



The Environmental Policy Direction of the present government

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National Institute of Environmental Human Resources Development

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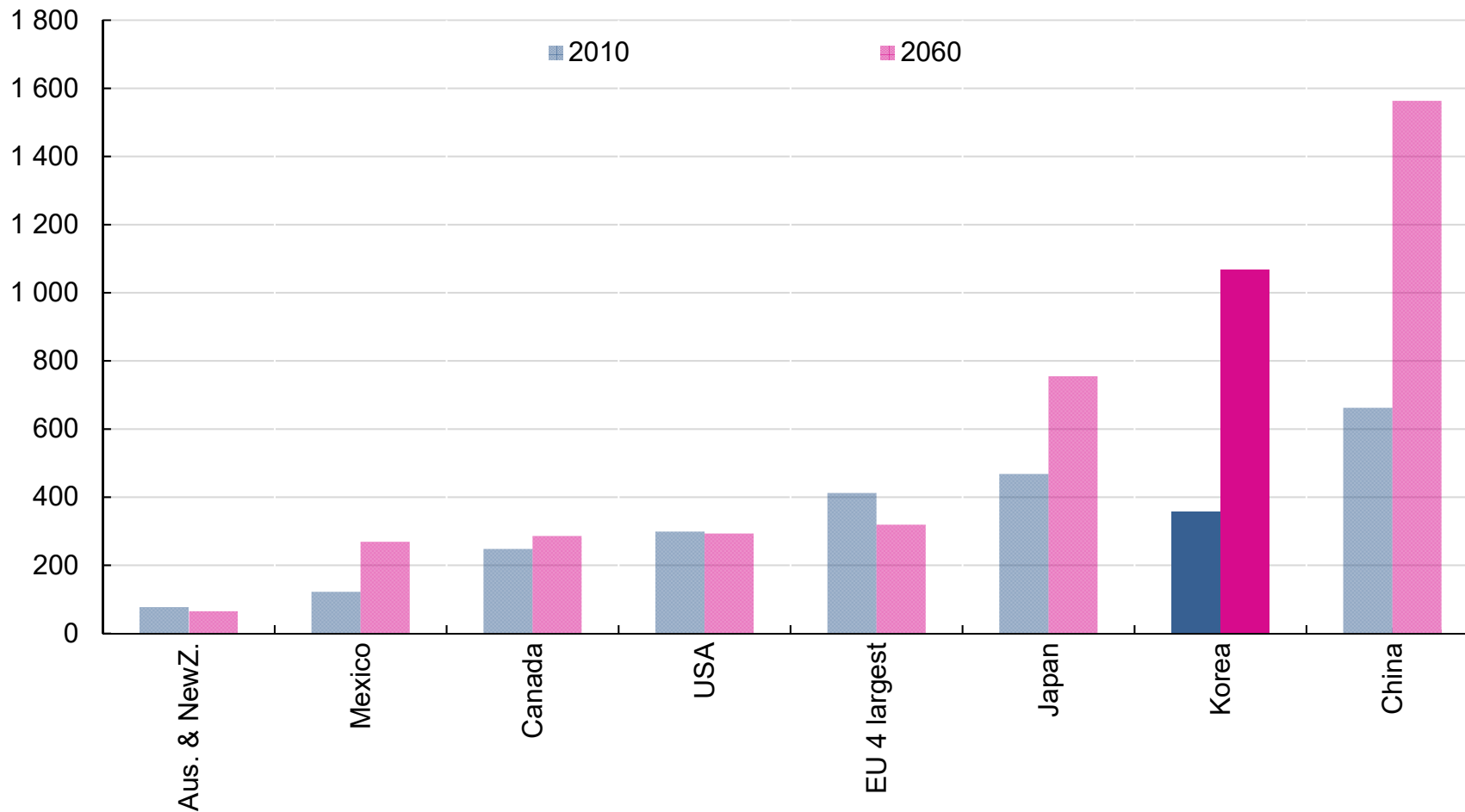
- II. National Environmental Tasks of the present government (2017~2022)**

