>Support for the global community's joint efforts in commercializing environmental technologies in overseas markets</li> </ul>

Number of Commercialization Success Cases



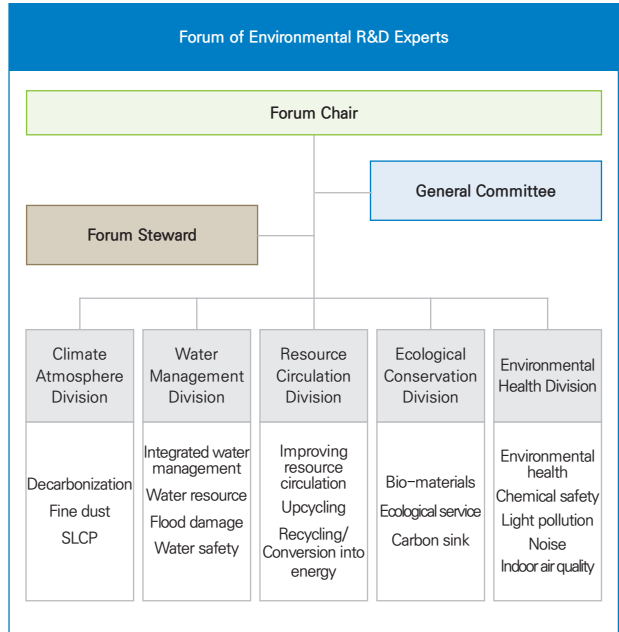
We are also operating 'Environmental R&D Performance Exhibition and Performance Presentation' to present research achievements among researchers and establish a network with consumers. In 2021, we promoted the 'Environmental Technology Joint Performance Presentation' with environmental R&D and environmental new technology and green certification technology. Contents related to presentations, exhibitions, field trips, and establishment of 2050 future vision were used mainly on online platforms, and we utilized various channels such as YouTube and Metaverse for visitors to participate.

R&D Performance Exhibition

Category	2021	2022
Participating companies	18	16
Visitors	About 470 persons	About 1,255 persons
Consultation on technology transactions	136 cases	260 cases

### For ESG Management Collaboration between R&D Specialized Institutions

KEITI continues to make efforts to improve the system through cooperation and communication with relevant organizations. To expand sustainable management to the research site by jointly declaring carbon management practice with a research institution. Furthermore, in order to listen to the voices from the field directly, the Environmental R&D Expert Forum, which consists of five divisions, was newly established, and through consultation with affiliated organizations of the Ministry of Environment, we are expanding the use of technology development policies.



# Inducing Low-Carbon Transition in the Industry

## Expansion of K-Taxonomy

### Announcement of Guidelines for K-Taxonomy, Establishing the Foundation for Promoting Green Financial Investment

K-taxonomy was developed to support more green funds to be invested in green projects and green technologies by presenting clear principles and standards for true green economic activities. KEITI held five meetings consisting of government ministries, industries, finance, civil society, and experts to develop a K-taxonomy based on social consensus. Upon the opinions, the final version of the "K-taxonomy Guidelines" was prepared, and in December 2021, the K-taxonomy was finally announced to define 69 green economic activities that contribute to achieving the six major environmental goals.

**Concept** : Voluntary Guidelines for Defining Green Economy Activities

**[6 major environmental goals]**

- ① Greenhouse Gas Reduction ② Climate Change Application ③ Sustainable Water Conservation
- ④ Resource Circulation ⑤ Pollution Prevention and Management ⑥ Biodiversity Conservation

**Principle** : Green economy activities comply with the following three principles



**3<sup>rd</sup>** in the world

Classification system including science-based detailed criteria

KRW **92** trillion Green New Deal

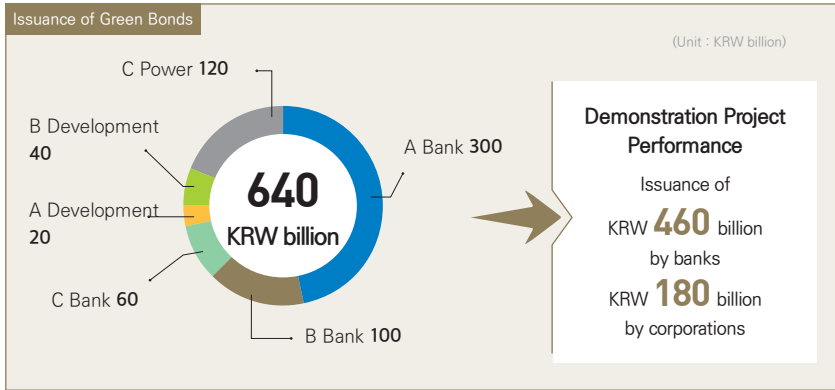
Induce investment in the right place at the right time (~'25)

**69** regulations in total

Green economy activity regulations

## Pilot Application of the Green Taxonomy to Vitalize the Green Finance Market

In 2022, we promoted a pilot project for issuing green bonds with green taxonomy to strengthen the market applicability and utilization of green taxonomy. 6 banks, including IBK Industrial Bank of Korea, and 5 companies, including Korea Central Power, developed financial products and discovered new businesses using green taxonomy and issued green bonds worth about KRW 640 billion. In addition, the guidelines for green taxonomy were revised in consideration of the improvements made during the pilot project operation and international standards (ICMA, CBI, EU, etc.). KEITI will continue to supplement green taxonomy to be a key tool for green transformation of our society.

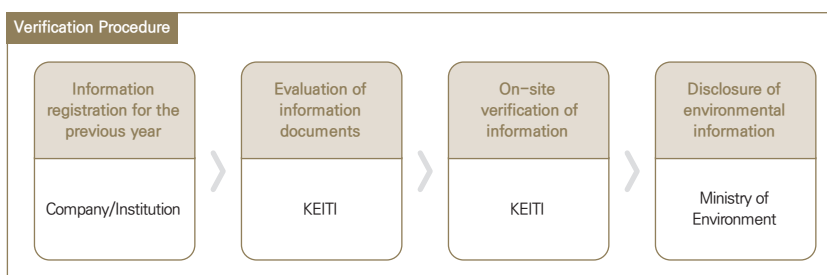
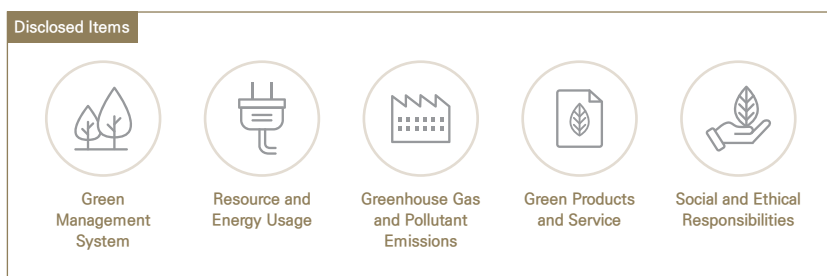


## Expansion of Environmental Information Disclosure

KEITI operates an environmental information disclosure system to create a foundation for environmental management and establish an autonomous environmental management system through enhancing companies' willingness to pursue green management. Up to 27 items of environmental information, including energy usage and greenhouse gas emissions, were registered in the Environmental Information Disclosure System, and were verified and disclosed in public institutions, green companies, and companies with great environmental impact. The disclosed environmental information is used for environmental responsibility investment and ESG evaluation by financial institutions, establishment of the government's environmental policy direction, and basic data for academic research. From 2022, it will be mandatory to disclose environmental information of sovereignlisted corporations with assets of more than KRW 2 trillion, and all listed companies will be subject to disclosure by 2030. In addition, in order to improve the convenience of information registration and utilization, it is planned to link the environmental information disclosure system and the national system (ALIO : All Public Information In-One) since 2023.

### Verification and Disclosure of Environmental Information in 2022

Total **1,824**  
 Companies/Institutions  
 (3,904 affiliated business sites)



## Environmental Evaluation System to Support Environmentally Responsible Investment

In February 2022, the Ministry of Environment and KEITI introduced the comprehensive environmental responsibility investment platform along with the guidelines for the environmental evaluation system to provide benefits to companies with excellent Environment Score\* and to improve environmental performance through self-diagnosis. About 36,000 companies and 1.3 million environmental information sources were evaluated to present the distribution status, statistics, and predictive analysis results of major environmental indicators. Based on this, we have developed and supplemented the 'Environmental Evaluation Rating System' to improve the reliability and to develop environmentally responsible investment financial products. KEITI will continue to contribute to the promotion of environmental responsibility investment by improving the reliability of evaluation data.

\* What is Environment Score? Resources, energy consumption, and pollutant emissions from the entire business process of a company affect the environment. degree of influence

### Financial incentives to Companies of Excellent Environmental Management

KEITI operates the Green Management Enterprise Financial Support System (enVinance) to provide financial benefits such as interest rate reduction and discount of guarantee fees to companies with superb environmental evaluation scores. By 2022, with a total of 12 banks and 3 guarantee institutions in a cooperative system, and through this, data collected from central and public institutions are provided to financial institutions that have signed a green financial diffusion agreement. In 2022, a total of 2,130 companies were provided with preferential loans of KRW 4.89 trillion, including 908 companies that practiced eco-friendly management that received loans with preferential interest rates.

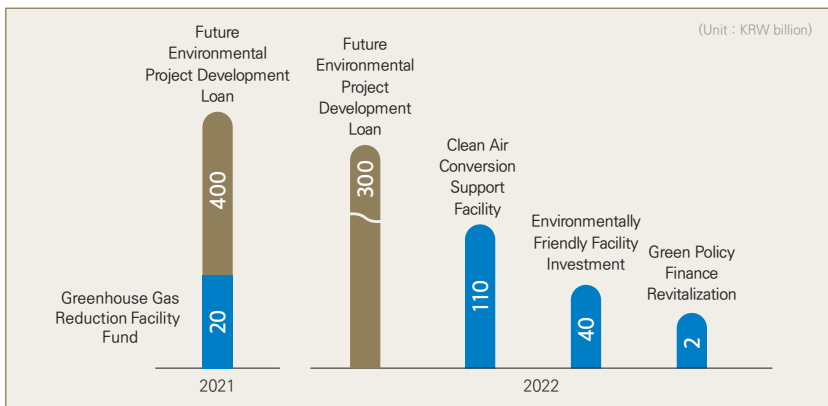


### Environmental Policy Fund to Induce Green Transformation of Companies

KEITI operates environmental policy funds (loans) to encourage companies to voluntarily switch to green management and become carbon neutral, including support for environmental pollution prevention facilities and greenhouse gas reduction facilities. In 2022, a total budget of KRW 450 billion was set for support of carbon neutrality policies by establishing a “Climate Response Fund” project to invest in eco-friendly facilities and revitalize green financing. In addition, we supported small and medium-sized enterprises that received loans to calculate the estimated reduction in greenhouse gas emissions by adopting gas reduction facilities (48 companies). In addition, we are making much effort in various fields, such as supporting the government’s fine dust reduction policy by expanding the industries subject to loans for large amounts of fine dust emissions.

Total Amount of Loans Taken Out from Environmental Policy Fundst (as of 2022)

KRW **3.45** trillion (cumulative)





### Support for Companies Responding to International Carbon Regulations

KEITI supports securing international product environmental performance and expanding production of lowcarbon products so that domestic companies can respond to overseas carbon regulations in major exporting countries such as the EU and the United States. Major exporting countries require the submission of environmental results in the entire product process that meets international standards. KEITI established a roadmap for environmental performance calculation (LCI DB\*) and guidelines that meet international standards, and based on this, it started to build an environmental performance calculation foundation in 2022 in four carbon-rich industries (steel, battery, chemical materials, and construction).

\* Life Cycle Inventory Data Base (basic data for product life cycle environmental calculation)

LCI DB Construction Roadmap		
Target: Base Industry [~ 2023]	Target: Major Export Items [~2025]	Target: Product/Technology [~2030]
<ul style="list-style-type: none"> <li>• 150 batteries-steel, chemicals, etc.</li> <li>• 150 carbon capture, transportation, etc.</li> <li>→ Deploy 300 new database sets in total</li> </ul>	<ul style="list-style-type: none"> <li>• 150 plastic waste, gas material, etc.</li> <li>• 250 pieces including building materials and bio raw materials</li> <li>→ A total of 400 database sets (newly existing ones)</li> </ul>	<ul style="list-style-type: none"> <li>• 500 items including carbon-neutral transition technology</li> <li>→ Updating existing database sets every 3 years</li> </ul>

### SME ESG Consulting Support

Although the necessity of ESG management is gradually increasing, domestic SMEs are having difficulty introducing ESG management due to practical limitations such as lack of human and material resources. Accordingly, KEITI provides customized consulting, such as establishing ESG management systems, converting into eco-friendly processes, and linking projects to strengthen ESG management capabilities. In addition, KEITI supports an integrated environmental safety management system that can self-diagnose violations of environmental regulations. In 2022, we provided and operated a system developed to 25 companies in the plating industry, and we signed a business agreement with the Korea Federation of Small and Medium Business to continue to be used in the industrial field.

#### Companies Received ESG Consulting Support



#### ESG Consulting Economic Performance



#### Customized ESG Consulting

- Establishment of ESG management system
- Eco-friendly process conversion
- Connection with other support projects, etc.

#### ESG Mentoring Program

- Dissemination of know-how to the same industry

#### Environmental Safety Integrated Management System

- Check for environmental regulation violations
- Calculation of energy and greenhouse gas emissions
- Provision DB for violation of environmental laws and regulations

# Innovative Growth of the Environmental Industry Led by the Private Sector

## Discovering and Nurturing Representative Domestic Companies in the Environmental Field

KEITI has designated and operated environmental companies with excellent business performance and technical skills as "Outstanding Environmental Company" to grow into leaders in the global market. As of 2021, a total of 61 companies are designated, and customized support is provided such as brand expansion through corporate precision diagnosis, strengthening export competitiveness. In 2022, 28 companies were supported to develop domestic and foreign markets, such as biz matching and distribution of technical introduction data through overseas offices, and incentives such as environmental R&D, finance, and overseas expansion are provided.



LEADING ENVIRONMENTAL COMPANIES

## Center of Growth of Environmental Companies: Environmental Industry Research Complex(E-techHive)

Since 2017, KEITI has been operating an environmental industry research complex that comprehensively supports the entire process from technology development to commercialization to overseas markets so that environmental companies can overcome the so-called "Death Valley" period that they go through due to the lack of funds in technology development during the commercialization process. As of December 2022, 130 environmental companies have set roots in the complex, and in order to closely manage each company and further discover promising companies, dedicated personnel are designated for each company to provide regular consulting. In addition, the Research Complex was designated as a special R&D zone in Seo-gu, Incheon (June, 2022) through collaboration with City of Incheon and Incheon University, and is expected to provide various opportunities including tax reduction to companies in the research complex. KEITI will continue to cooperate with operating institutions and local organizations in each field such as bio-materials to diversify support for environmental companies.



### Research, Technology Development and Promotion Facilities

Research and experiment building (76 offices, 50 laboratories, 17 start-up labs), 33 venture centers

### Demonstration Facility

Pilot test building (A-G), Test bed site


### Aids and Amenities

Main building, Guest house, Prototype production, Conference room, Seminar room, Public center, Restaurant, Convenience store, Cafe, etc.

\* Green Convergence Cluster : The Environmental Industry Research Complex was designated as a Green Convergence Cluster under the Enforcement of the Green Convergence Cluster Act ('21.12), and KEITI is a specialized operating institution for these research complexes.

