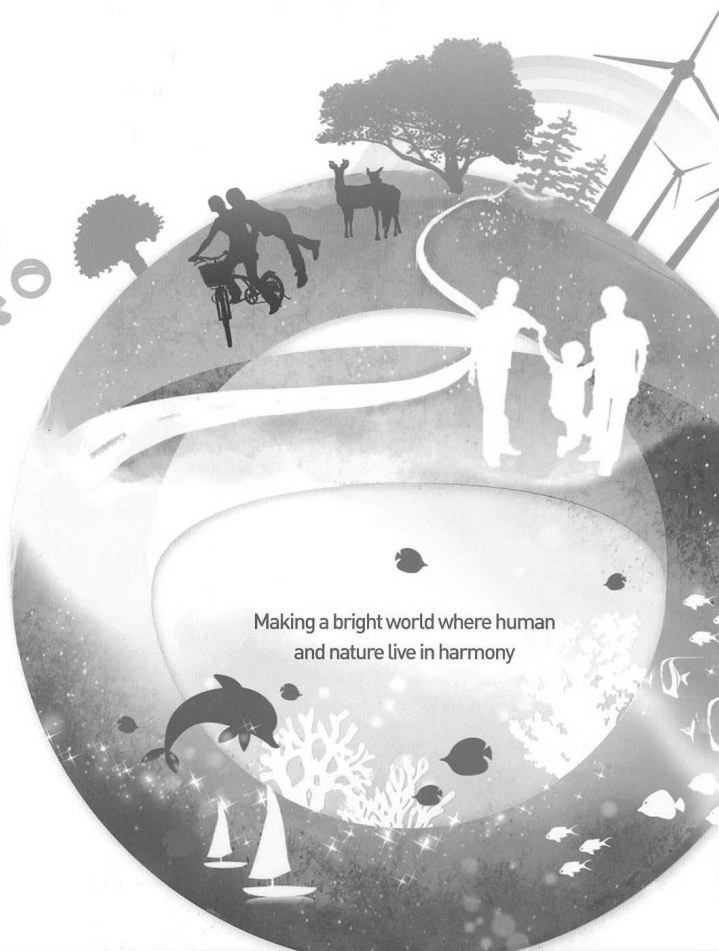


Closer to Nature, Closer to People

Keco

Korea
Environment
Corporation



Making a bright world where human
and nature live in harmony



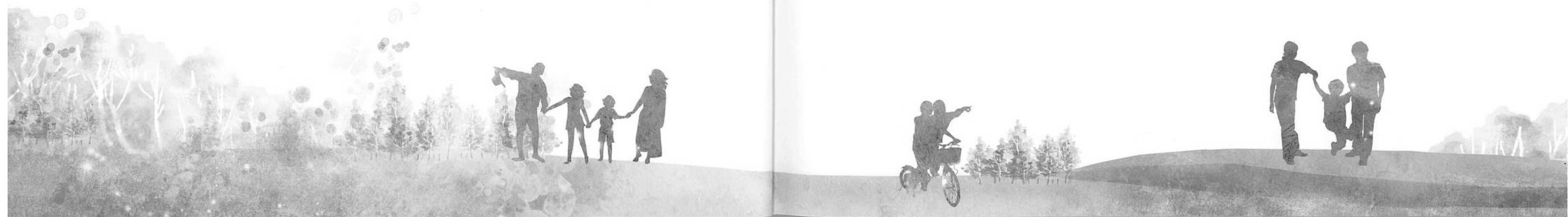


Making a world where nature and human live in harmony through
developing beautiful and clean nature and
increasing value of resources with organic circulation
is the future that KECO aims.

Korea Environment Corporation

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CEO Message



“KECO will make an environmental welfare society where every person in Korea can enjoy the healthy environment”

KECO is an integrated environmental service provider leading Korea's environmental policies by engaging in overall business areas including climate, air, water, resource circulation, and environmental health. Since its establishment in 2010, KECO has developed into a global environmental service provider through its continuous innovation and world-class sustainability management. Based on its excellent human resources and development of advanced management system KECO is carrying out various kinds of environmental projects such as greenhouse gas reduction, prevention of urban inundation, and operation of air and water quality monitoring network. What is more, KECO is consistently developing new business fields to improve Korea's environmental welfare.

To become a trusted and respected corporation KECO has set up three management policies; "Transparent and Ethical Management", "Value Oriented Management", and "Customer Centered Management." KECO promises to gain trust of the nation with its transparent and clean organizational culture, grow with the nation through its high value management, and become the best corporation that impresses customers with its customer-oriented operation.

In addition, KECO will share its vision and value with stakeholders through free communication and make management environment where share growth with SMEs can be achieved by mutual developing cooperation. KECO will try the best efforts to take its social responsibilities as a public agency by providing various kinds of environmental services to welfare vulnerable social groups.

As KECO is taking its leading step towards a bright new ear where the nation can be happy we ask you to stay with us and give us continuous interests and support.

CEO of Korea Environment Corporation **Sijin Lee**



Keco History Foundation

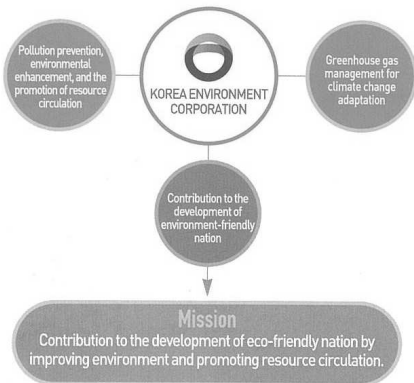
KECO dreams of tomorrow where nature and human live in harmony.

Background and Objective of Foundation

KECO aims to contribute to the eco-friendly development of Korea by effectively operating prevention of environmental pollution, improvement of environment, and promotion of resource circulation and business related to greenhouse gas to adapt to climate changes (Law No. 12519 of KECO Act).

Main Functions and Roles

- Installation and operation of environment monitoring network and control center for air and water quality.
- Installation and operation of environment facilities such as wastewater and sewage disposal and waste to energy recovery.
- Research on evaluation of soil and groundwater environment and management of its remediation.
- Reduction, circulation, and eco-friendly disposal of wastes.
- Examination, analysis, harmful test, and evaluation management of chemical materials that are harmful to the environment.
- Handling of international agreement on environmental issues such as climate changes and reduction of greenhouse gas emission.
- Development and support of policy research related to prevention of environmental pollution and environmental improvement and resource circulation.