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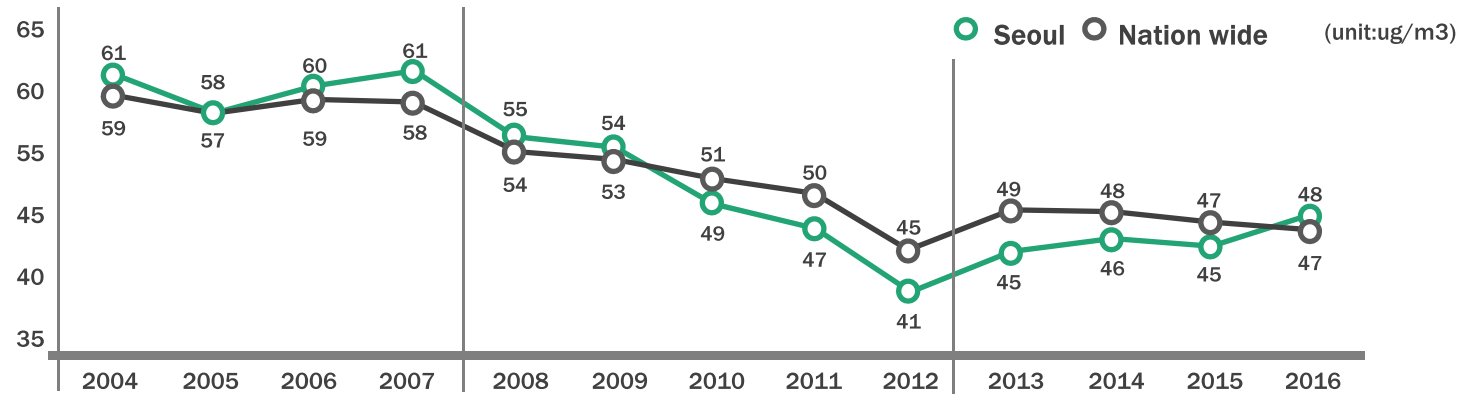
I. Environmental Key Facts

Premature deaths from outdoor **air pollution** to triple by 2060

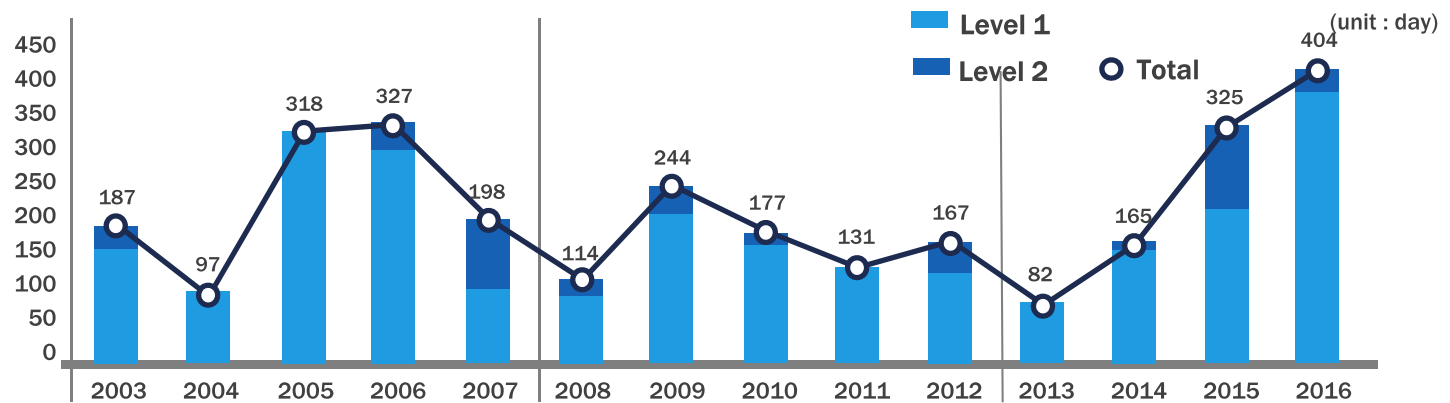
Nb of deaths per year per million people from exposure to particulate matter and ozone