**Case Study: Growth case of companies in the Environmental Industry Research Complex**

**Development of Artificial Intelligence Garbage Collection Robot**



**Business Difficulties**

Lack of funds and capabilities in the start-up process


**Support in policy fund loan and in attracting private investment**

- Fund support for technology development and commercialization (total of KRW 1.2 billion)
- IR events to attract investment (7 times)

**Results Achieved**

- Sales KRW 4.6 billion
- Cumulative investment attraction KRW 44.2 billion

**Starfish eco-friendly snow removal agent**



**Business Difficulties**

Limitations of market development after commercialization

**Export vitalization support project for tenant companies**

- Overseas expansion consulting and market research by company
- Finding overseas buyers (7 cases)

**Results Achieved**

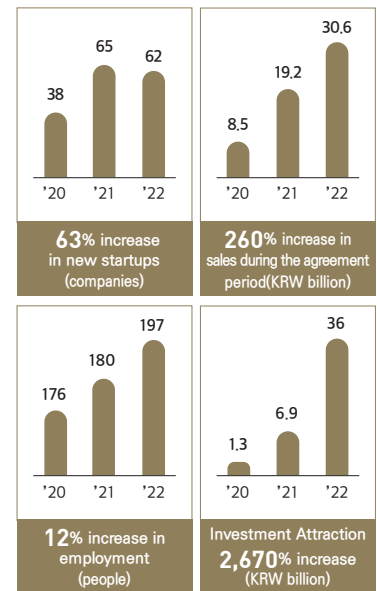
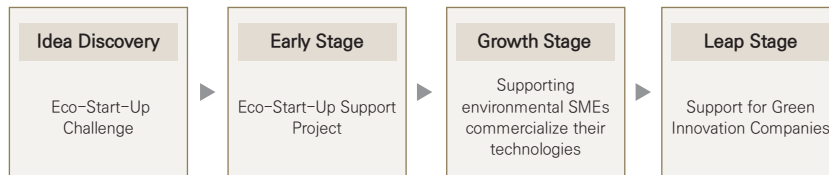
- Sales of KRW 15 billion
- 30 North American market demand sources discovered

### Environmental Industry Research Complex Operation Performance

Metric	'20	'21	'22
Tenant company (company)	117	124	130
Sales (KRW billion)	440	527	667
Job creation (persons)	131	142	150
Investment attraction (KRW billion)	21	33	57

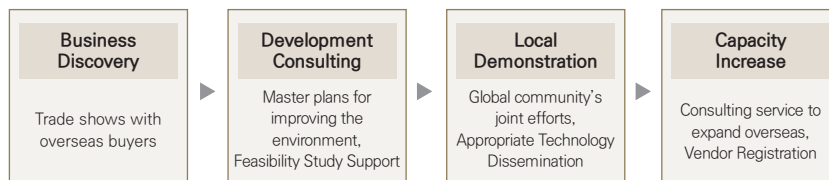
### From Idea Discovery to Commercialization, Full Cycle Support for Promising Environmental Companies

For the growth of the environmental industry, KEITI is expanding its support from the initial stage to the growth by discovering promising environmental startup items. First of all, Eco-Start-Up Challenge has been held since 2018 to discover and support young start-ups with high growth potential, and the excellent ideas are supported with education, mentoring, and commercialization funds via Eco-Start-Up Support Project. In particular, in 2022, we improved regulations such as expanding the target of support (work experience 3→7 years), establishing a "Re-do" start-up field, and expanding investment attraction such as holding Green IR Day. Moreover, we continue to increase the success rate of technology commercialization of small and medium-sized environmental companies even after the companies' establishment, and focus on commercialization consulting, prototyping, and marketing for market entry so that excellent green companies can take a step forward.



### Pioneering the Global Environmental Market

KEITI provides close support for environmental companies by stage of entry, dividing them into business discovery, order support, consulting, and technology localization. In the overseas business discovery stage, in order to increase the accessibility to overseas projects, we support business consultations based on the company's demand along with Global Green Hub Korea (consulting conference with overseas buyers). Through this, we support the establishment of the companies' master plan and feasibility study for the projects discovered, international joint local commercialization for overseas local technology application and commercialization, and the distribution of appropriate technologies tailored to the countries concerned. Furthermore, we are making great efforts to strengthen the capabilities of companies through export and trade consulting, along with support for vendor registration to enter overseas procurement markets.



#### Overseas Expansion Support Export Performance



\* Target Projects : Master Plan, Feasibility Study, International Joint Consulting, GGHK

### Operation of International Environmental Cooperation Center

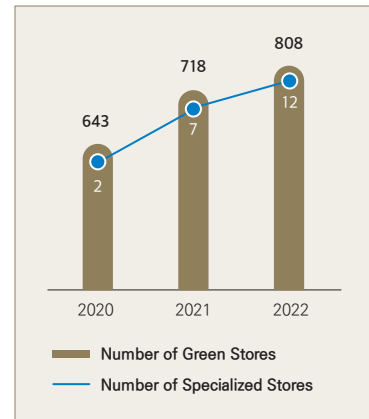
KEITI launched the Center for International Environmental Cooperation in September 2020 to meet the ever increasing demands of the international community for carbon neutrality and pannungal cooperation to discover future growth engines. In order to improve Korea's climate and environmental leadership, the Center actively promotes Korea's excellent environmental policies and technologies, and through cooperation with international organizations, it surveys the needs of developing countries and plans projects.

# Establishment of a Carbon-Neutral Lifestyle

## Consumption that Changes the World: Expansion of Green Market

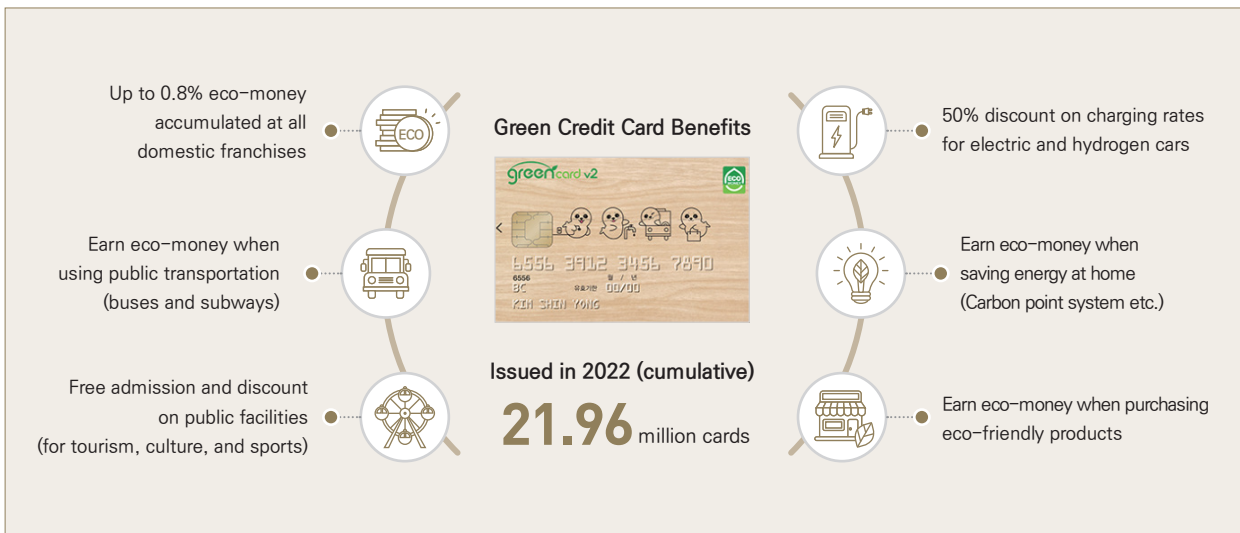
KEITI designates green stores to induce consumers to buy green products and reduce energy and greenhouse gases consumed by distribution stores. In particular, since 2021, we have signed business agreements with post office shopping, Interpark, and Homeplus to reflect consumption trends and expanded existing inperson green stores to online markets to improve accessibility for consumers. In addition, as of 2022, 12 “Specialized Green Stores” are designated and operated to minimize waste generation in the store.

Furthermore, the Ministry of Environment and distributors launched the “Green Consumption Consultative Group (ESG Alliance)” and operated the “2022 Green Consumption Week”. A total of 37 organizations and companies, including online and in-person retailers such as E-Mart and Naver, participate to promote the excellence of green products and provide incentives for purchases, contributing to the virtuous cycle of green consumption and expansion of green markets.



## Green Credit Card to Support the Green Life of the People

KEITI has been operating Green Credit Card since 2011 to provide a means for anyone to easily practice ecofriendly consumption in their daily lives. Green Credit Card has established itself as an essential item for eco-friendly consumer life by providing financial benefits (e.g., accumulation of eco-money points) from purchasing green products and using public transportation. In 2021, we rolled out various promotions to provide additional benefits to Green Credit Card users who practice ecofriendly consumer lifestyle. In 2022, card benefits expanded by raising the eco-money point accumulation rate for green products and establishing a system to allow eco-money points to be accumulated at highway rest areas through an agreement with the Korea Expressway Corporation.



### Korea’s Largest National Eco-Friendly Fair, ECO-EXPO KOREA

Since 2005, KEITI has promoted green products and expanded its participation in green life through ‘ECO-EXPO KOREA’ which covers eco-friendly industries spanning over areas such as green products, energy, transportation, and architecture.

In 2021, the Exhibition was conducted through an online platform in consideration of the COVID-19 situation, and we held various programs such as carbon-neutral life information online exhibition hall, lectures from 526 participating companies.

In November 2022, the “2022 ESG ECO-EXPO KOREA” presented ESG activities along with exhibitions of green products under the theme of ESG management and green consumption with 158 companies participated in the event. In particular, we promoted the ‘ESG Forum’ with ESG management experts and corporate managers at home and abroad to give lectures on the importance of the environment in ESG management and presentation of cases of outstanding companies. The “2022 ESG ECO-EXPO KOREA” ended successfully with 40,000 spectators participating. We will continue to lead the people’s green life through the operation of ECO-EXPO KOREA.



### Environmental Product Certification Trusted by Consumers and Reducing Corporate Burden

#### Korea Eco-Label

Korea Eco-Label is a system that certifies products with excellent environmental quality in the entire process among products (including services) for the same purpose. Korea Eco-Label started with 4 items and 37 companies in 1992 and expanded to 160 items and 4,800 companies as of 2022. In 2021, disposable products were excluded from certification in connection with the ‘de-plastic’ policy, and in 2022 while, new certification standards for everyday use products and services such as tumblers and multi-use container rental services were established. In addition, we introduced premium certification for products that meet additional top-level certification standards along with existing certification standards, and expanded it to 6 product lines, including laptops, clothing, and detergents, in 2022. Furthermore, in order to ease the burden on certified companies, the standard for classification of similar products under the same trademark has been improved so that they can be integrated and certified under the relevant trademark name, and simplified the re-application process for rejected products. Moreover, we support the establishment of a self-inspection system for follow-up management such as maintenance and management of product eco-friendliness so that companies can voluntarily strengthen quality control even after obtaining certification.

Eco-Label Certified Products

(Unit : Products)



Eco-label Certification Companies

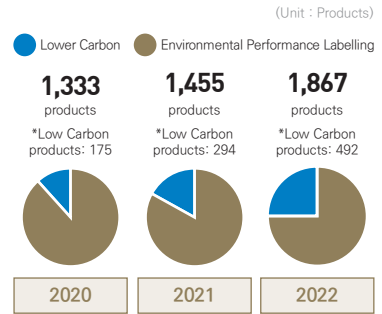
(Unit : Companies)



### Environmental Product Declaration (EPD)

In order to enhance the environmental quality of products and services, the environmental impact of the use of resources and pollutants emitted in the entire process, such as raw material collection, production, transportation, distribution, use, and disposal, is quantified and displayed through the Environmental Product Declaration. As of 2022, there are 1,867 valid certification products, and in order to improve the problem that is difficult to distinguish from the existing environmental signs, we have pushed for a change in labeling through the public participation contest (a total of 70 ideas). In addition, we support small and medium-sized companies' environmental product declaration and low-carbon product certification through regional briefing sessions, Start-to-finish consultation and education through environmental performance calculation programs, and public-private cooperation environmental performance calculation projects.

### Environmental Product Declaration (Valid)



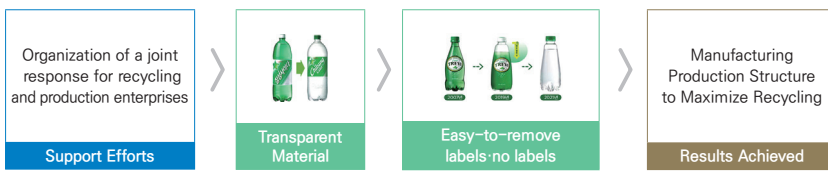
### Virtuous Cycle that Considers Resource Waste Solver from Product Production to Recycling

KEITI promotes the resource circulation of various products such as plastic containers, small appliances, and household goods to solve the loss of resources due to the disposal of all products caused by material and structure. We have improved circular utilization in various ways from the design and manufacturing stages of products such as reducing product weight and using recycled materials, prohibiting the use of dyes, reducing label adhesion areas, and improving the structure to improve material separation. In this process, transparent PET bottles were created, and based on public interest in the environment, the industry voluntarily expanded to label perforation lines and label PET bottles that are easy to separate. The KEITI will continue to communicate with the industry and recycling sites and strive to establish a healthy cycle of resource circulation.

### Product Groups Subject to Evaluation by Year

- 2018 ○ PET, PP, PE, PS, Foamed synthetic resin, PVC wrap
- 2019 ○ Sterile cartons, Refrigerators, Toner cartridges
- 2020 ○ Bidet, Auto parts
- 2021 ○ Plastic Bottles, Container, Electric rice cooker, Air fryer
- 2022 ○ Plastic containers for food, Office chairs, Bicycles
- 2023 ○ Other plastic containers, Water purifier, Speaker

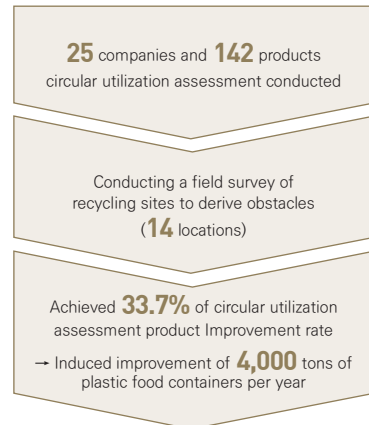
#### Transparent, No-label PET Bottle



#### The World's First Metal-Free Single-Material Pump Cap



(as of 2022)



# Carbon Neutral Practice to Save the Earth

## Reducing Energy Use and Moving towards Carbon Reduction

KEITI is making its own energy reduction efforts to take the lead in reducing carbon usage. Every year, we have established a 'Rationalization Promotion Plan for Energy Use in the Office Building' to continuously reduce carbon through energy use inspection, discovery and implementation of energy saving measures. As a result, KEITI has been recognized for its efforts to reduce carbon reduction in various sectors, including being selected as an "exemplary institution" for 10 consecutive years in meeting the goals to reduce greenhouse gas management system in the public sector in 2021, and receiving the "Korea Architecture Chairman Award" in 2021, the "Green Architecture Award" in 2022 and the "Minister of Industry Award" in 2022.

2022

39%

reduction

Exceeded Government recommended carbon reduction rate (34%)



▲ Renewable Energy Monitoring System



▲ Eco-Friendly Electric Vehicle Charging Station



▲ Wind Solar Hybrid Streetlamp

## Environmental Industry Research Complex Leading Carbon Neutrality, Transformed into a Green Park

Since its opening in 2017, the Environmental Industry Research Complex, equipped with renewable energy facilities such as solar and geothermal energy, has established a plan to create a "Green Park for Carbon Neutral" in 2021, taking the lead in building eco-friendly infrastructure. Following the Building Integrated Photovoltaic System (BIPV) in 2021, the first hydrogen charging station using state-owned land by the Ministry of Environment was installed in 2022 to contribute to the expansion of the national hydrogen infrastructure. In addition, we are trying to build a Building Energy Management System (BEMS) that visualizes renewable energy contents and to build a carbon-neutral infrastructure and spread culture by running a green park tour in the research complex.



▲ Building Integrated Photovoltaic System (BIPV)



▲ Hydrogen Charging Station



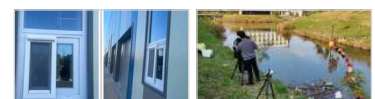
▲ Green Park Tour

## Contributing to Carbon Neutrality with Innovative Products and Technology Demonstration

KEITI is actively discovering and implementing innovative technology products forward carbon neutrality and provides demonstration infrastructure for verifying technology effectiveness. In particular, the research complex was provided as "beta best site" to apply innovative technologies developed by residential companies first, such as introducing starfish eco-friendly snow removal agents and installing fine dust blocking screens. In addition, the KEITI participates in the "K-Test Bed" in collaboration with 61 public and private organizations to share and support the companies' infrastructure for demonstrating new technologies. We will expand the experimental space of tenant companies, which originally was limited to existing research facilities, to various sites in the building and people's living space to become a representative demonstration institution in the environment field.



▲ Tumbler Washer (Innovation Prototype)    ▲ Eco-Friendly Snow Removal Agent Introduced



▲ Fine dust Blocking Screens    ▲ Blocking Device for Floating Garbage

## An Eco-Friendly and Carbon-Neutral Culture led by Executives and Employees and Created by the People

### Establishment of a Carbon-Neutral and Eco-Friendly Culture through Participation of Employees and Local Communities

Under the leadership of its executives and employees, KEITI is carrying out various practical tasks to reduce institutional energy use and carbon emissions. We will lead the green culture through eco-friendly and carbon-neutral activities with labor and management.