2004
Enactment of Korea Environment & Resources Corporation Act (Name changes from Korea Resource Recovery and Reutilization Corporation to Korea Environment & Resources Corporation[ENVICO])

1987
Enactment of Environment Pollution Control Agency Establishment of Environmental Management Corporation Act (Name changes from Environment Pollution Control Agency to Environment Management Corporation[EMC])

1980
Establishment of Korea Resources Recovery and Reutilization Corporation (KORECO)

2008
Integration of ENVICO and EMC (as the 2nd Public Organization Advancement Plan)

2009
Enactment and declaration of Korea Environment Corporation Act Start of Korea Environment Corporation establishment committee (Implementation of organization integration)

2010
Establishment of Korea Environment Corporation

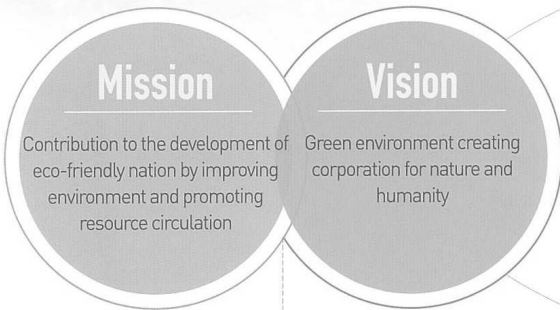
2012
Amendment of Korea Environment Corporation Act



Keco Mission Vision

Strategic Goals

- Achievement of 600 billion Won for future growth engine business
- Achievement of the best grade national reliability
- Nurturing of 800 global level environmental specialists



Slogan

Close to Nature, Close to People

Management Policy

Clean and Ethical Management

- Management of clean and fair organization and operation system

Value Based Management

- High value management based on creativity and productivity

Customer Centered Management

- Happiness-oriented operation for the better quality of life



Core Values

Advancement of Environmental Facilities

- Improvement of environmental monitoring quality
- Optimizing installation and operation of environmental facilities
- Expansion of foundation for environmental energization

Substantiality of Environmental Services

- Reinforcement of basis for climate change response
- Advancement of resource circulation management system
- Development of environmental pollution diagnosis and analysis service

4 Strategic Directions 12 Strategic Initiatives

Reinforcement of Creative Economy Basis

- Support for the growing businesses in environmental sector
- Support for the global environmental market entry
- Strengthening environmental consultation

Maximization of Organization Capacity

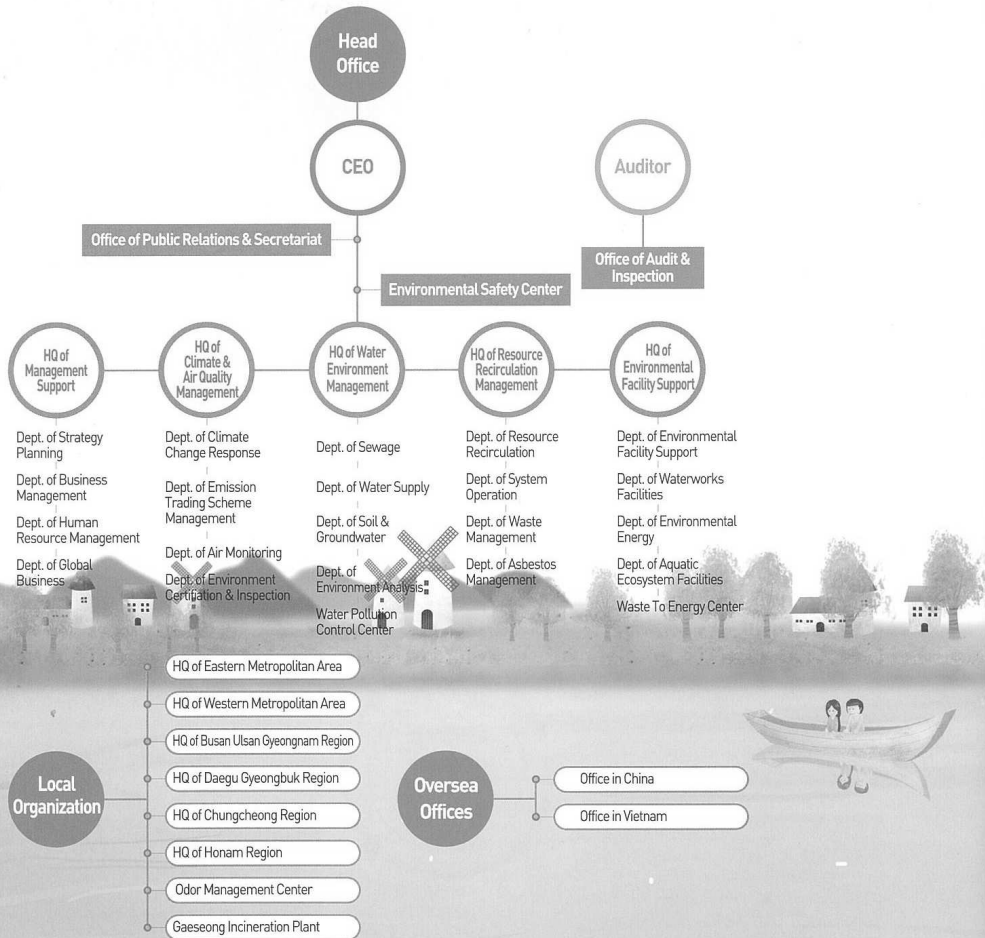
- Advancement of business management
- Nurturing of top talents
- Creation of national sympathy value

Keco Organization

Organization

Keco's headquarter consists of 5 head offices, 20 departments, 2 offices and 3 centers.

Keco's local organization consists of 6 local headquarters, 1 center, 1 office, and 2 international offices.



Keco Story



For nature +

Keco Preserves Clean Air

Keco preserves nation's precious rights to breathe clean and fresh air by considering diverse policies and continuous capacity reinforcement ranging from improvement of air environment and nationwide climate change adaptation.

- › 14 **GHG Reduction Policy Support**

 - Support for Greenhouse Gas Emission Trading Policy
 - Operation and Management of Compliance Offset Program
 - Establishment of National and Local Infrastructure for Greenhouse Gas Management
 - Operation of GHG and Energy Target Management Scheme
 - Establishment of Foundation for Management and Processing of Air Conditioner Refrigerant