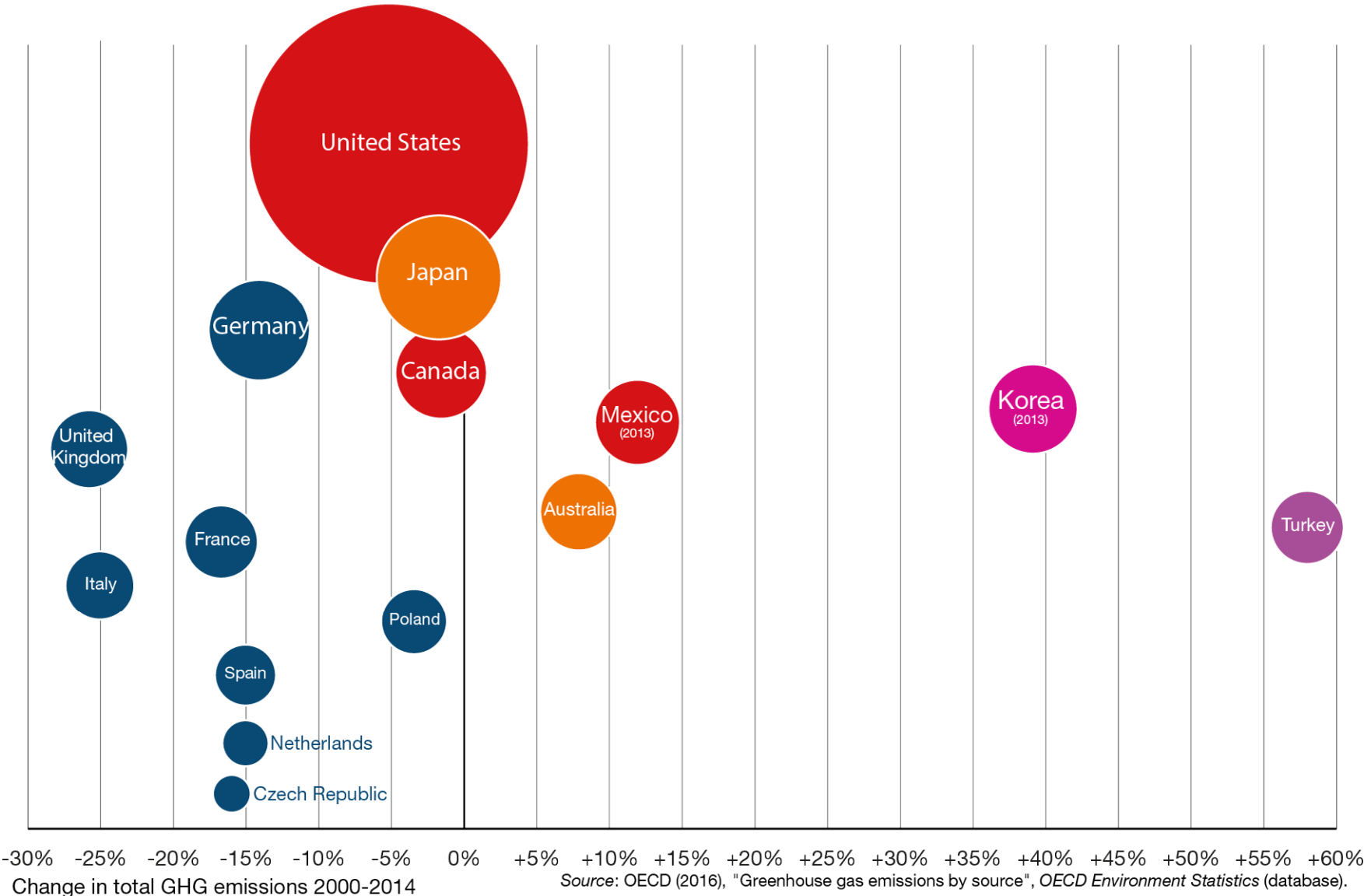
Concentration of PM₁₀



The number of issuing the algal warning at 4 Major rivers

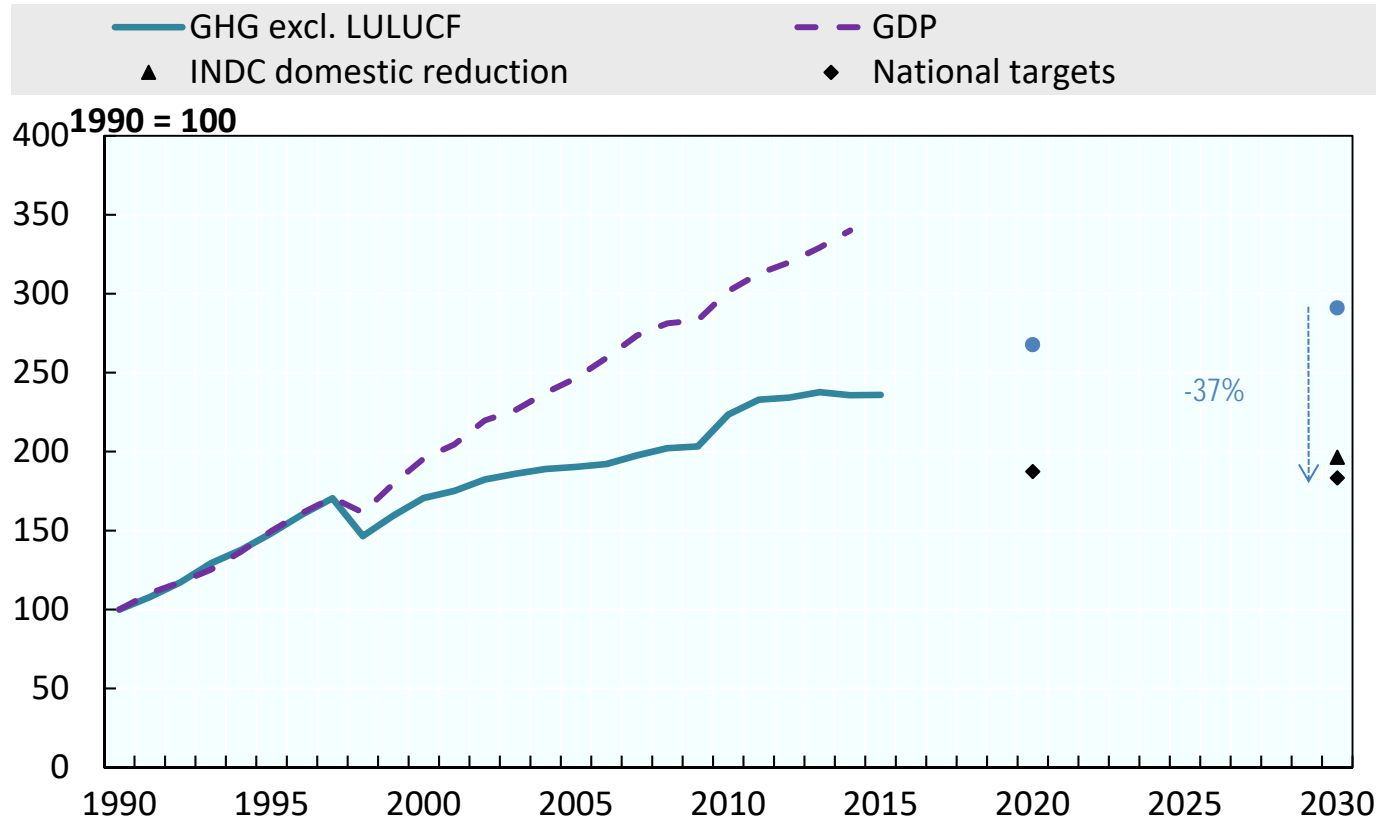


Korea : The **fifth-largest GHG emitter** in the OECD



GHG emissions decoupled from economic growth

OECD Environmental Performance Reviews: Korea 2017



a) Excluding emissions/removals from land-use, land-use change and forestry (LULUCF).