#### Small Actions in Daily Life for the Environment

- 1 **Creating a 4R organizational culture for waste reduction**
  - (RECYCLE) Recycle properly
  - (REFUSE) Zero use of disposable products
  - (REUSE) Reuse things
  - (REDUCE) Purchasing only what you need
    - Every Wednesday is "Day Without Food Waste"
    - Establishment of Paperless Conference Culture
- 2 **Eco-friendly practices that starts with the employees**
  - KEITI Environmental Watchmen, Green Patrol Operation
  - Link to in-house clubs and promote environmental activities
  - Campaign to reduce the use of disposable products in the company



#### Environmental Improvement Together with Local Community and People

- 1 **Eunpyeong-gu, environment together with local public institutions**
  - Step donation challenge with Eunpyeong-gu public institutions (4 places)
  - Cleanup activities in Eunpyeong (Bulgwangcheon)
  - Campaign to reduce disposable products with local small business owners
- 2 **Operating a living lab to address local environmental issues**
  - Reducing fine dust in traditional markets and bus stops
  - Project to supply drinking water in islands (Yeosu Daedurado)
- 3 **Creating an eco-friendly living culture in which the public participates**
  - Waste battery recovery resource circulation campaign
  - Eco-friendly camping without disposable items
  - Public participation in 'Green Consumption Week-Green Credit Card'



### Reducing the Use of Disposable Items: 'Break up with disposable items'

In order to reduce disposable products, KEITI demonstrated the severity of the usage of disposable beverage cups and plastic straws used in in-house cafes through a survey on the use of disposable products. Accordingly, disposable products in the company cafe were completely eliminated and multi-use cup rental and cleaning services were introduced through contracts with social enterprises. Through this, we were able to carry out environmental conservation activities that executives and employees could understand, and based on high satisfaction rate, the use of multi-use cups has been settled as an in-house culture through continuous operation.





## Sustainable Eco-Friendly Culture created by the People

### Resource Circulation in Daily Life that I Practice First

#### 1 Cordless vacuum cleaner waste battery collection campaign

For wireless vacuum cleaner products, which account for the largest proportion of small house appliances, we established a cooperative system with LG Electronics and a social solidarity for resource circulation, and ran a battery collection campaign. For two months, 12,638 people participated, and through this, about 12.5 tons of waste batteries were collected and reused.



#### 2 Green camping without disposable items

In cooperation with the KOREA National Park Service, we selected eight campgrounds with many users among the national parks and ran a pilot service that rents multiple containers to two of the selected campgrounds. To reduce waste generated through leisure life and encourage environmental preservation, we are promoting the reduction of disposable products in the campsite.



### Creating a National Green Consumption Culture with the Green Credit Card

As part of the "Green Consumption Week," which is operated to enhance the people's willingness to practice eco-friendly life and revitalize green consumption, we held a public participation social media challenge. The Zero Waste Shop and Green Credit Card are linked to provide prizes to the people who participated in green life and encourage the spread of green consumption culture.



#### What is Green Consumption Week?

Celebrating the 30 year anniversary of introducing Korea Eco-Label, KEITI held the 2022 Green Consumption Week "Buying Green Today" to spread green consumption such as purchasing green products. Various promotions such as discounting green product prices and points were accumulated to customers who practice eco-friendly lives such as using multi-use containers such as shopping baskets and tumblers, not receiving disposable products, and using public transportation. Thanks to the participation from the public, we are working to hold more Green Consumption Weeks in the future.

People participating in the social media event

**336,528** people

### 'Courage Green Eunpyeong' in which the People and Local Governments Participate

KEITI has collaborated with Eunpyeong-gu Office and cafes (21 cafes) to conduct a campaign to reduce the use of plastic and disposable packaging in the community. The Courage Green Eunpyeong Campaign, which means "green" Eunpyeong with the "courage (same word as 'container' in Korean)" of residents who use "multicontainer," guided customers to use multi-container and tumbler along with 21 small business stores in Eunpyeong-gu. More than 940 residents participated in the voluntary resource circulation of residents in solving local living environment problems, and revitalizing the local economy, winning the Ministry of Environment's Best Practices Contest in November 2021.





# KEITI Social

Public Safety, Environment Improvement Technology in Daily Life

Environmental Welfare without Blind Spots

Value Realization, Shared Growth and Win-Win Culture

Sustainable Job Creation and Talent Development

Safe, Trustworthy Workplace

Happy Workplace



# Public Safety, Environment Improvement Technology in Daily Life

## Establishment of an Environmentally Safe Society by Strengthening Public Safety

### Integrated Water Management Technology that is Safe for Climate and Disasters

KEITI supports technology in the fields of water resources, water supply and sewage, water ecology, soil and groundwater, and water disaster in order to establish a smart integrated water management system. In 2022, KRW 89.3 billion was invested in a total of 100 projects in 13 projects, and new R&D projects were carried out to cope with flood defense and drought response for climate crisis response.

Water Resources	Water Supply and Sewage	Aquatic Ecology	Soil and Groundwater	Water Disaster
Securing water resources to strengthen water welfare	Strengthening water stability and energy independence	Securing the health of aquatic ecosystems and restoring the function of rivers	Implementing a healthy and sustainable underground-topsoil environment	Response to flood damage based on the 4th Industry

#### Case Study


##### Detailed flood prediction technology of the basin time and space for golden time

Improving flood damage prevention and disaster response capabilities by developing flood forecasting technology in fast-detailed areas.

A golden time (3 hours → 6 hours) for sudden flooding within an hour.

### Technology to Respond to Environmental Issues Closely related to Life

KEITI promotes technology development to increase sustainable ecological value and to build a safe society from environmental issues close to people's lives such as fine dust. In 2022, KRW 139.9 billion was invested in 156 projects in 17 businesses, especially technology for predicting and preventing chemical accidents, technology for safely using various chemicals in daily lives and technology for preventing environmental diseases.

		
Ecological Conservation	Environmental Health	Life Safety
Systematic management of biological resources and securing ecological stability	Active monitoring of environmental hazards and advanced evaluation of exposure-health effects	Responding to environmental issues close to people's lives

#### Case Study

##### Development of color change sensor for Volatile Organic Compounds (VOCs) measurement

Preventing damage to the public by developing sensors that can monitor VOCs, a representative pollutant in indoor air, at all times without power.

### Public Safety, Environment Improvement Technology in Daily Life

Area	Projects	'22 budget
Water Resources	Domestic technologies to produce high-purity industrial water	KRW 8.2 billion
	On-demand water supply service (3)	KRW 15.4 billion
Water Supply and Sewage	Innovating sewage and water supply system (2)	KRW 16.7 billion
Aquatic Ecosystem	Ensure health of water ecosystem (2)	KRW 19.3 billion
Soil Groundwater	Management of Pollution and Hazards of Subsurface Environment (2)	KRW 19.2 billion
Water Disaster	Innovative flood prevention technology for climate crisis response	KRW 3 billion
	Innovative water management technology for drought response (2)	KRW 7.5 billion
Ecological Conservation	Invasive Species Management Program (6)	KRW 43.4 billion
Environmental Preservation	Household chemical safety management technology (4)	KRW 47.9 billion
Life Safety	Resolve and demonstrate management of air pollution blind spots (7)	KRW 48.6 billion

## Creation of Tangible Achievements



### Research and Planning that people want

National survey of technology demand  
Public verification of new tasks



### R&D with the people

Promotion of R&D for Civic Participatory Living Lab  
Promotion of R&D to resolve pending issues of local residents

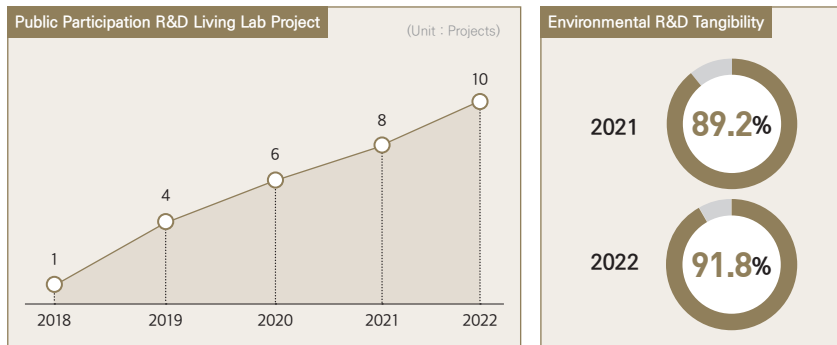


### Research Outcomes that people can tangibly feel

Environmental R&D Public Empathy Forum held  
Reflecting research results and government policies

### Technology needed by the People from Research Planning to Development

KEITI is striving to discover the technology that the people need through survey targeting the entire nation. We made it easy for anyone to make suggestions online, and cooperated with local governments to discover local issues that require technology development. In addition, we promoted the Living Lab research project, which continues to collect public opinions, to solve local environmental issues and create research results that the people can tangibly feel.



### A Collaborative System so that Research Results are Reflected in daily life

In order to expand the real-life application of research outcomes and increase policy utilization, we hold technology policy utility committee. Through this, the Ministry of Environment, the Institute of Technology, and other stakeholders can collectively share information, performance achievement consultations, and future plans for research projects in the field of technology R&D.

Technology policy utility committee  
**71** meetings (2022)

Utilization of Direct and Indirect Research Results  
**2,979** cases (2022)

Technology Policy Utility Committee



# Environmental Welfare without Blind Spots

## Reinforcing Safety Management for the Safe Use of Household Chemical Products by the Public

As social anxiety about chemical products increases due to humidifier disinfectant accidents, we check the ingredients and safety of household chemical products and support the safe production by companies. Starting with 15 items in 2015, safety management has expanded to 43 items as of 2022. In order to strengthen the safety management of residential chemicals based on civic participation, the government monitored unreported and unapproved products, blocked the distribution of illegal products, and introduced a reward system in 2021.

In addition, we have signed a voluntary agreement between the life chemical product industry and civil society to encourage companies to disclose all the ingredients of their products themselves, and to prevent damage to the public by checking products using safe raw materials.

Household chemical product safety management



## Diagnosis and Improvement of the Indoor Environment of the Vulnerable

KEITI is promoting environmental disease prevention projects in cooperation with local governments and private companies for population groups that are especially sensitive and vulnerable to environmental risk factors such as children, the elderly. In 2022, 1,902 households and facilities for vulnerable groups, including flooded households affected by torrential rains, were provided with indoor environmental diagnosis to identify risk factors that cause environmental diseases, and 541 households with particularly poor living conditions were supported to improve the indoor environment. KEITI also provides customized medical services for the vulnerables suffering from environmental diseases, and provides follow-up services so that these support activities can be carried out continuously, instead of them being one-off events.



Area	Cumulative	2020	2021	2022
Indoor diagnosis	19,190	1,700	1,756	1,902
Improvement of environment	6,343	650	550	541
Support for environmental diseases	2,404	303	328	226

## Establishment of Children’s Environmental Health Integrated Management System

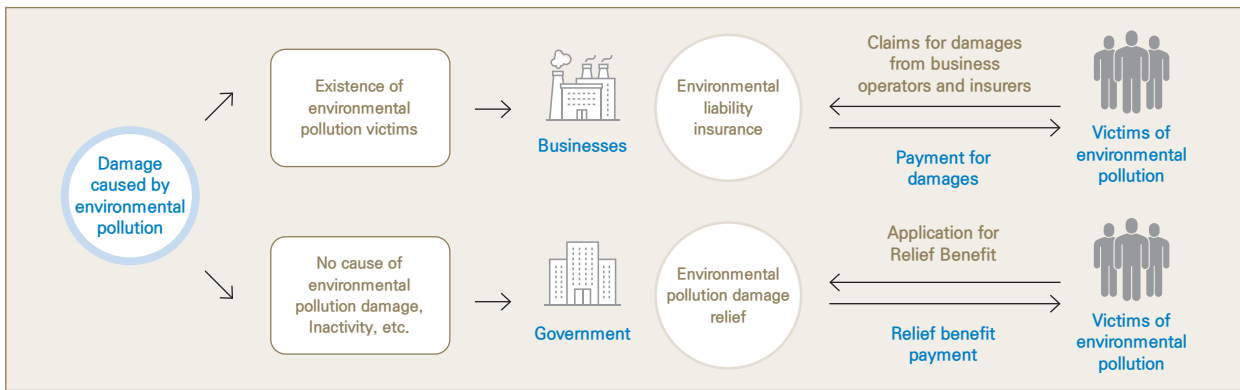
KEITI has been expanding children’s environmental health and safety management since 2019 to protect children, most vulnerable to environmental risks. In particular, since 2021, the KEITI has been investigated the causal relationship between children’s exposure to environmental risk factors and health effects, and prevented environmental diseases caused by harmful substances. In addition, environmental safety checks are conducted in children’s activity zones such as daycare centers and kids cafes, and various activities are being promoted to protect children’s health by supporting consulting so that children’s products operators can reduce and manage environmentally harmful products on their own.



## Operation of National Environmental Damage Relief System

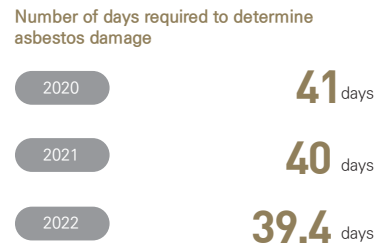
### Environmental Pollution Damage Relief

KEITI operates an environmental pollution damage relief system to identify responsibility for environmental pollution damage and to reduce the burden of proof on victims and effectively receive damage relief. In 2021, as the damage rating system was revised to evaluate the severity of physical symptoms and complications by environmental pollution, we have prepared evaluation guidelines and conducted damage rating evaluation. In addition, we have unified different recognized disease classification systems for each affected area to ease recognition standards, and promote health care projects for residents affected by environmental pollution.



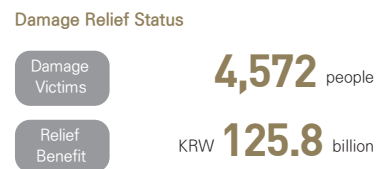
### Asbestos Damage Relief

KEITI is striving to relieve the health damage of victims by discovering victims of asbestos, a class-1 carcinogen, and providing medical support. In cooperation with related organizations, KEITI is proactively guiding potential victims, and from 2021 and, it is trying to improve the system by expanding the scope of damage recognition to related aftereffects such as lung dysfunction.



### Humidifier Disinfectant Damage Relief

KEITI is striving to quickly and fairly rescue victims and bereaved families who suffered life or health damage from humidifier disinfectants. In March 2020, the investigation and classification system was reorganized due to the revision of the Special Act on the Relief of Damage from Humidifier Sterilizers, the scope was expanded to recognize all diseases. In 2022, efforts were made to improve the speed of damage relief by expanding professional committees and investigative agencies. As a result, a total of KRW 125.8 billion in relief benefits was paid to 4,572 victims by December 2022.



### Biocidal Product Damage Relief

Since December 2021, KEITI has been promoting a new "measuring damage relief" project to relieve health damage caused by the use of pesticides (insecticides, disinfectants, etc.) among daily life chemical products used by the public. Industry experts will establish a biological product damage investigation system (product investigation, environmental exposure investigation, health damage investigation, damage scale investigation) and operate efficient damage relief by collecting opinions from various stakeholders including experts and relevant agencies in the field.



# Value Realization, Shared Growth and Win-Win Culture

## Shared Growth Promotion System

KEITI has established and promoted a KEITI shared growth strategy to contribute to the creation of a healthy environmental industry ecosystem through green partnerships. In addition, we are developing various customized support programs to strengthen the technological competitiveness of environmental industries and securing future growth engines.

Shared Growth Vision	<b>“Institution Specialized in Environment Solution that Grow Together through Green Partnerships”</b> “Collaborative Growth, Carbon Neutral and Green Growth”			
Strategic Direction	<b>① Supporting partner companies to expand their markets</b>	<b>② Securing growth engines for partner companies</b>	<b>③ Improvement of business environment of partner companies</b>	<b>④ Community contribution through shared growth and cooperation</b>
Action Items	1. Support for market development of partner companies  2. Operation of cooperative profit and performance sharing system  3. Operation of the Carbon-Neutral Transition Financing Program	1. Support for technology development and protection for small and medium-sized partners  2. Strengthening the development of market-leading environmental SMEs  3. Establishment of environmental industry commercialization infrastructure	1. Fair trade system and spread of fair trade culture  2. Support for improvement of working environment for partner companies  3. Cultivating future talents in the environmental field and linking employment	1. Development of shared growth promotion system for SMEs and small businesses  2. Development of a regional ‘Win-Win’ shared growth program for partner companies  3. Strengthening communication of ‘Win-Win Cooperation’ involving residents

## SME Market Support

### Public Procurement for Innovative Products

KEITI has designated innovative products in the environment sector to support SMEs in promoting public procurement links and entering the initial market. We encourage public purchases of products that have commercialized environmental technologies, and that have been recognized for innovation.