- › 18 **Reinforcement of Capacity for Climate Change Response**

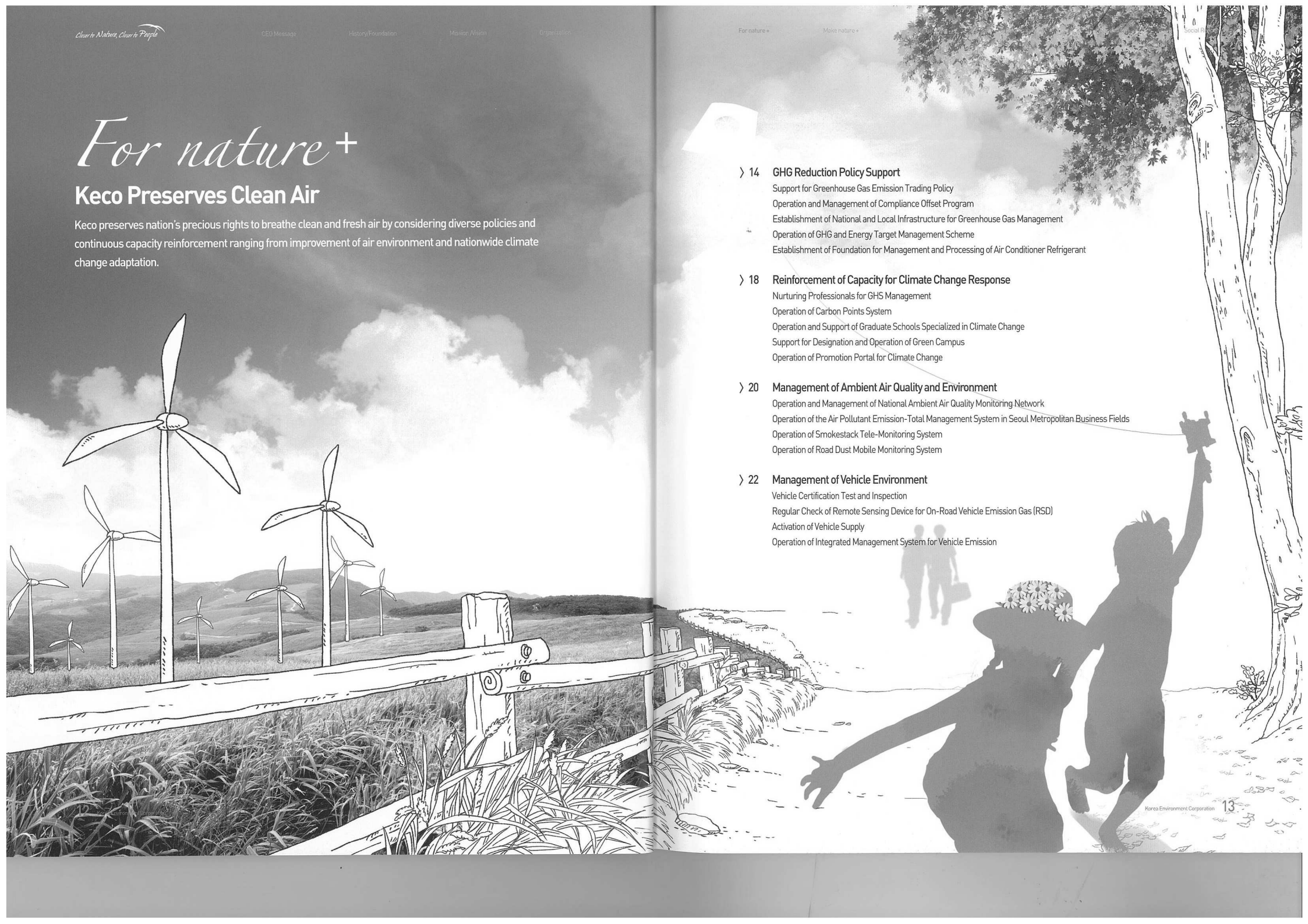
 - Nurturing Professionals for GHS Management
 - Operation of Carbon Points System
 - Operation and Support of Graduate Schools Specialized in Climate Change
 - Support for Designation and Operation of Green Campus
 - Operation of Promotion Portal for Climate Change

- › 20 **Management of Ambient Air Quality and Environment**

 - Operation and Management of National Ambient Air Quality Monitoring Network
 - Operation of the Air Pollutant Emission-Total Management System in Seoul Metropolitan Business Fields
 - Operation of Smokestack Tele-Monitoring System
 - Operation of Road Dust Mobile Monitoring System

- › 22 **Management of Vehicle Environment**

 - Vehicle Certification Test and Inspection
 - Regular Check of Remote Sensing Device for On-Road Vehicle Emission Gas (RSD)
 - Activation of Vehicle Supply
 - Operation of Integrated Management System for Vehicle Emission



For nature+

Keco Preserves Clean Air



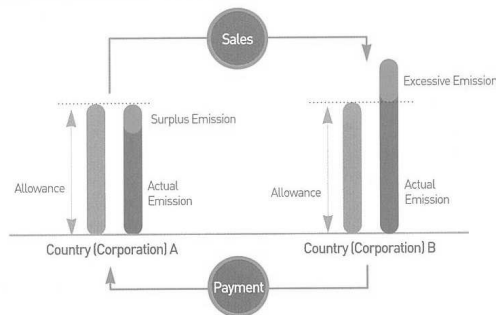
GHG Reduction Policy Support

Support for Greenhouse Gas Emission Trading Policy

Greenhouse gas emission trading (ET) is a policy trying to reduce greenhouse by allowing rights of greenhouse gas and introducing trading of emission rights among the participants. Keco provides support for the implementation of 2015 emission trading scheme.

Major Service

- Prepares specific announcement and provides policy support for the implementation of 2015 emission trading scheme
- Operation of support program (technical assistant, consulting) for small businesses



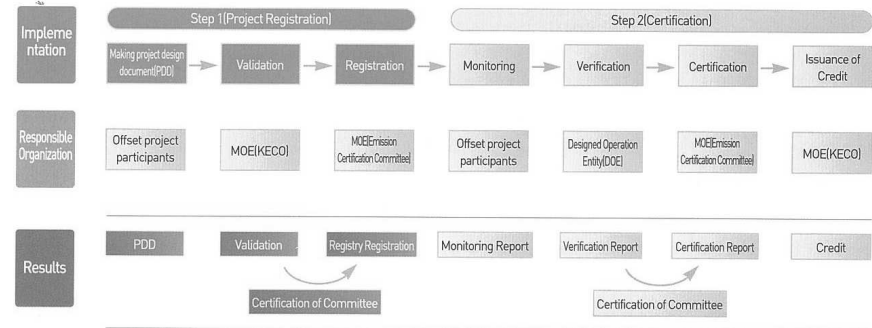
Operation and Management of Compliance Offset Program

A carbon offset is a reduction in emissions of carbon dioxide or greenhouse gases made in order to compensate for or to offset an emission made elsewhere. Offset credits are a specific type of tradable compliance instrument under the Korea Ministry of Environment(MOE) GHG emissions trade scheme(ETS). Offset credits represent an emission reduction or emission avoidance outside of the capped sectors(i.e., reductions in sectors not subject to the ETS Regulation). Covered entities can use MOE-issued offset credits to meet up to 10 percent of the obligation for each compliance period. All compliance offset projects must be developed according to Ministry of Environment approved Compliance Offset Guideline. KECO is in charge of supporting implementation of the Offset Program.

Major Service

- Developing guidance for compliance offset program
- Technical Supporting for offset projects validation, certification, and methodology development
- Promotion of the policy by having an education

Offset System Process



Establishment of National and Local Infrastructure for Greenhouse Gas Management

Establishment of statistics on national greenhouse gas emission in waste sector

According to the Article 4 and 12 of UNFCCC came into an effect in 1994 Korea is recording annual inventory on greenhouse gas emission and absorption rates. Keco is in charge of estimating national greenhouse gas emission rate in waste sector.

Major Service

- Estimation of greenhouse gas emission in waste sector and making an inventory report
- Implementation of quality assurance and control (QA/QC) for statistics of greenhouse gas emission in waste sector
- Development of coefficient for national greenhouse gas emission by origins (burying, incineration, sewage and waste water)

Establishment of basis for local greenhouse gas reduction

Keco helps promotion of greenhouse gas reduction by providing consultation and education on capacity reinforcement and technical support on climate change action plan of local government.