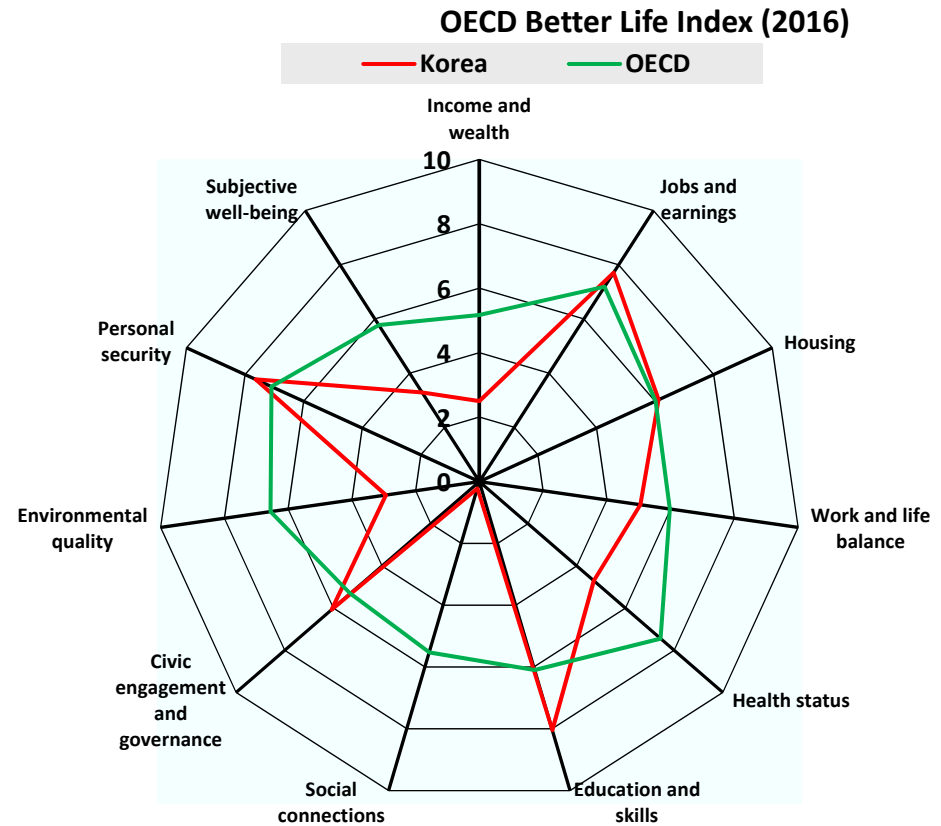
b) GDP at 2010 prices and purchasing power parities.

c) Intended nationally determined contribution.

d) In 2016, the 2020 target was replaced by the 2030 target in the Framework Act on Low Carbon, Green Growth. Out of the 2030 target 25.7% of reductions would be met domestically and the remaining 11.3% through international markets.

OECD Better Life Index

- **Korea was ranked: 6th in Housing and 10th in Education and Civic Engagement,**
- **36th in Environment, 30th in Life Satisfaction and 35th in Work-Life Balance. (2017 data)**



Measuring Distance to SDGs Targets (OECD 2017)

- In good progress – economy, water, and health
- Far away from reaching the targets - inequality, climate, and biodiversity

**For better quality of life,
Clean Environment and Public Health must be guaranteed.**

II. National Environmental Tasks of the present government (2017~2022)

(No. 57) Enhancing Environmental Health & Safety Management

Project Goal

- Improvement of the safety control system over **chemical substances and products**.
- Creation of better living condition **without environmental nuisance**

Main Tasks

Task 1. Safety Management of **Biocides and Chemical Products** in Daily Life

- **Helping for victims of humidifier disinfectants**
 - Securing financial aid for victims (125 Billion) ('17.8)
 - Expending disease coverage of damaged victims
- **Introducing a new permit system of Biocides ('19)**
 - * submitted a bill to the National Assembly ('17.9)
 - Kicking out spray type products not notifying inhalant toxicity within a year
- **Integrated relief systems** related to the environmental damages
- Strengthening systematic linkages from the **survey over potential environmental damages to its relief**

(No. 57) Enhancing Environmental Health & Safety Management

Task 2. Enhanced **Chemical Risk Assessment** & accessibility to Data

- **Mandatory registration** of all chemical substances (7000) over one ton by 2021
* Amended 'Act on the Registration & Evaluation, etc. of Chemical Substances' ('17.9)
- Promoting chemical toxicity facilities with GLP level
- Expanding facilities for **inhalant toxicity data**
- Enhancing **public access to toxicity information in daily life products**
- Strict **regulation** to prevent companies from **abuse of confidentiality claim**