Particularly from 2021, the Ministry of Environment and the Public Procurement Service have identified 21 applicable tasks to solve local governments’ environmental problems and provide SMEs with opportunities to enter the market. Moreover, KEITI is participating in the HUB Consultative Body to support Integrated Technology Market for Public Institutions\* to support SMEs in order to revitalize the technology market and foster innovation.

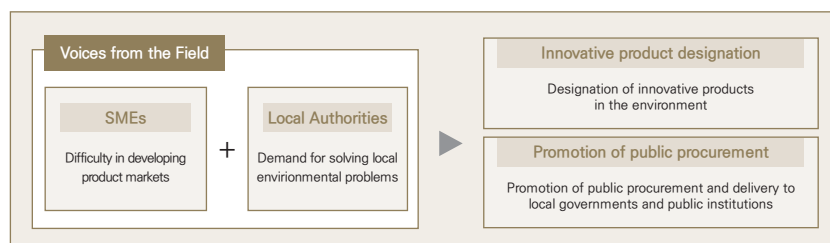
\* Integrated Technology Market : A platform that allows public institutions to jointly deliberate, certify, and purchase as long as SMEs register online to secure a market.

Performance of public sales of innovative products in the environmental field (as of 2022)

KRW **6.35** billion

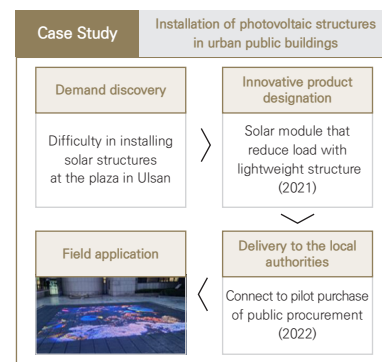
Designated as a new innovative product in the environmental field (as of 2022)

**30** cases



### Continued and Expanded Purchase of SMEs Products

KEITI introduced Shared Growth Mall in 2021 to support SMEs’ market development and sales expansion, and continues to expand purchases of excellent SMEs products such as Brand-K. In addition, we exceeded the goal by improving the private contract system to promote public purchase, the severely disabled, win-win cooperation products, and technology development products, and creating a public purchase environment using institutional infrastructure.



### Ladder of Hope for Overseas Expansion

KEITI is closely supporting the entry into overseas procurement markets and strengthening their capabilities for “promising small and medium-sized enterprises in the global green industry” that are having difficulty entering the overseas market due to the prolonged effects of COVID-19. Through the 2022 Overseas Expansion Exchange Forum, 62 environmental SMEs and 112 people were provided with export tax and financial management measures and entry strategies through five overseas offices in the KEITI. In addition, the KEITI also supports the development of overseas markets and the production of excellent products and technology contents. In particular, through a business agreement with a global trading company, it has established the foundation for a win-win cooperation program for small and medium-sized enterprises.



▲ Hosting a Forum for Overseas Expansion

### Strengthen the Foundation for Continuous Cooperation

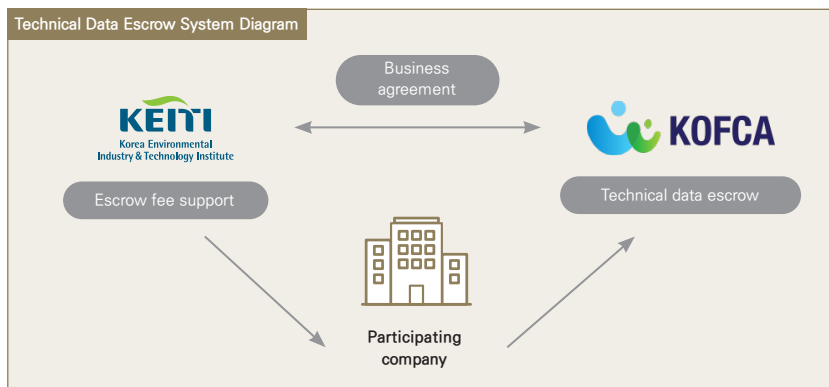
#### Accompaniment with Partner Companies, Expansion of Cooperative Profit Sharing System, and Introduction of New Performance Sharing System

KEITI introduced a performancesharing system in 2022 along with rent reduction for 115 companies in the Environmental Industry Research Complex to overcome the social and economic crisis caused by COVID-19 and support SMEs’ management activities and innovation. In order to solve local environmental issues caused by marine waste and plastic waste, we have signed 10 performance-sharing agreements, including cooperation projects between public, SMEs, and are continuing efforts to create a win-win cooperation environment.

#### Technical Support for the SMEs

KEITI is striving to create a fair technology trading environment by improving technological competitiveness of SMEs, strengthening their technology protection capabilities, and eradicating technology theft. In order to establish a cooperative system with the Ministry of SMEs and Startups and the Korean Intellectual Property Office and to promote the market entry of promising startups, we support from analyzing corporate capabilities to upgrading business models, establishing R&D strategies based on intellectual property rights, and supporting key technical data.

In order to keep important technical data and patent strategies safe, the Large, Small and Medium Business Agricultural and Fishery Cooperation Foundation revised the technical protection training for all employees and partner employees to improve their awareness of technology protection.



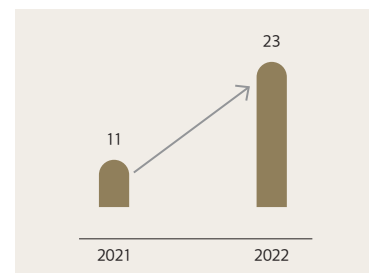
Reduction of rent for tenant companies

**115** companies

Performance sharing agreements

**10** contracts

Number of technology imposition (Unit : Cases)





### Operation of Social Economy Enterprise Support System

KEITI operates a customized support system for each stage of growth to strengthen the self-sustaining power of social economy companies. By easing support standards and strengthening capabilities, we supported the development of competitive technologies, and by providing a chance for funding and product promotion, we provided a stepping stone for actual sales improvement.

Relaxation of Application Criteria			Capacity Increase		
Establishment	Loans	Commercialization	Education/ briefing seminars	Expert matching	Consulting
Additional points when selecting eco-startup tasks	Priority Examination Support Points	Relaxation of Personal Responsibility	A Customized Briefing Session	Matching experts with know-how	Support for calculating export etc.
Market Development			Funding Support		
Online store	Exhibition Planning	Exhibition	Certification fee	Product analysis fee	Management stabilization fund
Briefing on know-how	Discount sales of green products and support for differences	Support for publicity and experience exhibitions	Discounts on test analysis fees and certification fees	Discount on testing and inspection fees	Labor costs and Support for vacation expenses etc.

### Environmental Product Declaration Certification Support Agreement Ceremony



### Establishment of KEITI Model Trading Model

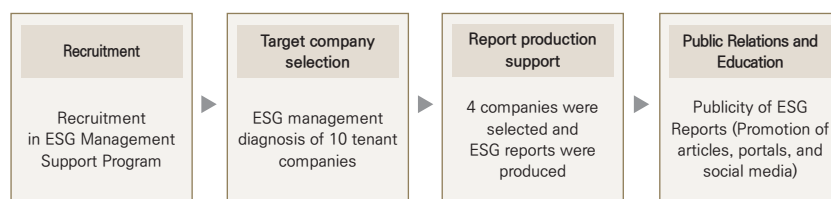
KEITI establishes a fair trade culture and actively blocks unfair contracts through the KEITI trading model. It was institutionalized to preemptively increase the technology protection and delivery price of subcontractors, and as a result, we were able to ease the cost burden by reflecting 100% of the cost increase at the request of the contractor. In particular, we introduced a win-win payment system in 2021 to protect the rights of secondary suppliers and ensure safe payment recovery for their stable management activities. In addition, as a result of pushing for the mandatory use of the subcontracting guardian system, the utilization performance increased significantly from 52 in 2021 to 370 in 2022. As a result, we were selected as an exemplary company for Win-win payment and received a commendation award from the Minister of SMEs and Startups.

### 2022 Win-Win Payment Excellent Company (Public Sector) Awarded by the Minister of SMEs and Start-ups



### Establishment of Win-Win Plans with Partner Companies

KEITI strives to improve the welfare of employees of partner companies and to create an ecosystem of shared growth. We collect opinions at all times so that they can balance work and family, have a good work-life balance, and provide customized support such as creating a win-win joint workplace daycare center and supporting vacation expenses. In addition, ESG diagnostic evaluation of 10 tenant companies in the Environmental Industry Research Complex was supported to respond to ESG management needs investing in sustainability and transition. ESG reports are also produced and supported for leading companies.




### Community Win-Win

KEITI has established a win-win cooperation system to participate in the community and revitalize the local economy, and is promoting various activities such as supporting local environmental challenges, and embracing the underprivileged. In order to identify local issues, we operated cooperative channels with the working-level consultative body of public institutions, local governments, and local merchants' associations and collected public opinions. Through this, we identified local environmental problems and demands such as fine dust and plastic chaos, and carried out activities to solve them. In addition, the institution operates its own Regional Win-Win Promotion Team to implement the budget early, support partner companies, and revitalize the local economy.

Goal	Creating a well-off community through the work of community cooperation	
Direction	Vitalizing Community Participation	Revitalization of the local economy
Action Item	<ul style="list-style-type: none"> <li>• Creating a pleasant regional environment</li> <li>• Donating to and sharing with the underprivileged</li> <li>• Utilizing open, space</li> </ul>	<ul style="list-style-type: none"> <li>• Operation of Regional Win-Win Promotion Team</li> <li>• Saving the Alley Commercial District</li> <li>• Expansion of local jobs</li> </ul>


Representative activities for win-win growth with local communities



▲ Resolving drinking water shortage in Wando Island  
Introduction of Sea Mobile Desalination Plant



▲ Spreading the Community Circular Economy  
A.I. Waste PET unmannned collectors are supplied to local governments (535)



▲ Improvement of Indoor Air Quality in air pollution blind spots  
Development and Application of a Customized Air Pollution Reduction System in the Traditional Market of Anseong City

\*Awarded grand prize in the 2022 Public Institution-Traditional Market Excellence in Mutual Activities Contest (Minister of SMEs and Startups)

### Company-Wide Participation-Type Social Contribution Activities

KEITI is actively carrying out various social contribution activities jointly with the employees by utilizing the capabilities to realize the value of togetherness in the local community. The KEITI is promoting social contribution activities by establishing a cooperative system with the local community, working-level consultative body of public institutions, partners, and in-house volunteer club "Nadoo Donghaeng." In connection with the institutional project, it has provided disaster prevention supplies to about 13,000 households that are vulnerable to heat waves and extreme cold weather since 2018, and in 2022, a total of 270 blood donations were made to the Korea Pediatric Cancer Foundation to help children with cancer. In addition, at the 2022 Pabalje and Nuri Festival, executives and employees participated in volunteer activities to improve the quality of life of local residents and revitalize the local community. Accordingly, in recognition of its contribution to the promotion of welfare of the local community, the C mark\*, a recognition system for community contribution, was obtained from the Ministry of Health and Welfare.

\* Recognized community contribution company C mark:

Community, Change, Collective Impact, Certification, community-based residents, NGOs, businesses, and the government for their contribution to the community through cooperation.



▲ New Employee Volunteer Mural Arts Work (Jeungsan Elementary School, Seoul)



▲ C mark of Recognized Community Contribution Company

KEITI Business Linked Support Type Activities	Employee Participation Type Activities
<ul style="list-style-type: none"> <li>• Improve the indoor environment of vulnerable groups and donate ecofriendly boilers.</li> <li>• Support for items for vulnerable groups related to cold waves and heat waves.</li> <li>• Construction and opening of facilities for the provision of green areas for residents' living;</li> </ul>	<ul style="list-style-type: none"> <li>• Environmental education for children and adolescents</li> <li>• Donate making upcycling bags using waste banners</li> <li>• Rice donation and distribution service at the Senior Welfare Center with partner companies</li> <li>• Participation in local cultural festivals</li> <li>• Helping Children with Cancer Blood Donation and Fundraising</li> <li>• New employee mural volunteer work (Jeungsan Elementary School, Seoul)</li> </ul>

# Sustainable Job Creation and Talent Development

## Establishment of Environmental Job Creation System

KEITI is taking the lead in creating good jobs by establishing a strategy for creating sustainable jobs and a cooperative system with the ESG Committee’s social value division. We will improve the quality of jobs and employment by expanding jobs in the public and private sector.

Vision	Leading a Sustainable Future Together with the People by Creating Environmental Jobs		
	<span style="border: 1px solid #0070C0; border-radius: 15px; padding: 5px 10px;">Target</span> <b>Creating 21,000 KEITI jobs by 2025</b>		
Direction	Improving Public Job Effectiveness	Private-led Creation of Key Jobs	Create Win-Win and Sustainable Jobs
Action Item	Improving the quality of employment and nondiscriminatory working environment	Personalized talent training and employment linkage to enhance competitiveness of the environmental industry	Strengthening the employment safety net for the vulnerable and expanding regional win-win jobs



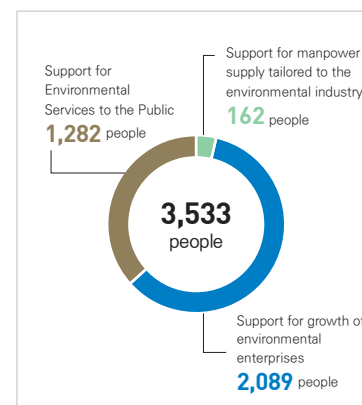
## Environmental Industry, Quality Job Creation

In order to meet the trend of private-led growth, KEITI is striving to create jobs such as supporting growth of environmental companies, supporting environmental services to the public, and supporting manpower supply tailored to the environmental industry. In 2022, 100 young people were hired on-site from 33 environmental venture and start-up companies in cooperation with 7 local universities to revitalize the local economy and attract local talent through the 2022 Eco Start-up Challenge. In addition, the 5060 Green Senior Internship, which provides middle-aged employees with expertise in environmental social enterprises with new opportunities, encourages middle-age generation employment and creates environmental jobs in various ways by expanding the number of eco-label inspectors for the socially vulnerable.

### Operation of the Best Job Company System to Improve Job Quality

Since 2018, KEITI has selected 10 companies that have created high-quality environmental jobs as the “Excellent Companies in Jobs” and has provided KRW 15 million worth of work environment improvement funds. As a result, in the “Satisfaction with Improving the Working Environment” survey conducted on workers, we got 88 points, up from the previous year.

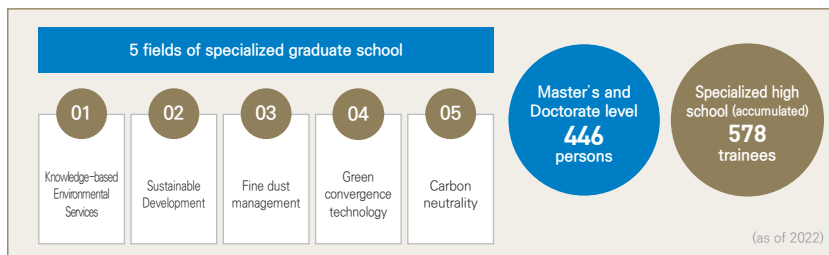
Creation of 3,533 private environmental jobs in 2022



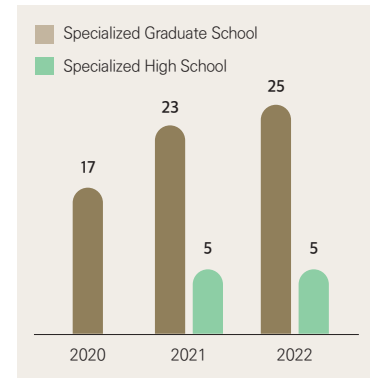
## Nurturing Customized Environmental Experts

### Specialized Graduate Schools and High Schools

KEITI operates specialized graduate schools in five areas, including carbon neutrality, to foster high-quality human resources who can respond to environmental issues. In addition, through a business agreement with the metropolitan and provincial offices of education, five specialized high schools in the environmental field were designated to train field-type working-level personnel needed by the industry.



Current Status of Specialized Graduate Schools (Unit : Number)



### Nurturing Professionals through a Healthy Cycle

KEITI promotes the creation of environmental jobs and the development of environmental industries by providing on-site training for unemployed individuals interested in the environmental field. To foster young talent, we provide employment-linked curriculum from theoretical education (6 weeks) to field training (6 weeks). And also job fairs, human resources meetings, job consulting, and career guidebooks are provided to support employment of professionals trained through each curriculum. We will continue a healthy cycle that fosters professional manpower to meet on-site demand and increases the youth employment rate.