Major Service

- Update on GHG inventory
- Consultation of management for local government greenhouse gas reduction
- Publication and distribution of a guideline on comprehensive management of local greenhouse gas
- Support on customized technical training for local government

Operation of GHG and Energy Target Management Scheme

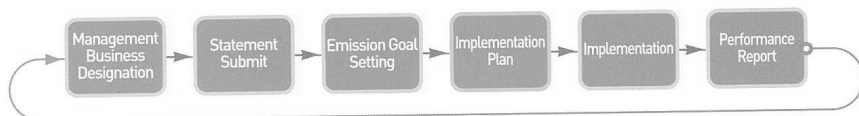
GHG and energy goal management is a system controlling business plants that emits a lot of greenhouse gas by setting a goal and making them to reduce greenhouse gas within the goal volume. Keco sets and manages goal for reducing greenhouse gas emission and energy for those business plant producing more than a certain amount of greenhouse gas and energy.

Major Service

- General management of GHG and energy goal management
- Operation of GHG and energy target management scheme for public organizations
- Operation of GHG energy target management scheme for waste sector
- Operation of certification system for external reduction performance in co-implementation and non-regulatory public sectors

Goal Allocation and Implementation Management

Each business plant designated as a management plant is allotted with reduction objective in consideration with domestic business conditions and international trend. Keco continuously controls greenhouse gas reduction and energy saving objectives by evaluating their implementation plan and performance.



The thresholds

	Until 2011.12.31		Beginning 2012.1.1		Beginning 2014.1.1	
	Corporate thresholds	Facility thresholds	Corporate thresholds	Facility thresholds	Corporate thresholds	Facility thresholds
Greenhouse gas Emission(CO2 Ton)	125,000	25,000	87,500	20,000	50,000	15,000
Energy consumption(TJ)	500	100	350	90	200	80

Establishment of Foundation for Management and Processing of Air Conditioner Refrigerant

Search RIMS www.rims.or.kr

Keco develops management and processing basis for the reduction of refrigerant leakage which causes global warming and destruction of ozone layer.

Major Service

- Investigation on management status of refrigerant use in buildings and facilities
- Educational, promotional, and technical support for refrigerant management
- Operation of Refrigerant Information Management System (RIMS)

Management Object

The subjected air conditioning units are ones that are included under 「High Pressure Gas Safety Management Act」 Article 3 Clause 1 Section 4 and Article 4 Clause 2 and their charged weight including all the refrigerants such as HCFC should be over 50kg (only, it would be more than 100kg until 2017).

Management Method

- Prohibition of uncontrolled release of refrigerant into the atmosphere
- Regular check on refrigerant leakage (every year)
- Proper recovery and treatment in case of replacement and maintenance
- Making of refrigerant management records, keeping it for 3 years, and making a report (before end of every January)

Operation of Refrigerant Information Management System

Refrigerant Information Management System (RIMS) was established for the administrative convenience and operational effectiveness in terms of making and submitting refrigerant management report for owners and managers. The purpose of this system is to provide overall information on refrigerants such as policy, related regulations, and education.

For nature+

Keco Preserves Clean Air

Reinforcement of Capacity for Climate Change Response



Nurturing Professionals for GHS Management

A training program is provided to nurture experts to meet the nation's GHG reduction goal.

Regular course (cluster education)

Training Period	120 hours for 4 weeks
Qualifications	The young unemployed and university graduates from related field such as environment, chemistry, energy, and industrial economics or students who have finished 5 semesters (including students on leave) and those who have the equivalent qualification.
Contents of Education	Theory education and practices on government policy and climate change agreements related to climate change, GHG and energy target management scheme, ETS (Emission Trading Scheme), carbon market, GHG reduction technologies, and estimation of emission.
Cost	Free of charge
Contact Information	Keco Yeouido office 82-2-783-3453-4, ccedu@keco.or.kr

Online course




Website and Address	(Online) www.ghgedu.or.kr / (Mobile) m.ghgedu.or.kr
Qualification	No qualification required
Cost	Free of charge
Contents of Education	Understanding and adjusting to climate change, trends and response policies for climate change, GHG MRV (Measurable, Reportable, and Verifiable), carbon market, ETS (Emission Trading Scheme), etc.

Search Nurturing GHG Management Professionals www.ghgedu.or.kr

Operation of Carbon Points System Search Carbon Point System <http://copoint.or.kr>

Carbon point system is a nationwide voluntary greenhouse gas reduction system where carbon points are given and these points are provided as incentives if people save electricity, water, and gas in houses or commercial sites.

Participants	Heads (including members) of the households (including apartments), actual users of commercial facilities, and organizations like kindergarten, elementary, middle, and high school.
Participation method	Sign up for the online carbon points program operated by Keco or submit the application form to a local government (For Seoul residents http://ecomileage.seoul.go.kr)
Incentive	Incentives are provided in the form of cash, transportation cards, gift vouchers, waste bags, and vouchers for admission to public facilities, according to the conditions of local governments. Green card points can also be provided depending on the options.
Incentive Standard	Incentive is offered based on the greenhouse gas reduction rate calculated by comparing consumption volume of this month compared to average monthly consumption volume 2 years before registration.

Electricity 	Gas 	Waterworks 
5%~Less than 10% Over 10%	5%~Less than 10% Over 10%	5%~Less than 10% Over 10%
20,000 Won 40,000 Won	12,000 Won 24,000 Won	3,000 Won 6,000 Won

Operation and Support of Graduate Schools Specialized in Climate Change

Keco contributes to the improvement of national competitiveness for the climate change control by providing support for research on climate change related fields and nurturing skilled manpower.

Areas of Support	5 areas including GHG reduction measures, assessment of climate change impact and adaptation solution, statistics on greenhouse emission, management strategy for climate industries, carbon market and international climate change negotiations, etc.
Support details	Financial support of 150 million Won for graduate schools on an annual basis and hosting of semi-annual joint seminar.

Support for Designation and Operation of Green Campus

Keco makes an effort for the universities to reduce greenhouse gas and to establish eco-friendly environment by providing technical and financial support.

Support Details

- Technical Support : Establishment of GHG inventory and technical support for GHG reduction in university
- Financial Support : Financial support of 120 million Korean Won for 3 years to each designated university

Search Green Campus <http://greencampus.or.kr>

Operation of Promotion Portal for Climate Change

The domestic and international trends and recent news on climate changes are provided to increase participation in GHG reduction and cognition on climate changes.

Contents	Policies for climate change control, educational contents related to climate changes (cartoon, movie, game, term dictionary, etc) and main events
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Search Climate Change Promotion Portal <http://gihoo.or.kr>

For nature+

Keco Preserves Clean Air



Management of Ambient Air Quality and Environment

Operation and Management of National Ambient Air Quality Monitoring Network

Search Real-Time Air Quality Disclosure System www.airkorea.or.kr

Search Mobile Web Service m.airkorea.or.kr

For the reality identification of air pollution and advancement of atmospheric quality management policy, national air quality measuring network is operated and controlled. The measured data is collected by NAMIS and made available to the public via AirKorea.