(No. 57) Enhancing Environmental Health & Safety Management

Main Tasks

Task3. Securing the Environmental Safety

- Preventing **sinkholes** by maintaining **sewer pipelines**
- **Strengthening economical penalty** over the environmental offenses
 - (ex.) Illegal discharge of toxic substances
- Stricter management of transboundary movement and distribution of hazardous waste

Task 4. Removing Nuisance in Daily Life

- **(Indoor noise)** Reducing disputes caused by inter-floor noise nuisance (consultation & measurement services, education, etc.)
- **(Traffic noise)** Adopting a labeling system on tire noise function ('17.9, Voluntary -> '19.1 Mandatory)
- Expanding the **control areas of light pollution management**
 - * 2 cities '17 → 5 cities

Expected Effect

- **Relieving victims** from humidifier disinfectants and preventing the similar chemical accidents
- Creating **chemical risk free community**



(No.58) Improving Air Quality (focused on PM)

Project Goal



Reducing the total amount of **domestic fine dust emission by 30%**

Main Tasks

Task 1. Discovery of Fine Dust Mechanism & Enhancing Forecast Accuracy

- Launching the **environmental satellite** ('20)
- Expanding **AQ monitoring facilities**
- Enhancing the **forecast accuracy** (63% in 16 -> 74% by 20')

Task 2. Emission Reduction from Energy & Industry Sectors

- Reducing emission from **coal power stations**
- Reinforcing the **industrial emission standards** by more than 20%
- **Closing coal-fired power plants over 30 years** by 22'(10 plants)

(No.58) Improving ambient Air Quality

Main Tasks

Task3. Reducing impact from **Transportation Sector**

- Expanding the use of **Eco-friendly Vehicles** (2022)
- Expanding **Low Emission Zone** (Seoul, 2018 → Capital Area)
- Supporting **early car scrapping for Diesel Vehicles**
- Obligation to use Eco-friendly Construction Vehicles and intensify emission restriction for Locomotives (2018)

Task4. Enhancing Protection for **Sensitive Groups and Regions**

- Additional **Designated Special Control Zone** (Chungcheong, Dongnam and Gwangyangman , 2019)
- Supporting in-door gymnastic facilities for school
- Converting school buses to Eco-friendly Vehicles

(No.58) Improving ambient Air Quality

Main Tasks

Task 5. Strengthening Cooperation between Korea and China

- Setting as agenda for the Korea-China summit
- Making a multilateral agreement among Northeast Asia
- Sharing of regional fine-dust movement data
- Conducting joint research and technical cooperation

Expected Effects

- Decreasing PM2.5 concentration to $18\mu\text{g}/\text{m}^3$ ($26\mu\text{g}/\text{m}^3$ in 2016)

(No.59) Building up the national sustainability

Project Goal

- ☑ Harmonizing Conservation and Development
- ☑ Integrating Water Management and Re-naturalizing the 4 Major Rivers

Main Tasks

Task 1. Preventing Improper Development

- Setting guidelines to integrate land conservation and development
- Improving the EIA system
- ✓ Introduction of 'Fee deposit system'
- ✓ Encouraging public participation
- Introducing 'Ecosystem service payment system'

Task2. Improving Animal Welfare

- Expanding 'Wildlife Salvation Centers'
- Developing 'toxicity test guidelines for cosmetics' to minimize animal testing
- Banning importation of improperly captured Threatened Species (CITES)

(No.59) Building up the national sustainability

Main Tasks

Task 3. Establishing a **New Water Governance system**

- **Integrating** the segregated water managerial systems' into one (2018)
- Establishing the new participation oriented, **river-basin governance**
 - Water management committee based on civil participation (2019)
- Diversifying drinking water source
- Building water circulation system to prevent drought (2022)
 - Modernizing **decrepit pipelines** (221,717km)
 - **Reuse of sewage water** (110 million tons per annum)