Cultivating young talent	• Fostering field-customized professionals (70 people)
Improving the effectiveness of on-the-job training	• Develop field practice manuals with companies to expand field work experience
Follow-up management of graduates	• Support for visiting jobs to strengthen 「Company-youth meetings」
Strengthen exchanges between seniors and juniors	• Share success stories of employment by holding 「Meeting seniors and juniors」

### Fostering Experts in Recycling Environmental Evaluation

In order to revitalize the recycling industry, we are training "recycling effectiveness evaluation experts" who investigate and predict the impact of waste recycling on human health or the environment and evaluate the suitability of recycling technology. It consists of theoretical education (1st week) and practical in-depth education (2nd week) courses, and strengthens field expertise by operating a separate remuneration training course (every three years) for professionals who passed the evaluation. Furthermore, we continue to support industries and technologies by operating recycling environmental evaluation technology consulting by matching technical personnel with environmental industries.

Recycling eco-friendliness evaluation experts (Unit : Persons)

Category	2020	2021	2022	Cumulative Total ('16-)
Human resource development	86	180	209	774

### Competency-Oriented Fair Recruitment

KEITI is strengthening the adequacy of the entire recruitment process, from job planning to follow-up inspection, to further strengthen fairness and transparency by excluding discriminatory factors. Auditors are present throughout the hiring process and monitor it to prevent unfair hiring, and double audits are conducted in cooperation with the Korea Transparency Organization.

Recruitment Goal	Gain competitive talent by strengthening fairness, transparency, and job competency throughout the hiring process		
Direction	① 'Fair and transparent' recruitment	② 'Job-oriented' recruitment	③ For job seekers recruitment
Action Items	<ul style="list-style-type: none"> <li>• Improve fairness in blind recruitment</li> <li>• Securing transparency, such as strengthening security</li> </ul>	<ul style="list-style-type: none"> <li>• Discovery of new professional groups</li> <li>• Strengthen job evaluation by screening</li> </ul>	<ul style="list-style-type: none"> <li>• Expansion of communication channels</li> <li>• Actively disclose recruitment information</li> </ul>

As a result of strengthening recruitment expertise, such as fair recruitment and arranging personnel in consideration of job competencies, we obtained fair recruitment certification from the Korea Management Certification Institute in May 2022.

#### Fair Recruitment Certification



Violation of blind recruitment monitoring and recruitment corruption

**'0'** cases

### Recruitment based on Job Competency Evaluation

KEITI is promoting job-oriented recruitment to secure competitive and excellent human resources. We newly derived essential specialties for each job and divided them into four areas from the existing single field (environment) recruitment. And also strengthened the job competency evaluation by increasing the proportion of job qualifications such as engineers, and introducing presentation interviews. For hired new employees, we strengthen their capabilities by operating practical skills improvement training before deploying them into respective departments to improve their work adaptation.

### Social Equitable Recruitment

We operate a social equilibrium recruitment system to ensure equal employment opportunities for everyone. In December 2021, in cooperation with the Korea Employment Service for the Disabled, we analyzed the recruitment system, found suitable jobs for the disabled, and improved the recruitment environment considering the characteristics of applicants by deploying stenographers in the process. In addition, to expand the recruitment of excellent high school graduates, 9 new employees were hired. And the system is continuously improving to recruit from a diverse background by introducing additional points in 2022 for the socio-economically disadvantaged including recipients of basic needs fund and single-parent families.

#### Socially Equitable Recruitment (Unit : Persons)

Category	2020	2021	2022
Disabled	2	2	5
Youth	19	18	33
Youth Intern	44	52	51
High school graduates	0	0	9

### KEITI Focusing on Fostering Future Key Talents

In order to achieve its management goals, KEITI has set a human resource development plan to develop and improve its members' capabilities in connection with its management strategy. In particular, we are promoting education on digital convergence capabilities, public values, and carbon neutral and green management capabilities by responding to rapidly changing environments such as the 4th Industrial Revolution and Green New Deal and reflecting employee needs.

<b>HRD Target</b>	Fostering KEITI Environmentalists who Challenge Future Tasks based on Passion and Provide Environmental Solutions		
<b>KEITI Ideal Talent</b>	① Talent who Communicates and Cooperates ② Talent who Brightens the World with Professionalism ③ Talent who Realizes Public Values		
<b>Strategies</b>	Efficient and Effective Education	Communication and Empathy Education	Sustainable Capacity Development System
<b>Action Item</b>	<ul style="list-style-type: none"> <li>Competency Model/Need-Based Training</li> <li>Job competency process expansion and reorganization</li> <li>Analysis of educational effectiveness and feedback</li> </ul>	<ul style="list-style-type: none"> <li>Strengthening generational empathy and cohesion</li> <li>Internalization of public value</li> <li>Strengthening public service</li> </ul>	<ul style="list-style-type: none"> <li>Introduction of competency development system</li> <li>Self-directed learning infrastructure</li> <li>Strengthening response to environmental changes</li> </ul>

In addition, we are creating an educational environment regardless of time and place by establishing a virtual education system. We produce online education services that enable two-way communication in real time as well as employee-centered self-education contents that provide field knowledge such as interview type and group discussion type.

### Customized Education for Each Life Cycle Considering the Competency of Each Stage

KEITI provides customized training considering the capabilities of members of each stage, from new employees to managers. In order for executives and employees to innovate their organizational culture and internalize their vision, we operate a variety of curricula ranging from communication training, creative thinking and administrative skills training, and environmental professional job training. In particular, in 2022, the Common Job Competency Training, which is used directly for work, was operated so that all employees can participate, enhancing the effectiveness of the onsite application of the education and showing high satisfaction.

New employees	Hands on Worker	Middle manager	Manager
<ul style="list-style-type: none"> <li>Organizational adaptation and practical capabilities</li> <li>Introduction to law</li> <li>Public Document Basics</li> </ul>	<ul style="list-style-type: none"> <li>Followership, Improving reports</li> <li>Learnig on the job</li> <li>Communication skills</li> </ul>	<ul style="list-style-type: none"> <li>Senior leadership</li> <li>Coaching capabilities</li> <li>Long-term consignment policy research courses</li> </ul>	<ul style="list-style-type: none"> <li>Administrator Leadership</li> <li>Crisis and conflict management</li> <li>International Top Course Training</li> </ul>

### Specialized Education for Empowerment of Female Talent

KEITI operates customized education for women to demonstrate their capabilities and expand opportunities. We supported customized education for each position, such as self-leadership cultivation and future female leader education, and establishment of a cooperative network. In addition, we actively support female talent to show their capabilities through personnel reflection, such as deploying them to institutional senior departments and core strategic departments.

### Training to strengthen digital and IT utilization capabilities

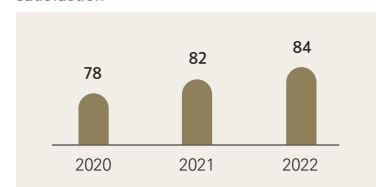
Introductory	Intermediate
Understanding Digital Transformation	Utilization and practice of data analysis
Digital literacy big data, etc. (48 courses)	Statistical program utilization environment data analysis, etc. (15 courses)

### Education for internalization of public values

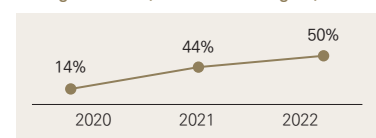
Ethical Integrity	Understanding Conflict of Interest Prevention, Integrity leadership course
Customer Satisfaction	Customer satisfaction communication program
Human Rights	Prevention of unfair trade and overuse cases, Gender sensitivity, 4 major violence prevention education
Mutual Respect	Reverse mentoring for new employees, Organizational revitalization role training
Safe Business	Prevention of musculoskeletal disorders, Understanding the Occupational Safety and Health Act
Information Security	Cyber hacking response, Information Leakage Accidents, Privacy Act



### Improved internal employee training satisfaction



### Increased proportion of women promoted to managerial level (senior level or higher)



# Safe, Trustworthy Workplace

## Establishment of Disaster Safety Management System and Advancement of Operation

KEITI has established a disaster safety management system to implement management principles that put "safety" first. In order to prevent and improve safety and health risks of the KEITI in advance, the organization dedicates itself to expand its safety management and additional experts have been deployed in the field. Additionally, the implementation of the system has been enhanced through the inspection of behavioral manuals for vulnerable disaster situations and joint public-private training.

Furthermore, we practice safety first management through communication with the government, the people, workers, and partners.

Vision	A Safe and Healthy Accident-free and Incident-free Institution			
Strategic Goal	Safety Management of Coexistence and Innovation to Protect the Lives and Safety of Workers and Citizens			
Strategic Direction	Advancement and Spread of Safety Management System	Establishment of Environmental Safety Net for People	Inclusive Risk Management for Everyone's Safety/Health	Preemptive Inspection/Diagnosis of Facilities
Action Item	<ul style="list-style-type: none"> <li>Establishment and operation of safety management system</li> <li>Strengthening response to disaster and safety accidents</li> <li>Prevention of COVID-19</li> </ul>	<ul style="list-style-type: none"> <li>Safety management of household chemical products</li> <li>Securing safety and health management technology</li> <li>Strengthening the environmental safety network for the vulnerable</li> </ul>	<ul style="list-style-type: none"> <li>Risk management based on working environment</li> <li>Protection-consideration of vulnerable workers</li> <li>Safety management support for field workers</li> </ul>	<ul style="list-style-type: none"> <li>Safety inspection of facilities</li> <li>Joint workshop inspection</li> <li>Establishment of safety system for multiuse facilities</li> </ul>
Responsible Organization	Organization Dedicated to Safety Management <ul style="list-style-type: none"> <li>Operation of disaster safety system</li> <li>General manager of workplace safety management/inspection</li> </ul>	Safety and Health Committee <ul style="list-style-type: none"> <li>Revision of safety regulation guidelines</li> <li>Deliberation/decision on safety and health matters</li> </ul>	Working Council <ul style="list-style-type: none"> <li>Inspection of safety tasks</li> <li>Cooperation/response on safety issues</li> </ul>	Safe Labor Council <ul style="list-style-type: none"> <li>Joint inspection of business establishments</li> <li>Participation in disaster investigation, etc.</li> </ul>

### Safety and Health Management System (KOSHA-MS) Certification

In February 2022, KEITI introduced Korea Occupational Safety and Health Agency-Management System (KOSHA-MS) for all workplaces, including employees and partners. For thorough safety and health management, related manuals/procedures (18 items) and 30 guidelines resources have been established. And safety activities such as safety and health management policies and goal setting, risk assessment, emergency response, monitoring, and management review are implemented. KEITI will continue to improve its management system to secure internal and external reliability in safety management.



Area	Detailed plans and achievements
Policy and Goal Management	<ul style="list-style-type: none"> <li>Review, revision, and sharing of management policies (MIS, agency website, etc.)</li> </ul>
	<ul style="list-style-type: none"> <li>Set goals and targets (July)</li> </ul>
	<ul style="list-style-type: none"> <li>Establishment of safety and health activity promotion plan (December)</li> </ul>
Risk Assessment	<ul style="list-style-type: none"> <li>Implementation of current risk identification</li> </ul>
	<ul style="list-style-type: none"> <li>Implementation of workplace risk assessment</li> </ul>
	<ul style="list-style-type: none"> <li>Risk assessment improvement measures and confirmation of implementation</li> </ul>
	<ul style="list-style-type: none"> <li>Certification of excellent risk assessment workplaces</li> </ul>

Area	Detailed plans and achievements
Internal Audit	<ul style="list-style-type: none"> <li>Establishment of internal audit plan, selection and training of auditors</li> </ul>
	<ul style="list-style-type: none"> <li>Report and share internal review results</li> </ul>
Management Review	<ul style="list-style-type: none"> <li>Preparation, reporting, and sharing of review results of management review reports</li> </ul>
Improvement	<ul style="list-style-type: none"> <li>Continuous improvement of major nonconformities</li> </ul>
External Audit	<ul style="list-style-type: none"> <li>Response to follow-up examination and maintenance of certification</li> </ul>

### Advancement of Safety Activities and Spread of Safety Culture

KEITI is collecting opinions from various stakeholders to enhance safety activities in the workplace. We actively discover risk factors by preparing safety proposals, subsequent accident competitions, and other disaster reporting procedures for executives and employees. In addition, risk factors in the workplace are preemptively managed by joint inspections linked to specialized institutions and providing risk assessment consulting for partner companies. We continue to achieve safety culture through activities such as a safety zone declaration ceremony, and a safety campaign for outside workers.

Area	Project Contents
Spreading Safety Culture	<ul style="list-style-type: none"> <li>• Introduction of safety awareness level improvement program                             <ul style="list-style-type: none"> <li>- Diagnosis, evaluation and improvement of employee safety value, operation, training, communication activity level</li> </ul> </li> <li>• Expand safety proposal system, share safety activities</li> </ul>
Reinforcing Collaboration on Safety Activities	<ul style="list-style-type: none"> <li>• Joint inspection in connection with specialized institutions</li> <li>• Providing risk assessment consulting to suppliers, establishing an emergency contact system</li> <li>• Workplace daycare center linkage, fire response joint training</li> </ul>
Pre-Discovery and Improvement of Risk Factors	<ul style="list-style-type: none"> <li>• Risk factor investigation and risk assessment for each task</li> <li>• Establishment of emergency work suspension request center and operation of near-miss accident reporting system</li> <li>• Facility inspection to identify and improve potential risk factors</li> </ul>

KEITI is expanding professional safety education to enhance company safety capabilities and safety awareness. We provide health, disaster safety, and occupational disease prevention education for executives and employees. And also, we provide risk assessment and safety and health management system operation training for safety managers. In addition, we regularly monitor the degree of improvement in safety awareness of employees.

#### Supplier Safety Management Support Project

For the safety of stakeholders, the Environmental Industry Research Complex produces and operates safety education video contents such as accident prevention safety procedures and designates them as essential education for tenant companies. Moreover, we held a 'Safety Zone Declaration Ceremony' event to establish a safety culture that participates and practices with research complex residents, enacted the top 10 safety golden rules, and encouraged them to participate in workplace risk assessment.

### Reinforcing Personal Information Management Supervision

KEITI processes personal information in accordance with the Personal Information Protection Act and related laws. In order to strengthen personal information management, we strengthen personal information safety measures, provide customized personal information education for each job, and operate a management system for personal information protection. Following these efforts, the Personal Information Protection Committee has maintained a "good" rating for three consecutive years (2019-2021) in the diagnosis of the level of personal information management.

Disaster safety experience education using VR (Virtual Reality)



Safety zone proclamation ceremony for Environmental Industry Research Complex



Category	Unit	2019	2020	2021
Customer information leaks	case	0	0	0
Personal Information Management Level	points	99.79	99.55	96.78

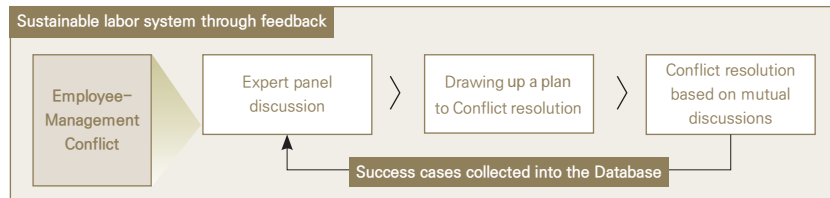


# Happy Workplace

## Labor-Management based on Mutual Cooperation

### Operate a Reasonable and Legal Labor-Management Consultation System

KEITI supports the operation of labor unions to guarantee workers' right to unite, and right to collective bargaining and collective action. We also establish a consultation system between employees and management and operate it regularly for collective bargaining and agreements under the Labor Union Act. Through the consultation system, we discussed various agendas for improving the working environment and institutional management, and employees and management work together to make KEITI an enjoyable workplace. From 2021, a new employee-management professional group has been in operation to ensure that conflict resolution and consultations can be continuously implemented and managed.



### Healthy Corporate Culture Campaign with Employees and Management

KEITI held a Healthy Organizational Culture Campaign in cooperation with employees and management for sound communication based on voluntary participation. Once a month, we run "Communication Day with Music" and opened a "Ask Anything" bulletin board to share employees' thoughts and opinions. In addition, in order to form a culture of appreciation and respect for each other, the 'Express Praise Relay' and "Thanks to You Campaign" were conducted. And the 'Smart Work Plus Minus' was promoted to find and check factors that impede work productivity.