Operation of National Ambient air Monitoring Information System(NAMIS)

NAMIS collects, selects, and statistically processes the measured data from the nationwide ambient air quality monitoring network and provides this data to the central and local governments for supporting government air policy.

Operation and Management of National Ambient Air Quality Monitoring Network (114 Monitoring Sites)

(As of April 2014)

Total	National	Suburb	Photochemistry	Acid deposition	HAPs	PM2.5	Earth Atmosphere
114	3	19	18	32	23	18	1

Operation of real-time quality system (Airkorea)

Comprehensive Air Quality Index (CAI)

CAI is an air pollution index which reflects the influence on human body and pollution level felt by the nation based on its levels. It encourages a better understanding of the impact of various levels of air pollution and offers an action plan to prevent damage to people.

Airkorea is an online system that provides real-time information to the public about ambient air quality. It promotes understanding and encourages public utilization of the information on air quality such as particulate matter.

Airkorea describes the air pollution level based on the degree of health effect and the pollution level felt by people.

Index	Good	Average	Little bad	Bad	Very bad
Meaning	No adverse effect	May cause limited adverse effect in people chronologically exposed	May cause harmful effects in people chronically exposed or in sensitive people	Normal people may experience unpleasantness	May cause harmful effects on anyone
CAI	0-50	51-100	101-150	151-250	251-500

Open Items SO₂, CO, NO₂, O₃, PM₁₀ (5 Open Items)

Operation of the Air Pollutant Emission-Total Management System in Seoul Metropolitan Business Fields

Search Total Volume Management System www.n-sky.or.kr

Search Electronic Emission Trading System www.emissiontrade.go.kr

The Air Pollutant Emission-Total Management System allots the total amount of allowable emission to each region and business. If exceeded the allotted amount they are imposed with fine for the excessive amount. At the same time, this is an advanced environment management system that allows business plants to trade surplus emission among them.

Items of Control NOx, SOx

Regions of Control Regions in Seoul and Gyeonggi area which have serious pollution or give large influence on pollution

Seoul	All districts
Incheon	All districts excluding Ongjin-gun (including Yeongheung-myeon)
Gyeonggi-do	Suwon, Seongnam, Goyang, Bucheon, Anyang, Yongin, Euijeongbu, Namyangju, Pyeongtaek, Gwangmyeong, Siheung, Gunpo, Hwaseong, Guri, Gimpo, Hanam, Euiwang, Osan, Ansan, Dongducheon, Gwacheon, Paju, Icheon and Yangju

Operation of Smokestack Tele-Monitoring System (CleanSYS)

CleanSYS is a system inducing business plants to voluntarily reduce air pollution and preventing air pollution accidents by monitoring emission concentration of air pollutants from business plants in real-time.

Target Facilities Large emission facilities of 1st-3rd class business in Korea (power plant, incineration, etc)

Measuring Items • Pollutants: Dust, SO₂, NOx, HCl, HF, NH₃, and CO
• Supplementary: Flow rate, Temperature, O₂

Search CleanSYS www.cleansys.or.kr

Operation of Road Dust Mobile Monitoring System

This monitors the concentration of scattered dust using a mobile dust monitoring vehicle and supports the efficient environmental administration by providing a real-time road dust pollution map to the local government.

Operation Method

• Prior notice of monitoring region to local government → measurement → producing a map of road dust pollution → reporting the monitoring result → intensive cleaning on heavily → dusted region in each local government → Remeasurement after cleaning → Measurement report

Scattered dust on road

Dust accumulated on the surface of road spread in the atmosphere by the ride of a car or wind.

Search Road Dust Monitoring System www.cleanroad.or.kr

For nature+

Keco Preserves Clean Air



Management of Vehicle Environment

Vehicle Certification Test and Inspection

Performs certification and inspection for managing pollution sources such as emission gas and noise from vehicles and motor (construction machinery and devices which generates electric power for machinery used for agricultural, forestry or marine purposes).

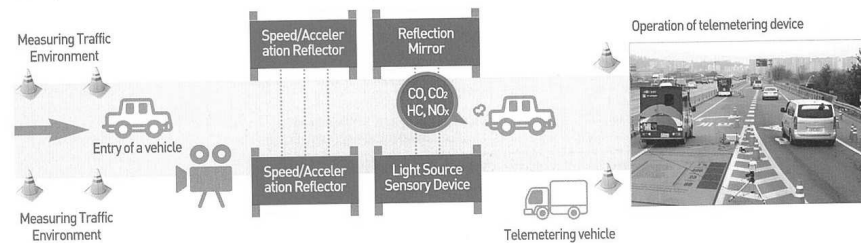
- Vehicle certification test: gas emission and noise certification test of domestic and foreign vehicles.
- Individual vehicle certification: gas emission and noise certification of individual vehicle (imported car but non made by non-Korean manufacturer)
- Individual motor certification: gas emission certification of individual motor (imported construction and agricultural machine but not made by non-Korean manufacturer)
- Certification omission: issue certification omission of gas emission and noise for subjected vehicle and motor
- Vehicle manufacturer facility monitoring: Monitoring propriety of HR and facilities of vehicle companies in Korea and abroad operating their own test facilities
- Test for vehicle GHG and energy consumption efficiency (fuel efficiency): perform test on GHG and fuel efficiency by designation of KOLAS, the international certified test authorities

Regular Check of Remote Sensing Device for On-Road Vehicle Emission Gas (RSD)

Measures gas emission of on-road vehicles using RSD in places under in-depth inspection such as metropolitan areas and reports to local government of vehicle exceeding the permitted emission level for improvement.

Measuring Method

Absorption band of measuring materials, IR and UV rays, are projected to the gas emitted from the vehicle to measure absorption rate and concentration of CO, HC, NOx, and S/F are estimated.



Activation of Vehicle Supply

Search Charging Infra Info System <http://evcis.or.kr>

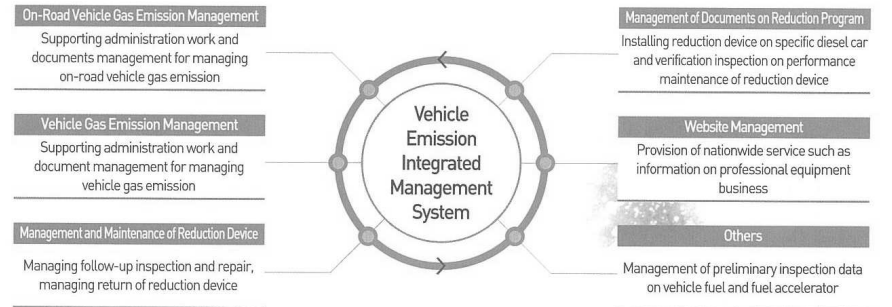
The programs aim to verify the performance and commercial applicability of electric vehicles by testing charging infrastructure and function of electric vehicles and to improve eco-friendliness of the vehicles by making foundation for its distribution and expansion.