(No.59) Building up the national sustainability

Main Tasks

Task 4. The **Re-Naturalizing** 4 major Rivers

- Permanent **opening of 6 weirs** where algal bloom is frequently occurred in
- Conducting re-naturalizing after full examination and assessment.
 - Establishing public and private joint **assessment committee**
 - Planning how to deal with 16 weirs in the 4 major rivers
 - Conducting **rejuvenation tasks** following the committee plans

Expected Effect

- Arrangement of institutional prevention system against improper development
- Expanding **ecological protection areas** (11.2% , 16' → 17%, 21')
- Increasing **water supply secure rate** (62%,13' → 87%, 21')

(No.61) Robust Response to Climate Change

Project Goal

- ✓ Achieving the **National GHGs mitigation goal** by 2030
- ✓ Risk management for the impacts of Climate Change and minimizing the effects of abnormal climate events

Main Tasks

Task 1. Reinforcing the Governance system for SD

- Strengthening the **Sustainable Development Commission** (Since 2018)
- Development of **2030 National Strategy for Sustainable Development**
 - ✓ Development of implementation system
 - ✓ Assessment index for central and local government

(No.61) Robust Response to Climate Change

Task 2. Enhance GHGs Reduction

- **Readjust authority for Emission Trade Scheme**, allocating Emission Permit for the stage II ('18~'20)
- **Amendment of the 2030 GHGs reduction roadmap**
- Increasing number of Zero-Carbon buildings
- Setting up new standards for vehicle GHGs emission

Task 3. Enhance Adaptation Capacity to Climate Change

- Institutionalizing systemized assessment of public organization's Climate Change adaptation (2018)
- Re-drawing the Korean Peninsular Climate Change Scenario and mapping for the Adaptation Risk (2019)
- Set up monitoring network and integrate info system (2020)

(No.61) Robust Response to Climate Change

Task 4. Participate in Global Discourse

- Contribute to implementation mechanism after Paris Agreement
- GHGs **Emission Verification System** for Mutual Acceptance (Since 2018)
- Building bilateral cooperation mechanism for overseas emission reduction

Expected Effect

- Shifting to low-carbon economy and climate-resilient society

III. KME's Work Plan in 2018

Transformation of Environmental Policies for Better Quality of Life



- 1 Build a foundation for national sustainability**
- 2 Bring a substantial Improvement in environmental quality**
- 3 Promote environmental policies for people and with people**
- 4 Create jobs through the innovation in environmental industry**

Task1

**Build a Foundation for
National Sustainability**



National Indicators for Better Quality of Life

Step1 Assess the sustainability of the country

- ✓ Evaluate national sustainability using existing indicators(July 2018)

Only 110 out of the total 241 global sustainability indicators are relevant or applicable to Korea's circumstances.

Step2 Develop a country-specific assessment system

- ✓ By the end of 2018, goals, strategies, and indicators for the national implementation of SDGs by 2030 will be established.
- ✓ The new indicator will build upon UN SDGs, life quality indexes of OECD and Statistics Korea.



Green Transition in the Way We Use Energy

Alternative Energy

- **By 2030, increase the new and renewable share to 20% of national power generation by 2030**
 - Increase renewable capacity to 53GW (by 2030)
 - Increase the share of solar and wind power
- **Energy Transition (nuclear-free)**
 - Gradually phase out nuclear power plants
 - Increase the share of renewables

Energy Supply

- **Adjust the operation of power plants in connection with atmospheric fine dust concentration**
 - Limit the operation of old coal plants during spring season
- **Reform the energy tax system considering environmental costs**
 - Encourage emission reduction and secure financial resources for environmental improvement projects



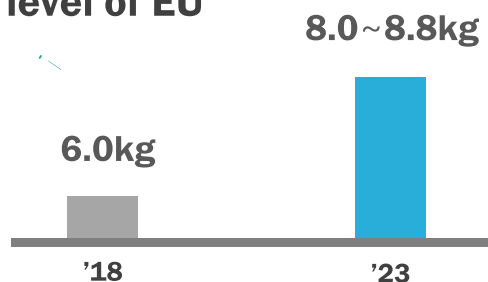
Towards a Circular Economy through Sustainable Consumption and Production

Resource-cycling Production

- **Recycling Target Management for large emitting businesses ('18~)**
- **Recyclability Assessment system ('18~)**
- **Expand the range of EPR (electrics/electronics)**