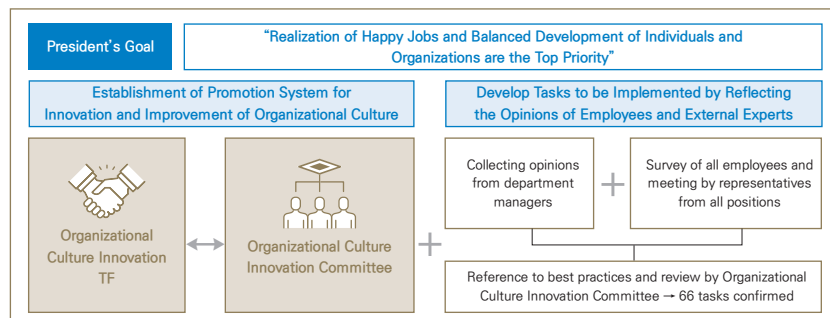
Operation of Employee-Management Council

Category	Operations (annual)
Employee-Management Council	4 times
Employee-Management Expansion Meeting	4 times
Labor-Work Affairs	4 times

### Operation of a TF and Innovation Committee for Organizational Culture Innovation

In 2022, KEITI launched the Organizational Culture Innovation TF to realize a happy workplace and promote balanced development of individuals and organizations through communication and cooperation among executives and employees. A survey was conducted on all employees to discover tasks for improving organizational culture in the fields of personnel, evaluation, workplace, and organizational system, and 66 tasks were finally identified. The improvement project will be carried out in stages over three years, and we will continue to make efforts to become a job we want to work in through continuous monitoring and collecting opinions from employees.

Declaration ceremony for healthy organizational culture campaign



### KEITI Human Rights Management

KEITI established human rights management in 2019 with the vision of a “people-centered happy workplace, KEITI” and established three strategies and eight implementation tasks with the goal of “sustainable management through respect and protection of human rights.” Since then, we have strengthened norms and organizations to implement human rights management, unified personnel system and human rights management, and operated an external grievance counseling regarding power abuse, workplace harassment, and sexual violence. As a result, we obtained certification for the human rights management system in December 2021.

Acquired Human Rights Management System Certification (2021.12.)



<b>Goal</b>	<b>Implementation of Sustainable Management through Respect and Protection of Human Rights</b>		
<b>Strategy</b>	<b>1. Establishment of Human Rights Management System</b>	<b>2. Practice of Human Rights-Friendly Management</b>	<b>3. Human Rights Violation Relief</b>
<b>Action Item</b>	Establishment of human rights management system Organization and operation of the Human Rights Management Committee Declaration of human rights management and dissemination at home and abroad	Human rights education and training Implementation of human rights impact assessment and feedback of results Establishment and implementation of human rights management plan	Establishment and implementation of human rights violation relief procedures Promotion of human rights violation relief procedures

### Spread Awareness of Human Rights Management among Employees

KEITI held a declaration ceremony for human rights management to internalize the culture of respect for human rights, and provides customized human rights violation prevention education for all employees, from new employees to managers. Moreover, we are focusing on fostering grievance counseling professionals through education of grievance counseling experts for sexual harassment and sexual violence in connection with the Korean Institute for Gender Equality Promotion and Education. As a result of these efforts, employees’ awareness of human rights management has improved.

#### Human Rights Management Declaration

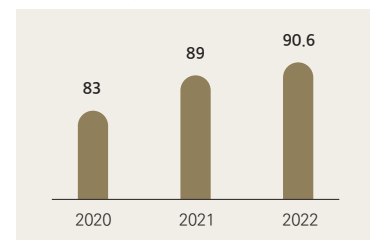
KEITI is an environmental professional organization that has contributed to the development, support, and dissemination of environmental technology, fostering environmental industries, and promoting eco-friendly life. As a principle of action and value judgment that all executives and employees must observe, KEITI declares the Human Rights Management Declaration as follows.

- 1. We support the Universal Declaration of Human Rights and establish and implement necessary systems and policies to ensure that a culture of respect for human rights can be established within the organization.
- 2. We prevent human rights violations in advance and actively strive to remedy human rights violations.
- 3. We respect the human rights of all stakeholders, including customers, research institutes, partners, and communities, and pursue win-win development.
- 4. We do not discriminate on the grounds of disability, gender, race, religion, region of origin, age, political views, etc.
- 5. We comply with domestic and foreign environmental laws such as ecosystem restoration and environmental vulnerability protection, and strive to protect the environment and prevent pollution.
- 6. We respect and ensure the organization and activities of trade unions.
- 7. We create a safe and healthy working environment.
- 8. We protect all personal information obtained from management activities.

#### Human rights violation prevention education

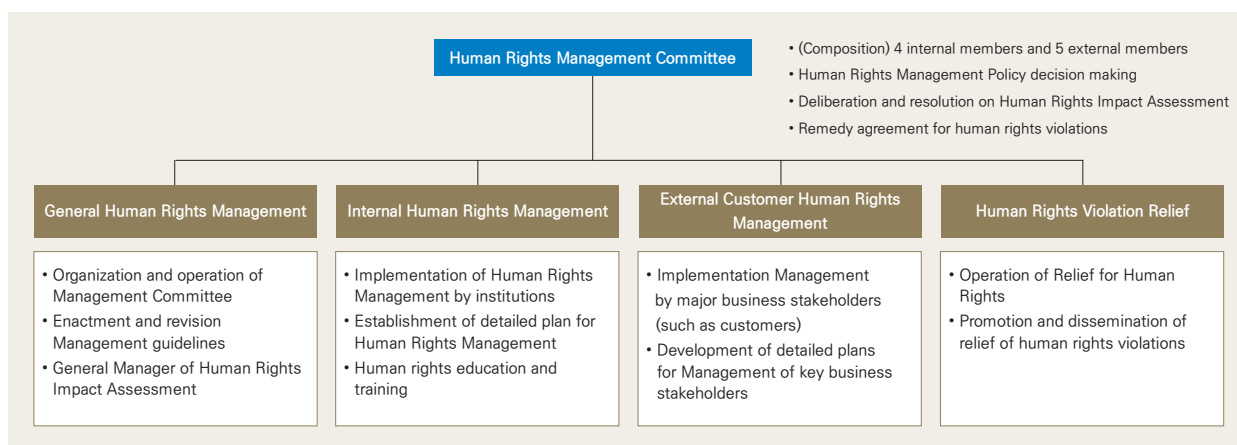


Raising awareness level of human rights management system



### Organization of the Human Rights Management Committee

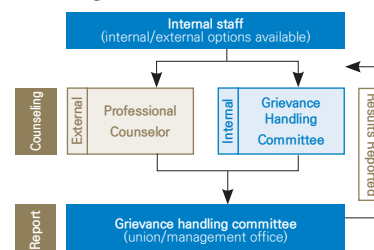
The Human Rights Management Committee is a decision-making body for the efficient promotion of human rights management, and has the authority to deliberate and vote on the protection of human rights by internal and external stakeholders. The Human Rights Management Committee is chaired by the president of KEITI and consists of four internal members, five external members of experts. The Committee holds regular meetings at least once a year, and may hold ad hoc meetings at the request of important agenda items and at the request of at least 1/3 of the incumbent members. In addition, we are deliberating on agenda items for damage relief in the event of human rights violations, and are actively promoting activities such as discovering and preventing risks of human rights violations in advance by conducting human rights impact assessments.



### Operation of an External Counseling Center for Human Rights Management

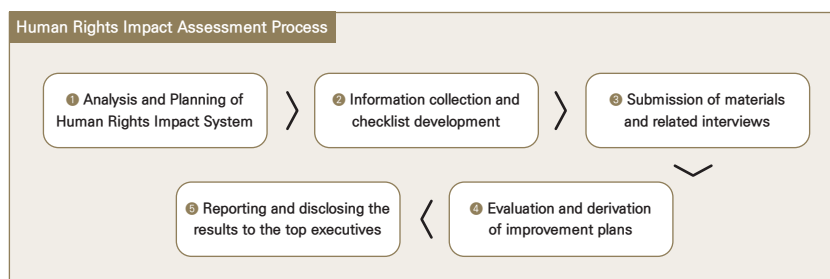
When anonymity is not guaranteed, it is not easy to report and consult grievances caused by human rights violations. In order to solve these problems, KEITI has established a grievance consultation system of external experts that guarantees anonymity. A certified labor attorney conducts 1:1 consultation, which is strictly private. We also provide legal advice if necessary.

#### Human Rights Violation Consultation Process



### Human Rights Impact Assessment

KEITI is conducting a human rights management impact assessment to determine the actual potential human rights risks that can affect human rights due to management activities or business relationships. We evaluated 10 international issues such as non-discrimination in employment, prohibition of forced labor, and guarantee of environmental rights, and we will continue to manage the human rights of all stakeholders while promoting the project.





# KEITI Governance

Governance

Ethical Management: Engraving integrity into KEITI



# Governance

## Composition of the Board of Directors

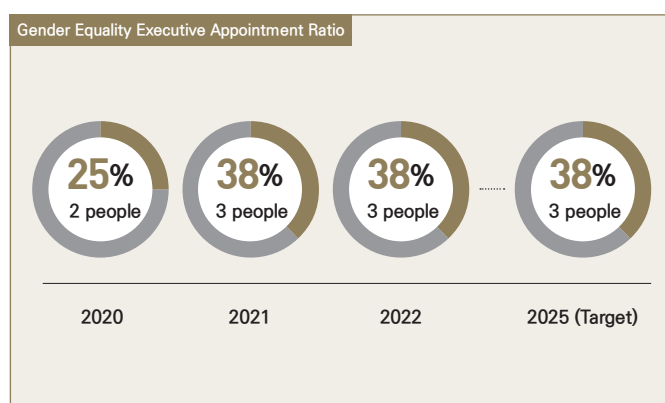
The board of directors of KEITI is the highest voting body that makes decisions on important management matters such as management goals, budgets, and management performance in consideration of social responsibility. We are striving to keep non-executive directors in check, promote the performance of advisory roles, and diversify the members of the board of directors. The board consists of one director, two permanent directors, five non-executive directors, one non-executive auditor, a total of nine people. The director is appointed by the Minister of Environment among the multiple recommenders of the Executive Recommendation Committee, and non-executive directors except ex officio are appointed from among personnel from industrial, academic, and private environmental groups. The term of office of the director is three years, and the term of the other board of directors is two years, and can be reappointed on a yearly basis to ensure responsible decision-making.

(As of December 2022)

Position	Name	Affiliation and Position	Term of office	Gender
President	Heungjin Choi	Director of the Korea Environmental Industry and Technology Institute	'22.Sep.13.~'25.Sep.12.	Male
Executive director	Woowon Lee	Head of Environmental Technology & Industry Headquarters, KEITI	'21.Dec.20.~'23.Dec.19.	Male
Executive director	Jong-hwan Kim	Head of Sustainable Lifestyle & Welfare (Health) Headquarters, KEITI	'20.Sep.21.~'23.Jan.24.	Male
Non-executive director (ex officio)	Gibok Jang	Head of Green Transition Policy Division, Ministry of Environment	'21.Jun.21.~(undecided)	Male
Non-executive director	Wongi Lee	Executive Advisor, People and People LLC	'20.Apr.29.~'23.Apr.28.	Male
Non-executive director	Choony Kim	Secretary General, Korea Federation for Environmental Movements	'20.Apr.29.~'23.Apr.28.	Female
Non-executive director	Booyoung Ahn	Director of Science Data Education Center, Korea Institute of Science and Technology Information	'21.Nov.1.~'23.Oct.31.	Female
Non-executive director	Sangcheol Kim	Advisor, BNB STEEL	'21.Nov.1.~'23.Oct.31.	Male
Non-executive auditor	Myoung-ju Lee	Professor, Myongji University College of Architecture	'20.Apr.8.~'23.Apr.7.	Female

## Expansion of Female Executives' Participation in Management

In order to realize gender equality in executive composition, KEITI is trying to actively select talented female executives by setting a challenging goal higher than the government's recommended level of 20%. In particular, the ratio of female executives reached 38% in 2021, which is an achievement of a goal by 2025 four years early. In addition, in operating the executive recommendation committee, we have expanded the composition of the workforce to include female members in the "National Talent DB," and have expanded the public offering channel in connection with female related organizations such as the Korean Women's Development Institute and the Korean Institute for Gender Equality Promotion and Education.



(As of December 2022)

Category	Position	Board Makeup (People)			Percentage of female executives
		Male	Female (A)	Total (B)	(A/B)
Executive	President	1	0	1	0%
	Standing Director	2	0	2	0%
non-executive	Non-executive Director	2	2	4	50%
	Non-executive Auditor	0	1	1	100%
Sum		5	3	8	37.5%

### Board of Directors

The board of directors holds regular and temporary board meetings. Regular board meetings are held twice a year, and temporary board meetings are actively held in case of issues. In 2022, a total of 6 board meetings were held, and a total of 34 agendas were deliberated, including 18 resolutions and 16 reporting agendas.

KEITI has been improving its operational methods to expand its participation in management of the board of directors. During the pandemic era, virtual board meetings were held to ensure that the board continued to fulfill its duties, and post-COVID era, in-person board meetings are being held to expand on-site inspections and customer opinion exchanges in connection with institutional management issues. In addition, we tried to help non-executive directors in making institutional management decisions by operating a system where they are given thorough information regarding the agendas and resolutions prior to the meeting to enhance their ability to deliberate on complex agendas. We are striving to increase transparency in the board's operations and the contents and results of the board meetings through frequently disclosing the minutes on the website "Management Disclosure" and "ALIO," a management information disclosure system for public institutions.

### Operation of Specialized Subcommittees

In order to utilize the expertise of non-executive directors and enhance their roles, a department dedicated to each specialized subcommittee is designated. In particular, starting 2022, we have been stepping up efforts to promote ESG management by strengthening the sustainable management system. The management suggestions through the operation of these specialized subcommittees were reflected in the management of the institution, and various activities were implemented, such as holding a Carbon Neutral GACHI Forum with internal and external experts and promoting the Specialized High School project to train environmental experts.

Category	ESG Committee	Environmental Technology Industry Committee	Environmental Safety Committee
Composition	<ul style="list-style-type: none"> <li>Non-executive Director</li> <li>Director of Management Planning Division</li> </ul>	<ul style="list-style-type: none"> <li>Non-executive Director</li> <li>Director of Environmental Technology Industry Division</li> </ul>	<ul style="list-style-type: none"> <li>Non-executive Director</li> <li>Director of Sustainable Lifestyle Welfare Division</li> </ul>
Area	<ul style="list-style-type: none"> <li>Overall management of the institution</li> <li>Promotion of the institution, informatization</li> </ul>	<ul style="list-style-type: none"> <li>Environmental R&amp;D business management</li> <li>Fostering the environmental industry</li> </ul>	<ul style="list-style-type: none"> <li>Promotion of eco-friendly lifestyle</li> <li>Prevention and relief of environmental damage</li> </ul>
Main Activity	<ul style="list-style-type: none"> <li>Consultation on organization's key business plans, public relations, and informatization</li> </ul>	<ul style="list-style-type: none"> <li>On-site inspection of environmental R&amp;D and commercialization support</li> </ul>	<ul style="list-style-type: none"> <li>On-site inspection of eco-friendly living promotion</li> </ul>

### Performance Evaluation and Compensation

KEITI decides on a yearly basis on the director's serving a second term by reflecting their contribution to the board of directors, their business expertise, and internal and external influence. The remuneration standards for directors are set in accordance with the regulations, and are transparently disclosed on the 'Management Disclosure' of the institution's website and 'ALIO'.

#### Board of Directors

Category	'21	'22
Number of board meetings held	5	6
Resolutions	15	18
Reporting agenda	7	16

#### Field-Oriented Board of Directors



#### Ethical Integrity Establishment of KEITI

Company-wide efforts are needed to prevent corruption that is feared to continue to increase in business size.  
(Non-executive director, LeeOO '22.2)

All departments participated to establish an anti-bribery management system (ISO 37001)

Establishment of ethical management monitoring system by designating non-executive directors as ethical experts

(In KRW million)

Division	2020	2021	2022
President	191	179	146
Executive Director	153	143	117
Non-executive Auditor	12.9	13.1	15.5
Non-executive Director	13.3	15.4	15.4

# Ethical Management: Engraving integrity into KEITI

## Compliance·Ethical Management Promotion System

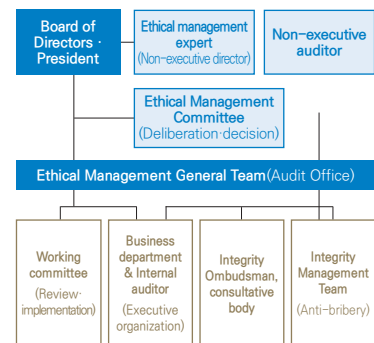
KEITI is striving to achieve the goal of the best institution in integrity by setting the goal of the comprehensive integrity level through a long-term management strategy. In order to do that, KEITI has operated a compliance and ethical management system by setting the vision: "Realization of KEITI that is trusted by customers through environmental ethical management." It established 10 ethical norms, including the Code of Ethics, Code of Conduct, Corruption and Public Interest Reporting Guidelines, and established 12 tasks for the 6 key elements in 2022 according to the standard model of ethical management of public institutions announced by the Steering Committee of Public Institutions.