- Installation and operation of charging infrastructure for electric vehicles
- Operation and management of information system for charging infrastructure
- Performance evaluation test for electric vehicles
- Promotion for the distribution facilitation of electric vehicles

Operation of Integrated Management System for Vehicle Emission (mëcar)

Keco operates a system that is established to control all the information regarding emission gas ranging from manufacturing to scrapping of vehicles.

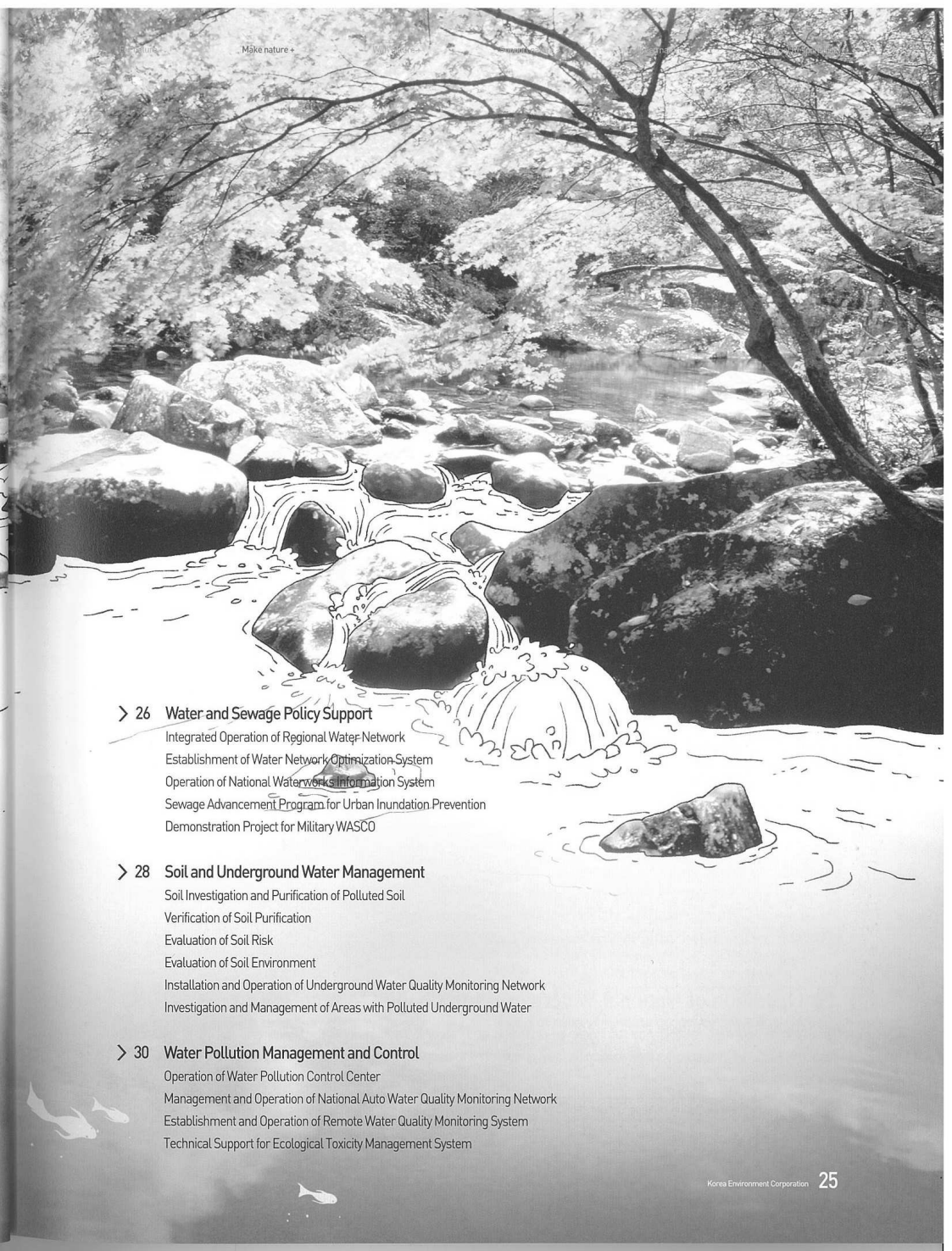
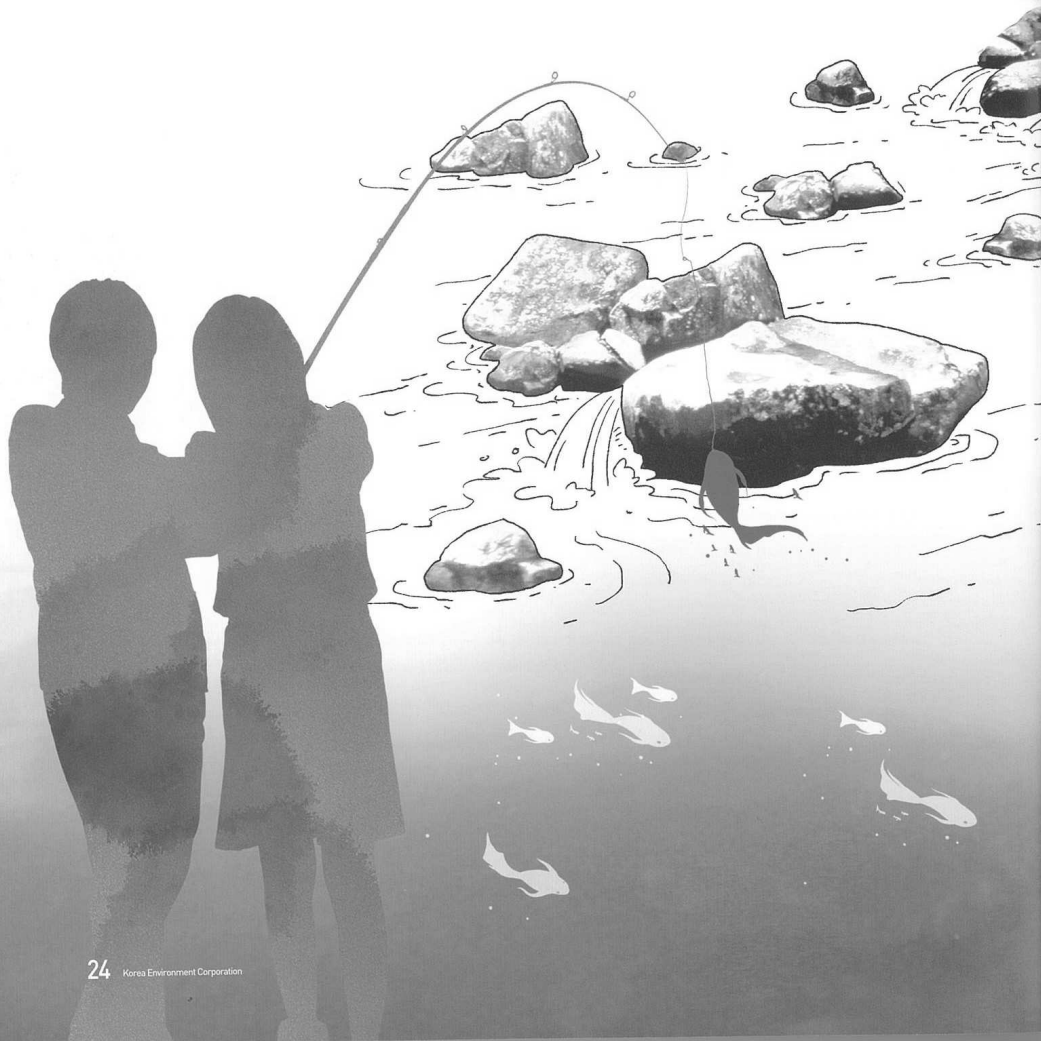
Search Vehicle Emission Integrated Management System www.mecar.or.kr



Make nature +

Keco Makes Clean Water and Soil

KECO preserves clean and healthy drinking water and land through enhancement of water and soil environment by remediating soil pollution and improving water and sewage services.



> 26 Water and Sewage Policy Support

- Integrated Operation of Regional Water Network
- Establishment of Water Network Optimization System
- Operation of National Waterworks Information System
- Sewage Advancement Program for Urban Inundation Prevention
- Demonstration Project for Military WASCO

> 28 Soil and Underground Water Management

- Soil Investigation and Purification of Polluted Soil
- Verification of Soil Purification
- Evaluation of Soil Risk
- Evaluation of Soil Environment
- Installation and Operation of Underground Water Quality Monitoring Network
- Investigation and Management of Areas with Polluted Underground Water

> 30 Water Pollution Management and Control

- Operation of Water Pollution Control Center
- Management and Operation of National Auto Water Quality Monitoring Network
- Establishment and Operation of Remote Water Quality Monitoring System
- Technical Support for Ecological Toxicity Management System

Make nature+

Keco Makes Clean Water and Soil



Water and Sewage Policy Support

Integrated Operation of Regional Water Network

By managing local water system from small administrative sector to large river area water flow is adjusted and the level of running water is increased. Also, Keco provides support for the establishment of water infrastructure such as expanding water facility in preparation for PyeongChang Olympics.

Target Regions Integrated operation of regional water network in Gangwon region [Taebaek-si, Yeongwol-gun, Jeongseon-gun, Pyeongchang-gun, Goseong-gun]

Integrated operation of regional water network

Widening of area for water business by administrative sector to solve problems of excessive water facilities, double investment, and supply imbalance between regions.

Establishment of Water Network Optimization System

Establishes advanced network management system by using scientific leakage maintenance and IT technologies to improve problems of water quantity, quality, and pressure caused by deterioration of water pipes and inappropriate supply system.

Major Service

- Examination of pipes and scientific maintenance of water leakage
- Improvement and replacement of bad pipes and other related facilities
- Maintenance of water distribution and supply system as well as establishment of block system
- TM/TC and establishment of maintenance management system

Operation of National Waterworks Information System (국가상수도정보시스템)

This system improves reliability on tap water by providing accurate information on water quality and quality of tap water. Also, this National Waterworks Information System is operated to have efficient policy operation by collecting and managing scattered information on waterworks.

Search **National Waterworks Information System** www.waterrnow.go.kr

Main Service

- Operation and management of national waterworks information system
- Standard management of integrated information database on national waterworks
- Management of database on waterworks statistics and technical and policy data
- Management of legal water quality data and publication of related information
- Technical support for water purification facility automation and information facility
- Networking with related agencies

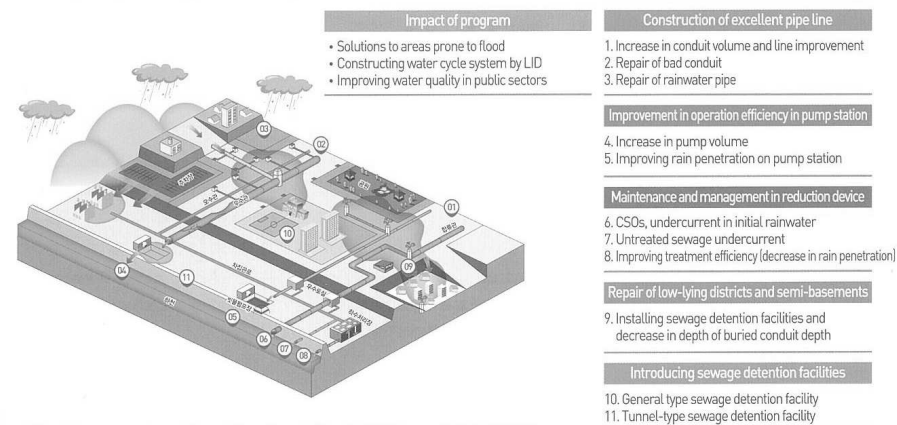
Sewage Advancement Program for Urban Inundation Prevention

As flood damage caused by local downpour and increase in impermeable area in cities caused by climate change is rising, Keco aims to make a safer environment from inundation by promoting sewage maintenance program.

Main Service

- Government policy support (related laws and guidelines including revisions)
- Conduct consignment business of local government on sewage maintenance for inundation prevention
- Technical support for major sewage management regions on designation, modification, and cancellation

Concept Map for Integrated Sewage Rehabilitation



Demonstration Project for Military WASCO

Keco contributes to the enhancement of water in military and saving of national defense budget by improving old water system in military based on the demonstration project of WASCO (Water Saving Company).

Investment business of specialized water saving company (WASCO)

Specialized water saving company investing its own capital first to reduce water leakage and saving during contract period and collecting invested capital by saved water cost.

Make nature+

Keco Makes Clean Water and Soil

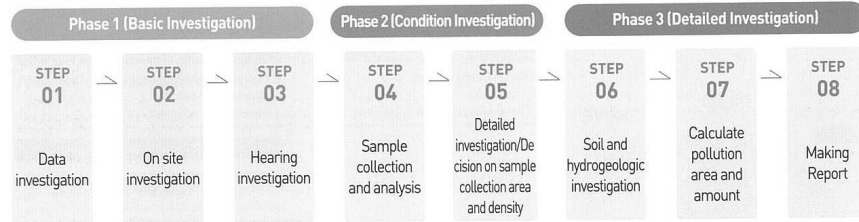
Soil and Underground Water Management



Soil Investigation and Purification of Polluted Soil

Areas with expected or actual soil pollution are invested to find cause of pollution and at the same time, quantity of polluted soil is measured. These areas are remediated by selecting the optimal purification method which reflected characteristics of the land.

Investigation Method



Verification of Soil Purification

When polluter wants to remediate polluted soil, in accordance to the Article 15 Clause 6 of Soil Environment Preservation Law, Keco inspects whether appropriate purification process is implemented from the starting step to each step and issues verification statement for purification after checking the completion of final purification.