Institutional Vision	A Global Environmental Institution that Opens the Future Together with the People				
Ethics Vision	Realization of KEITI that is Trusted by Customers through Environmental Ethical Management				
Goal	Comprehensive Integrity 1st Grade + ZERO Corruption cases				
Core Areas	Establishment of Ethical Awareness	Establishment of Management System	Identification and Control of Ethical Risks	Communication	Monitoring
Action Items	<ul style="list-style-type: none"> <li>• Inspection of environment</li> <li>• Internalization of management</li> <li>• Expansion of management</li> </ul>	<ul style="list-style-type: none"> <li>• Composition of the propulsion system</li> <li>• Enhancement of KEITI's ethical management</li> </ul>	<ul style="list-style-type: none"> <li>• Identify KEITI ethical risks (common-general, and unique-core)</li> <li>• Establishing risk control activities</li> </ul>	<ul style="list-style-type: none"> <li>• Improvement of the whistleblower system</li> <li>• Operation of external check system</li> </ul>	<ul style="list-style-type: none"> <li>• Responding to criticism</li> <li>• Operation inspection</li> <li>• Follow-up management</li> </ul>

## Operation of Ethical Management Promotion Organization

KEITI has designated an organization dedicated to ethical management and established an ethics management committee consisting of high-ranking officials such as heads of institutions and permanent directors to carry out systematic activities. In addition, we are striving to establish a clean ethical management organizational culture by forming a working committee under the Ethics Management Committee and designating ethical management practice leaders for each department.

Institutional ethical management promotion organization chart



## Anti-bribery Management System (ISO 37001) Certification

As the social demand for transparency and integrity in the public sector increases, we have introduced an Anti-bribery management system (ISO 37001) that meets international standards. We developed anti-bribery management manuals, risk assessment guidelines, and internal review guidelines in compliance with global standards, and prepared anti-corruption education and anti-bribery education, and a corruption risk management system for each business project.

Anti-bribery Management System (ISO 37001) Certificate



### Internalization of Ethical Awareness among Employees

KEITI conducted in-person ethical education for managers and invited instructors specializing in business integrity education to hold real-time video education for all employees (2 times per year). Furthermore, in order to internalize the practice of business integrity for executives and employees, we hold an anti-corruption integrity pledge ceremony and continue to operate the ethical mileage system to establish an institutional integrity culture.

In addition, KEITI promoted participatory activities such as online quiz competition, conducting mock training sessions on reporting conflicts of interest, sharing cases of violations of the Code of Conduct for public officials, and spreading audit results to raise awareness of anti-corruption.



▲ In-person ethical education for managers



▲ Online ethics training for all employees

### Operation of Internal-External Reporting Channels

In order to enhance organizational integrity, KEITI operates channels for reporting public interest, clean reporting, power abuse, and human rights violations on the institute’s website. In particular, the Ministry of Environment’s direct anonymous reporting center was opened to improve the anonymity and convenience of informants to deal with misconduct by executives and employees.

In addition, in June 2021 and July 2022, we conducted self-simulation training for employees to enhance their ability to respond to corruption by training them on reporting fidelity, speed, and reporting rate in corruption situations. In accordance with related laws such as the Reporter Protection Regulations and the Personal Information Protection Act, we have reorganized regulations to strengthen the protection of reporters and are making efforts to increase the effectiveness of the reporting system.

#### Internal/external reporting channels

Internal	Public interest report
	Clean reporting center
	Channels for reporting workplace abuse and human rights violations
External	Anonymous Report directly to the Ministry of Environment

### Operation of Institutional Internal Control System

KEITI operates and strengthens the internal control system for institutional fairness and transparency. In order to preemptively eliminate potential corruption factors for each project, the 'Internal Control Self Assessment (CSA)' was conducted to identify the risk ranking of corruption based on five items such as fraudulent solicitation and preferential treatment. In addition, we are strengthening the integrity network with local governments and related public offices such as the Seoul Integrity Society Public-Private Council and the Transparency Organization Korea Forum, and participating in the Ministry of Environment–Public Institution Anti-Corruption and Integrity Innovation Group to spread fair and transparent ethical management.

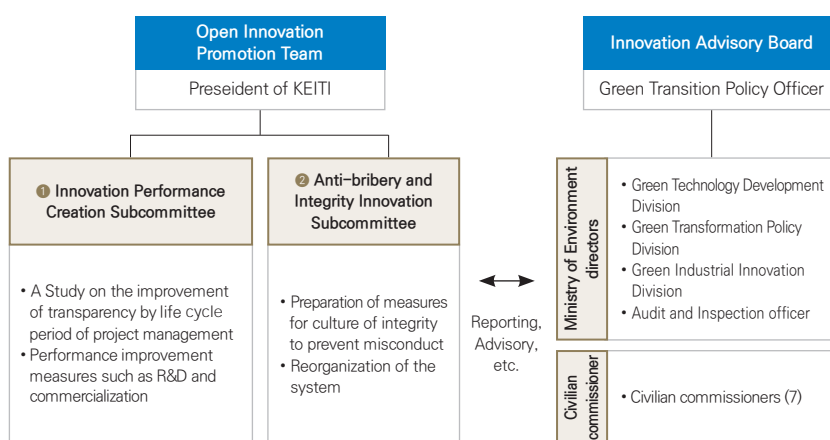
<p>Competition for the Corruption-Weak Areas 29 departments participated, 33 items submitted</p>	<p>Anti-Corruption Policy Evaluation Full marks for 'Efforts to Eliminate Corruption Risk'</p>	<p>The Number of Corruption Prevention Case 44% year-to-year Increase (24 → 35 cases)</p>
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## Leap to Strengthen Integrity, Operation of the Open Innovation Promotion Group

In order to strengthen the integrity of all employees, KEITI formed the KEITI Open Innovation Promotion Team led by the head of institution to carry out 14 detailed tasks in 5 areas, including corruption prevention activities. We have executed the operation of the internal reporting system, the diagnosis of institutional integrity through external specialized institutions, and field inspection. We are also operating an occasional inspection system throughout the year.

### Open Innovation Promotion Group Operating System



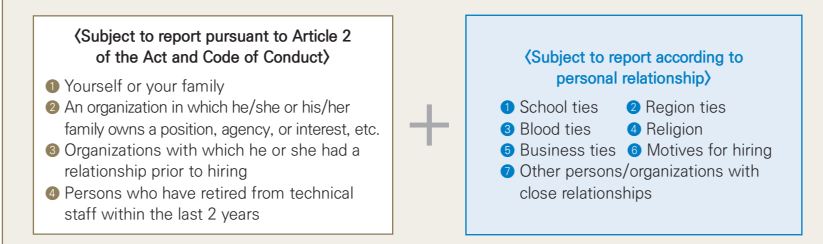
### Integrity Reinforcement 5 Areas

- 1 Preventive activities
- 2 Reinforcing punishment
- 3 Strengthen communication and management
- 4 Strengthen business transparency
- 5 Improving R&D commercialization performance

### KEITI Conflict of Interest Reporting System

In accordance with the implementation plan established through the KEITI Open Innovation Promotion Team, KEITI operates the "Interest Reporting System" to strengthen employee communication and corruption risk management. If employees are in private relationship with interest groups, it is mandatory to report. By expanding the scope of the Public Officials Conflict Prevention Act, relationships such as school ties and religion, it is included to immediate reporting thereby excluding duties and designating agents.

#### KEITI Reporting Conflict of Interest Scope of Reporting Subjects



### Reinforcing Business Operation Transparency

KEITI conducts regular inspections of the execution of research funds to enhance transparency in the use of funds. A quarterly inspection was conducted on 1,281 projects supporting research funds between 2021 and 2022. In addition, 658 researchers were trained 3 times in the proper usage of research funds, and the R&D expenditure Q&A booklet was distributed to 762 R&D institutions and 1,363 R&D practitioners.

### Meetings for Research Performers





# ESG DATA

Environment

Society

Governance



## Environment (E)

### Energy Usage

Division		Unit	2020	2021	2022
Fuel	Gasoline	TJ	0.474	0.261	0.215
	Diesel	TJ	0.053	0.015	0.015
Electricity		TJ	22.557	22.947	23.714
City Gas		TJ	2.181	2.199	2.415

### Greenhouse Gas Emissions

Division		Unit	2020	2021	2022
Direct emissions (Scope 1)	Gasoline	tCO <sub>2</sub> eq	31.869	17.53	14.455
	Diesel	tCO <sub>2</sub> eq	3.725	1.042	1.084
	City gas	tCO <sub>2</sub> eq	110.7	111.605	122.575
Indirect emissions (Scope 2)	Electricity	tCO <sub>2</sub> eq	1,095.54	1,098.161	1,134.834
Total greenhouse gas emissions		tCO <sub>2</sub> eq	1,241.82	1,228.33	1,272.948

### Waste Generated

Division		Unit	2020	2021	2022
KEITI		Ton	29.75	40.96	33.00

### Water Usage

Division		Unit	2020	2021	2022
KEITI		Ton	9,768	10,209	12,712

### Green Product Purchase Performance

Division		Unit	2020	2021	2022
Green product purchase performance		KRW Million	593	496	648

※ Reflects ALIO disclosure standards and public data

## Society (S)

### Employee Status

Category		Unit	2020	2021	2022	
Total number of employees		Persons	633	633	660	
Regular	Male	Persons	316	293	316	
	Female	Persons	290	317	319	
Non-regular	Male	Persons	12	16	7	
	Female	Persons	15	7	18	
Age	10's	Persons	0	-	-	
	20's	Persons	138	123	128	
	30's	Persons	258	258	257	
	40's	Persons	149	167	183	
	More than 50's	Persons	88	85	92	
Diversity hiring	Youth intern	Persons	44	52	51	
	Local talent	Persons	9	16	22	
	Disabled	Persons	2	2	5	
Number of new hires	Total number of new hires		Persons	25	26	35
	New Recruitment by Gender	Male	Persons	7	12	13
		Female	Persons	18	14	22
Retiree	Male	Persons	21	22	27	
	Female	Persons	11	27	31	
	Retirement rate	%	5.3	8	9.1	
Parental leave	Male	Persons	3	12	21	
	Female	Persons	38	49	39	
	Returnees after parental leave	Persons	11	26	36	
	Number of employees with over one year of continuous service period after returning from parental leave	Persons	11	26	34	
	Return rate	%	100	100	100	
	Percentage of continuous work for 12 months or more	%	84.6	96.2	94.4	
Union status*	Number of members	Persons	432	391	387	
	Participation Rate	%	73.9	66.6	67.1	

\* Applied to union members in accordance with the scope of application according to the collective

※ Reflects ALIO disclosure standards and public data

## Employee Training

Division		Unit	2020	2021	2022
Gender	Male	Hour	49.4	52.4	59.3
	Female	Hour	54.6	57.9	65.5
Type	Regular	Hour	53	56.2	63.6
	Non-regular	Hour	51	54	61.1
Position	Senior level and above	Hour	47.8	50.7	57.4
	Junior Level	Hour	51.5	54.6	61.8
	Below Regular Employee level	Hour	56.7	60.1	68.0
Average monthly training hours per person		Hour	4	5	5
Training cost per person		KRW 1,000	540	575	554
Employees participating in sexual harassment prevention training		Persons	602	617	595
Number of sexual harassment prevention training		Times	2	2	2

## Industrial Accident Status

Division		Unit	2020	2021	2022
Injury rate		%	0.3	0.15	-
Occupational disease rates		%	-	-	-
Work-related fatalities		Persons	-	-	-
Number of work-related injuries		Persons	2	1	-
Number of major accidents		Cases	-	-	-
Industrial accident rate		%	0.3	0.15	0

## Community

Division		Unit	2020	2021	2022
Dr. Eco*	No. of training sessions	Cases	15	10	29
	Participating students	Persons	318	200	304
Volunteer hours per employee		Hour	2	2	2
Donation amount		KRW	57,773,760	1,161,890	31,072,480

## Customer Privacy Protection

Division		Unit	2020	2021	2022
Number of leaks of customer personal information		Cases	0	0	-
Level of privacy protection management		Points	99.55	96.78	-

\* Dr.Eco: An eco-friendly education program that combines theories and discussions with a tour of the 'Geumcheon Eco Center', an education and public relations center specialized in climate change in Geumcheon-gu, Seoul

## Governance (G)

### Board of Directors

Category	Unit	2020	2021	2022
Number of board meetings	Times held	9	5	6
Resolutions	Items	19	15	18
Reporting agendas	Items	16	7	16
Board attendance rate	Executive directors	%	96.3	100
	Non-executive directors	%	82.2	84
	Total	%	86.9	89.6
Gender makeup	Female directors	Persons	2	3
	Male directors	Persons	7	6

### Ethical Management Education

Category	Unit	2020	2021	2022
Employees participating in ethical management training	Senior level or higher	Persons	12	14
	Senior	Persons	23	29
	Junior	Persons	45	57
	Researcher	Persons	54	93
	Below researcher	Persons	112	138
	Specialized	Persons	12	23
	Administrative position	Persons	90	110
	Operating position	Persons	29	90
Ethics management training hours per person	Hour	4.21	6.33	9.08

### Anti-Corruption

Category	Unit	2020	2021	2022
Anti-corruption policy evaluation rating		3	2	2
Integrity Evaluation (External)	Rating	4	4	85.6(rating unannounced)
Integrity Evaluation (Internal)		2	3	66.9(rating unannounced)
Overall Integrity rating		3	4	4



# APPENDIX

Financial Information

GRI Standards Index

UNGC Advanced Level

Independent Assurance Statement

Major Memberships and Awards



# Financial Information

## Summary of Balance Sheet

(Unit : KRW)

Classification	14th Period (1.1-12.31, 2022)	13th Period (1.1-12.31, 2021)	12th Period (1.1-12.31, 2020)
<b>Asset</b>			
1. Current assets	472,263,551,946	325,159,512,417	289,384,114,285
1) Cash and cash equivalents	103,749,055,008	72,897,492,345	80,081,388,901
2) Current financial assets	357,779,994,180	248,639,349,985	206,189,559,958
3) Account receivables and other receivables	9,908,641,280	1,482,921,790	1,121,959,385
4) Current income tax assets	441,459,300	315,177,178	179,907,703
5) Current non-financial assets	384,402,178	1,824,571,119	1,811,298,338
2. Non-current assets	1,271,209,940,283	1,260,185,962,302	1,056,747,302,555
1) Non-current financial assets	1,263,987,981,938	1,252,069,647,784	1,047,766,619,618
2) Long-term accounts receivables and other receivables	352,334,843	341,800,683	267,469,355
3) Tangible assets	2,498,570,650	3,562,019,874	3,772,020,179
4) Intangible assets other than goodwill	845,814,695	1,388,176,018	1,829,592,170
5) Deferred corporate tax assets	3,525,238,157	2,824,317,943	3,111,601,233
<b>Total assets</b>	<b>1,743,473,492,229</b>	<b>1,585,345,474,719</b>	<b>1,346,131,416,840</b>
<b>Liabilities</b>			
1. Current liabilities	184,724,971,764	133,372,794,814	113,225,646,070
1) Accounts payables and other payables	13,281,495,297	5,617,650,583	4,460,826,670
2) Current financial liabilities	148,850,426,808	101,838,053,288	94,005,907,448
3) Current corporate tax liabilities	-	-	-
4) Current non-financial liabilities	21,398,192,518	24,955,975,942	13,604,897,077
5) Current estimated liabilities	1,194,857,141	961,115,001	1,154,014,875
2. Non-current liabilities	1,504,267,303,566	1,405,856,023,085	1,197,873,432,238
1) Long-term accounts payables and other payables	-	-	110,793,541
2) Non-current financial liabilities	1,492,016,019,892	1,391,822,538,070	1,183,618,004,660
3) Employee benefits liabilities	10,029,792,712	11,302,835,028	11,413,984,050
4) Long-term legal proceedings provision	2,221,490,962	2,730,649,987	2,730,649,987
<b>Total liabilities</b>	<b>1,688,992,275,330</b>	<b>1,539,228,817,899</b>	<b>1,311,099,078,308</b>
<b>Stockholder's Equity</b>			
1. Paid-in capital	247,048,224	247,048,224	247,048,224
2. Retained earnings (deficit)	54,251,840,576	45,889,532,327	34,786,698,594
3. Other capital components	(17,671,901)	(19,923,731)	(1,408,286)
4. Capital attributable to owners of the parent company	54,481,216,899	46,116,656,820	35,032,338,532
<b>Total Stockholder's Equity</b>	<b>54,481,216,899</b>	<b>46,116,656,820</b>	<b>35,032,338,532</b>
<b>Total equity and liabilities</b>	<b>1,743,473,492,229</b>	<b>1,585,345,474,719</b>	<b>1,346,131,416,840</b>



## Summary of the Comprehensive Income Statement

(Unit : KRW million)