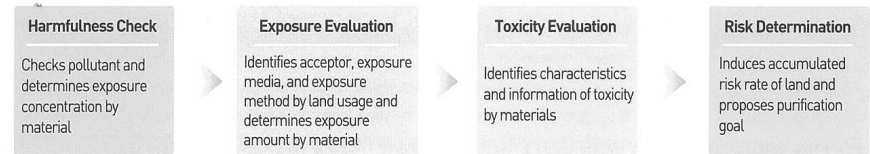
Variation Plan



Evaluation of Soil Risk

This is a process of evaluating harmfulness of soil pollutant on health and environment by considering pollution of the area, surrounding environment, and future usage plan. This evaluation quantitatively measures current or potential harm on health caused by exposure to the pollutants.

Evaluation Process



Evaluation of Soil Environment

As those who have acquired or leased sites with a specific facility are responsible for compensation and purification of soil pollution this evaluation prevents disputes in advance by clearly defining the limits of responsibilities prior to transfer or lease of lands to the parties.

Installation and Operation of Underground Water Quality Monitoring Network

Basic data to establish policies for preserving ground water quality is provided by examining the underground water quality and transitional aspects through regular sample collection and water quality analysis.

Items and Duration of Monitoring

67 items, including quality requirement for drinking water, four times of analysis per year

Installing National Ground Water Quality Monitoring Network

Establishment of 884 sites by 2020 and 3,469 sites by 2030

Investigation and Management of Areas with Polluted Underground Water

Implements detailed investigation on groundwater development and use facilities or underground water quality network which have gone beyond the standard. Based on the result active plan for reducing pollutants such as prevention of spread and purification of underground water is implemented for those areas with high pollution rate or high dependency on underground water.

Monitoring of underground water quality → Select areas with water pollution concern → Detailed investigation (define cause and status) → Post care (prevention and purification)

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Keco Makes Clean Water and Soil



Water Pollution Management and Control

Operation of Water Pollution Control Center Search Water Pollution Control Center www.waterkorea.or.kr

Operates water pollution control center and provides activities for inspection, prevention, and control of water pollution accidents to rapidly deal with water pollution and damage of water ecology in public areas.

Major Service

- Real-time water pollution inspection by establishing and operating control system (operation and management of water pollution control centers)
- Provision of support for water pollution accidents (HR and equipment)
- Education on control technology for preventing water quality pollution accident
- Control training on prevention of water quality pollution accident
- Operation and management of IP-USN mobile water quality monitoring equipment



Control Equipment Status

- 12 Air-Cushioned Landing Crafts, 2 Oil Spill Response Vessel, 11 Oil Skimmers, 10 Mobility Maneuverable Vehicles (35 units in total)
- Operation of control storage for 4 rivers (16 sites)

Location of Protection Center

Keco Water Pollution Control Team (Head Office / Control Center)	Regional Water Protection Team			
	Metropolitan area (Han River)	Yeungnam (Nakdong River)	Chungcheong (Seum River)	Honam (Yeongsan River)
Incheon/Daegu Suseong	Gyeonggi Seongnam	Daegu Suseong	Daejeon Seo-gu	Guangzhou Gwangsan

Management and Operation of National Auto Water Quality Monitoring Network Search Real-time water quality info system www.koreaawqi.go.kr

National Auto Water Quality Monitoring Network provides real-time measurement of water quality of major 4 rivers to rapidly control pollution accidents and it also collects basic data for environmental policies required for the enhancement of water quality forecasting and warning accuracy, water quality protection, and general plan for water management.

Major Service

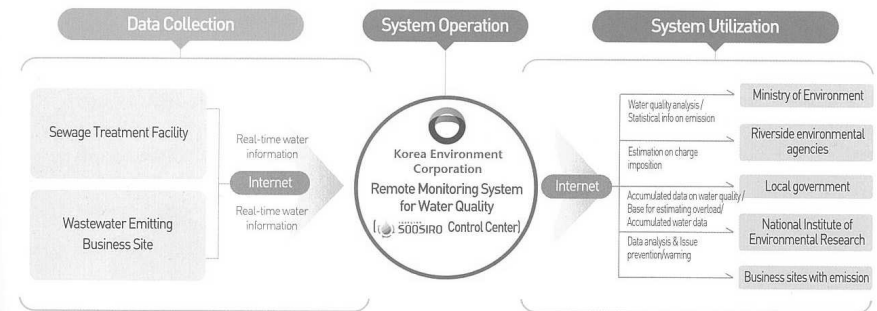
- Installation and operation of water quality monitoring network on 69 stations in major 4 rivers
- Monitor water quality pollution through water quality monitoring system, collecting measurement data, and offering information for analysis
- Establishment of early alert system for the prompt control of the possible water contamination

Items of Measurement

- Common Items: Water temperature, electric conductivity, pH, DO, and TOC.
- Optional Items: Bio monitoring (water flea, algae and microorganism), VOCs, T-N, T-P, NH₃-N, NO₃-N, PO₄-P, turbidity, Chlorophyll-a, phenol, and heavy metals.

Establishment and Operation of Remote Water Quality Monitoring System (소오시어) Search Remote Water Quality Monitoring System www.soosiro.or.kr

This is a 24-hour regular monitoring system which observes the emission status of water pollutants by connecting consecutive auto measurer, attached to the final outlet of nationwide public sewage and wastewater disposal facilities and commercial wastewater discharge sites, online with the control center of remote water inspection system.



Items of Monitoring pH, organism(BOD or COD), suspended solid(SS), total nitrogen(T-N), total phosphorus(T-P))

Technical Support for Ecological Toxicity Management System (생태독성관리시스템) Search Ecology Toxicity Management System www.biowet.or.kr

This system manages the toxicity of hazardous chemicals that are discharged into water and builds management system centered on acceptors. It also forms ecologically healthier and safer water environment against hazardous materials.

Subjected to the Ecotoxicology Emission Approval Standard

- Wastewater treatment facility and public sewage treatment facility
- 35 businesses including petrochemical facilities categorized under enforcement regulation of Water Quality and Ecosystem Conservation act appendix 13

Ecotoxicology Management System
System that provides integrated management by identifying toxicity of chemical materials included in wastewater by using water flea.

Search Ecology Toxicity Management System www.biowet.or.kr

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Keco Facilitates Resource Circulation

Keco is leading the field of resource circulation which is the foundation for environment preservation based on various systems and policies to reuse wasted resources.

> 34 Resource Circulation Program

- Confiscated Goods Recycling Program
- Financial Support for the Establishment of Recycling Businesses and Technical Consulting
- Provision of Environment Statistical Information
- Packaging Material and Method Inspection and Material Test for Recycling Mark
- Agricultural Waste Collection and Disposal Program

> 36 Operation and Management of Resource Circulation System

- Eco-Assurance System
- Waste Charge System
- Extended Producer Responsibility System
- Recycling Mark System

> 39 Waste Management

- Operation of Allbaro System
- Business Wastes Reduction System
- Operation of RFID-Based Integrated Food Waste Management System
- Operation of Export and Import Wastes Portal
- Operation of The Recyclable Resources Market