Classification	2022	2021	2020
Revenue (Sales)	634,248	579,837	521,654
Costs and Expenses	622,103	561,880	508,158
	10,415	9,660	8,747
Operating profit	1,729	8,298	4,749
Other income	-	-	0
Other costs	-	-	0
Other profits	50	366	100
Financial income	2,875	859	396
Financial cost	0.8	5	9
Net Income before income taxes	4,654	9,518	5,236
Income tax expense	(787)	5	(1,406)
Net Income	5,441	95,127	6,642
Other comprehensive income	2,556	1,572	363
Total comprehensive income	7,997	11,084	7,004

## GRI Standards Index

Topic	Disclosure	ISO 26000	SDGs	page
<b>Universal Standards</b>				
<b>GRI 102: General Disclosure</b>				
GRI 102: Organization Profile	102-1	Name of the organization		6
	102-2	Activities, brands, products, and services	6.3.10/6.4.1/	6~9
	102-3	Location of headquarters	6.4.2/6.4.3/	6
	102-4	Location of operations	6.4.4/6.4.5/	6~7
	102-5	Ownership and legal form	6.8.5/7.8	6
	102-6	Markets served		6~7
	102-7	Scale of the organization		SDGs 8 6~7
	102-8	Information on employees and other workers		SDGs 5, 8 6, 60
	102-9	Supply chain		SDGs 8 8~9
	102-10	Significant changes to the organization and its supply chain		None
	102-11	Precautionary principle and approach		No significant change
	102-12	External initiatives		SDGs 17 68
	102-13	Membership of associations		SDGs 17 72
GRI 102: Strategy	102-14	Statement from senior decision-makers	4.7/6.2/7.4.2	4~5
GRI 102: Ethics and Integrate	102-16	Values, principles, standards and norms of behavior	4.4/6.6.3	SDGs 16 13~14, 50
	102-17	Mechanisms for advice and concerns about ethics		SDGs 16 56~57
GRI 102: Governance	102-18	Governance structure		53
	102-22	Composition of the highest governance body and its committees	6.2/7.4.3/ 7.7.5	53~54
	102-33	Communicating critical concerns		14, 54
	102-34	Nature and total number of critical concerns		14, 54
GRI 102: Stakeholder Engagement	102-40	List of stakeholder groups	5.3	15
	102-41	Collective bargaining agreements		15~16
	102-42	Identifying and selecting stakeholders		60
	102-43	Approach to stakeholder engagement		15~17
	102-44	Key topics and concerns raised		16~17
GRI 102: Organization Profile	102-45	Entities included in the consolidated financial statements	5.2/7.3.2/	64
	102-46	Defining report content and topic boundaries	7.3.3/7.3.4	15~17
	102-47	List of material topics		17
	102-48	Restatement of information		N/A
	102-49	Changes in reporting		17
	102-50	Reporting period		About this report
	102-51	Date of most recent report	7.5.3/7.6.2	About this report
	102-52	Reporting cycle		About this report
	102-53	Contact point for questions regarding the report		About this report
	102-54	Claims of reporting in accordance with the GRI Standards		About this report
	102-55	GRI Content Index		66~68
	102-56	External assurance		69~71

Topic	Disclosure	ISO 26000	SDGs	page
<b>Topic-specific Standards*</b>				
<b>Topic 1: Carbon Neutral Transition Support</b>				
GRI 103: Management Approach	103-1	Explanation of the material topic and its boundary		22-25
	103-2	The management approach and its components		28-29
	103-3	Evaluation of the management approach		31-33
Energy	302-1	Energy consumption within the organization	6.5.4/6.5.5	
Emissions	305-1	Direct (Scope 1) GHG emissions	6.5.5	SDGs 6, 13-15
	305-2	Energy indirect (Scope 2) GHG emissions		
	305-5	Reduction of GHG emissions		31
<b>Topic 2: Establishment of National Environmental Safety Infrastructure</b>				
GRI 103: Management Approach	103-1	Explanation of the material topic and its boundary		
	103-2	The management approach and its components		
	103-3	Evaluation of the management approach		35-36 37-38
indirect economic effect	203-1	Infrastructure investments and services supported	6.7.1/6.7.2/ 6.7.4/6.7.5/	SDGs 9
	203-2	Significant indirect economic impacts	6.8.8	
<b>Topic 3: Development of Environmental Technology to Respond to Environmental Crisis</b>				
GRI 103: Management Approach	103-1	Explanation of the material topic and its boundary		
	103-2	The management approach and its components		
	103-3	Evaluation of the management approach		19-21 26-27
indirect economic effect	203-1	Infrastructure investments and services supported	6.3.9/6.6.6/6.6.7/ 6.6.8/6.8.1/6.8.2/	SDGs 9
	203-2	Significant indirect economic impacts	6.8.5/6.8.7/6.8.9	
<b>Topic 4: Sustainable good job creation</b>				
GRI 103: Management Approach	103-1	Explanation of the material topic and its boundary		
	103-2	The management approach and its components		43-46
	103-3	Evaluation of the management approach		
Employment	401-1	New employee hires and employee turnover		SDGs 8 60
	401-3	Parental leave	6.4.4/6.8.7	SDGs 3, 8 60
Training and Education	404-1	Average hours of training per year per employee	6.4.7	61
	404-2	Programs for upgrading employee skills and transition assistance programs	6.4.7/6.8.5	SDGs 4 46

## UNGC Advanced Level



This is our **Communication on Progress** in implementing the Ten Principles of the **United Nations Global Compact** and supporting broader UN goals.

We welcome feedback on its contents.

Topics	Description	Page
1 <b>Strategies and Operations</b>	The COP describes mainstreaming into corporate functions and business units.	14,
	The COP describes value chain implementation.	15~16
3 <b>Human Rights</b>	The COP describes robust commitments, strategies or policies in the area of human rights.	50~51
	The COP describes effective management systems to integrate the human rights principles.	
	The COP describes effective monitoring and evaluation mechanisms of human rights integration.	
6 <b>Labor</b>	The COP describes robust commitments, strategies or policies in the area of labor.	49
	The COP describes effective management systems to integrate the labor principles.	
	The COP describes effective monitoring and evaluation mechanisms of labor principles integration.	
9 <b>Environmental Management</b>	The COP describes robust commitments, strategies or policies in the area of environmental stewardship.	19
	The COP describes effective management systems to integrate the environmental principles.	21
	The COP describes effective monitoring and evaluation mechanisms for environmental stewardship.	23, 29~30, 37
12 <b>Anti-corruption Management</b>	The COP describes robust commitments, strategies or policies in the area of anti-corruption.	55~57
	The COP describes effective management systems to integrate the anti-corruption principle.	
	The COP describes effective management systems to integrate the anti-corruption.	
15 <b>UN Goals and Issues</b>	The COP describes core business contributions to UN goals and issues.	14
	The COP describes strategic social investments and philanthropy.	39~42
	The COP describes advocacy and public policy engagement.	
	The COP describes partnerships and collective action.	72
19 <b>Governance and Leadership</b>	The COP describes CEO commitment and leadership.	4
	The COP describes Board adoption and oversight.	53~54
	The COP describes stakeholder engagement.	15~16

\* UNGC(UN Global Compact) Advanced level: As a voluntary initiative that promotes corporate social responsibility, the UN Global Compact's social responsibility performance and disclosure standards are in seven areas, including strategy and operation, human rights, labor, environment, anti-corruption, UN goals and issues, and sustainable governance and leadership.

# Independent Assurance Statement

bsi.



To: The Stakeholders of Korea Environmental Industry & Technology Institute

## Introduction and Objectives of Work

BSI Group Korea (hereinafter "the Assurer") was requested to verify 2022 KEITI Sustainability Report (hereinafter "the Report"). This assurance statement applies only to the relevant information included in the scope of the assurance. The assurance was conducted for the Report in December 2022. KEITI is solely responsible for all information and assertion contained in the Report. The responsibility of the Assurer is to provide KEITI Management with independent assurance statement based on its expert opinions by applying the verification methodology for the specified assurance scope. It is also to provide the information to all stakeholders of KEITI.

## Assurance Standards and Levels

This assurance was based on the AA1000AS (Assurance Standard) v3 (2020) Assurance Standard and confirmed that the Report was prepared in accordance with the Core Option of GRI Standards, the international standards guidelines of sustainability reports. In accordance with the AA1000 AS, the assurance level was Moderate Level, and conducted against Type 1 to confirm compliance with the four principles of the AA1000 AP (AccountAbility Principles) 2018. Therefore, this assurance statement does not confirm the credibility and quality of the key achievements and assertion contained in the Report.

## Scope of Assurance

The scope of assurance applied to the Report is as follows:

- Report contents during the period from January 1st 2021 to December 31st 2022
- Major assertion included in the report such as sustainability management policies, strategies, objectives, business and performance
- Information related to material issues determined as a result of materiality assessment
- Appropriateness and consistency of processes and systems for data collection, analysis and review

The scope of assurance does not comprise the followings:

- Financial information in Appendix
- Index items related to other international standards and initiatives other than the GRI
- Other related additional information such as the website listed in the Report
- Other related additional information such as All Public Information In-One (ALIO)

## Methodology

As a part of its independent assurance, the Assurer has used the methodology developed for relevant evidence collection in order to comply with the verification criteria and to reduce errors in reporting. The Assurer has performed the following activities:

- Verification prioritization by reviewing materiality issue analysis process and verifying the results
- System review for sustainability strategy process and implementation
- Review of the supporting evidence related to the material issues through interviews with senior managers in the responsible departments
- Verification of data generation, collection and reporting for each performance index

# Independent Assurance Statement

## Limitation

The Assurer performed limited verification for a limited period based on the data provided by the reporting organization. It implies that no significant errors were found during the verification process, and that there are limitations related to the inevitable risks that may exist. The Assurer does not provide assurance for possible future impacts that cannot be predicted or verified during the verification process and any additional aspects related thereto.

## Assurance Opinion

On the basis of our methodology and the activities described above, it is our opinion that

- The information and data included in the Report are accurate and reliable and the Assurer cannot point out any substantial aspects of material with mistake or misstatement.
- The Report is prepared according to the Core option of the GRI Standards.
- The assurance opinions on the four principles presented in the AA1000 AP (2018) are as follows.

### AA1000 AP (2018)

#### **Inclusivity: Stakeholder Engagement and Opinion**

KEITI defined Government and National Assembly, Relevant organizations/partners, Employees, Labor Union, Customer (companies, research institutes, etc.), Citizens, Press/civic groups, Local residents and Local governments as key stakeholder groups. KEITI operated communication channels for each stakeholder group for engagement. KEITI conducted a survey on internal and external stakeholders and collected various opinions and expectations of stakeholders based on the responses and feedback and reflected the derived material issues in decision-making on sustainability management.

#### **Materiality: Identification and reporting of material sustainability topics**

KEITI derived the issue pool of 23 major issues through the risk assessment process and communication with stakeholders as well as the results of media research, benchmarking global companies in its field, analysis of major global initiatives related to sustainability, and opinions collected from communication channels of each stakeholder group. KEITI conducted a materiality assessment that comprehensively considered stakeholder interest and business impacts then identified the 4 core issues.

#### **Responsiveness: Responding to material sustainability topics and related impacts**

KEITI established and implemented a response plan for each issue to appropriately respond to the derived core issues that reflects the expectations of stakeholders. The detailed response activities and performance are disclosed in the Report.

#### **Impact: Impact of an organization's activities and material sustainability topics on the organization and stakeholders**

KEITI implemented the process to identify and evaluate the impact on organizations and stakeholders related to core issues. KEITI made decisions on operations and management of the impacts that could arise from each core issue by identifying and assessing the impacts, risks, and opportunities regarding derived core issues. The results of analysis of impact, risk and opportunity factors on core issues were used in decision-making to establish response strategies for each issue. The process was disclosed in the Report.



#### Key areas for ongoing development

- KEITI established an enterprise ESG management strategy based on an ESG management strategy system. Disclosure of the roles and responsibilities of the dedicated organizations including the ESG committee, and disclosure of performance and review agenda based on the ESG strategies can help to advance the sustainability management system.
- The Report describes the key sustainability achievements of the reporting period and expresses efforts to advance these activities. Identifying underperformed sustainability issues and specifying mid- to long-term plans and goals for them can help ensure balance in reporting.

#### Statement of independence and competence

The Assurer is an independent professional institution that specializes in quality, health, safety, social and environmental management with almost 120 years history in providing independent assurance services. No member of the assurance team has a business relationship with KEITI. The Assurer has conducted this verification independently, and there has been no conflict of interest. All assurers who participated in the assurance have qualifications as an AA1000AS assurer, have a lot of assurance experience, and have in-depth understanding of the BSI Group's assurance standard methodology.

#### Evaluation against GRI 'In Accordance' Criteria

The Assurer confirmed that the Report was prepared in accordance with the GRI Standards Core Option and the disclosures related to the following Universal Standards and Topic-specific Standards Indicators based on the data provided by KEITI.

#### [Universal Standards]

Organizational Profile 102-1~13/ Strategy 102-14/ Ethics and Integrity 102-16~17/ Governance 102-18, 102-22, 102-33, 102-34/ Stakeholder Engagement 102-40~44/ Reporting practice 102-45~56/ Management Approach 103-1~3

#### [Topic-specific Standards]

- Economic: 203-1, 203-2
- Environmental: 302-1, 305-1, 305-2, 305-5
- Social: 401-1, 401-3, 404-1, 404-2

31 Dec 2022

S. H. Lim / BSI Group Korea, Managing Director



**AA1000**  
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000-47/V3-2128V

A handwritten signature in black ink, appearing to be 'S. H. Lim', is written over a faint watermark of the BSI crest.

## Major Memberships and Awards

### Membership Held

(as of 2022.12.31)

No.	Membership Held
1	The National Assembly Forum on Climate Change
2	Transparency International-Korea Forum
3	Global Eco-labeling Network (GEN)
4	Korea Council of R&D Funding Agencies
5	UN Global Compact
6	Incheon Regional Business Incubation Association
7	Korea Zero Waste Management Network
8	Korea Business Council for Sustainable Development (KBCSD)
9	The Institute of Internal Auditors Korea
10	Korea Society of Public Enterprise
11	Korea Water Partnership
12	Korea Council of Heads of Research Institutions
13	The Korean Society for Life Cycle Assessment
14	Korea Electric Engineers Association
15	Korea Business Incubation Association
16	The Korean Society of Public Administration

### Major Awards

Category	Award Field	Award Received	Awarded by
2021	2020 LACP Vision Award	Gold Prize	LACP
	2021 Busan International Design Award	Idea Award	Design Council Busan
	2021 Social Eye Awards	Grand prize	Korea Internet Professionals Association
	2021 Korea National Territory Competition	Society President's Award	Ministry of Land, Infrastructure and Transport
	2021 Best Administration and Policy Cases	Exemplary Administration Award	Korean Association for Public Sector Affairs Analysis & Evaluation
	2021 Korea Failure Overcoming Case (Social Contribution)	Association President's award	Ministry of Interior and Safety
	2021 Public Sector Target Management System Performance Report	Achievement Award	Korea Environment Corporation
	2021 Korea Social Contribution Grand Prize (Regional Development)	Grand Prize	Korea Social Contribution Federation
	2021 Web Award Korea	Grand Prize	Korea Internet Professionals Association
	Best Practices of Social Economy by Organizations Affiliated with the Ministry of Environment	Minister's Award	Ministry of Environment
2022	2021 Job of the Year Award (Youth Employment)	Grand Prize	Chosun Media
	Social Eye Awards 2022 Korea Social Internet Innovation Grand Prize (Public institution Facebook)	Grand Prize	Korea Internet Professionals Association
	2022 Win-Win Payment Expansion Day (Excellent Purchasing Companies for Win-Win Payment System - Public Sector)	Minister's Award	Ministry of SMEs and Startups
	Commendation as an Excellent Institution for Evaluating Public Data Provision Operation Status	Minister of Interior and Safety Award	Ministry of Interior and Safety
	2022 Korea Green Architecture Competition (Green Architecture Operation Sector)	Minister of Trade, Industry and Energy Award	Korea Institute of Civil Engineering and Building Technology
	Public Institution-Traditional Market ESG Excellence Win-Win Activity Contest (E-Field)	Grand Prize	Small Enterprise and Marketing Service (Ministry of SMEs and Startups)
	2022 Affiliated Organization Social Economy Best Practice Contest (Environmental Field)	Participation Award	Korea Environmental Industry Association (Ministry of Environment)
	2022 Affiliated Organization Social Economy Best Practice Contest (Coexistence)	Encouragement Award	Korea Environmental Industry Association
Web Award Korea 2022 (Internet Service)	Grand prize	I-Award Committee	





Sustainability Report



**KEITI** Korea Environmental  
Industry & Technology Institute