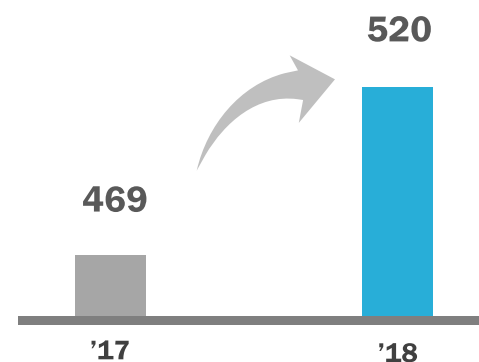
* **27 → 51 types**

- **Raise recycle target (per capita) to the level of EU**



Sustainable Consumption

- **Increase green product share in public procurement to 52% (Dec '18)**
- **Introduce deposit and EPR to disposable paper cups**
- **Increase Green Store designation**



- **Green Consumption Centers**



Greater Environmental Consideration in Land Use

Green Land Planning

- **Innovate the Environmental Impact Assessment system ('18~)**

- **From the drafting of assessment report to the completion of the consultation, the whole EIA process will be open to public.**

- * **Not only the residents of the region concerned but also general citizens take part in the process.**

- **Integrate the management of Land and the Environment ('18~)**

- **Environmental status data will be mapped, and an integrated land-environment information system will be established.**



Task2

**Bring a substantial
improvement in
environmental quality**

Proactive Responses to Climate Change

Effective Mitigation Measures

- **Amend the 2030 National GHGs Reduction Roadmap (July '18)**

- The national target, methods and standards will be re-examined and reset.

- * Bottom-up approach involving the government, industry, and civil society.

- **Establish the 2nd Emission Allocation Plan ('18~'20)**



Warning and Forecasting

- **Improve Climate Information SMS service for the vulnerable (May '18)**

- From providing plain information (e.g. “Warning: high UV”) to offering practical instructions

- *(e.g.) “People who have sensitive skin should wear sunscreen before going out.”

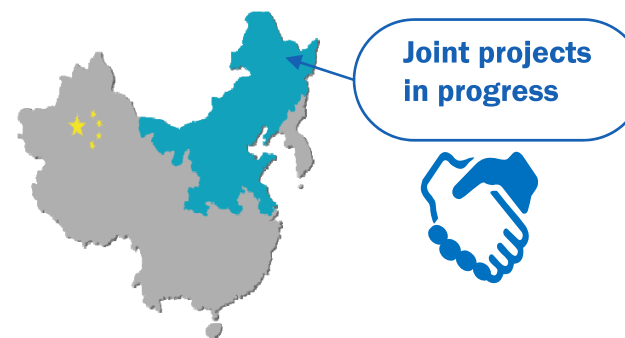
Fight against the Fine Dust

Domestic Sources

- **Tighten fine dust standards** (1st half, '18)
 - * Daily average concentration: 50 → 35 $\mu\text{g}/\text{m}^3$
- **Increase and improve monitoring sites** ('16) 264 → ('18) 355
 - Adjust the height of the monitoring points
- **Expand the restriction on old diesel vehicles**
 - * ('17) Seoul → ('18) 17 cities incl. Incheon
- **Enhance public participation in dust reduction** e.g. no-driving-day initiative

International Sources

- **Korea-China cooperation on fine dust reduction – towards applicable outcomes**
 - * 6 → 12 regions, 3 → 5 types of business



Chemical Safety



Manufacturing ·
Import

- **All existing chemical substances manufactured or imported above one ton in quantity shall be registered with their hazard/risk information.**

* During the term of the incumbent administration, hazard/risk information of 99.9% of chemicals in the Korean market are expected to be registered.



Production ·
Marketing

- **Biocidal products (e.g. humidifier disinfectant) should obtain prior permissions before the introduction to the market (A Biocides Act enacted, Feb '18)**

* All biocidal products will be required to undergo risk assessment and receive approval.



Sales ·
Distribution

- **Regular inspection on products' safety information disclosure. Tighter enforcement and heavier penalty for breaches and violations.**

Integrated Management for Safe and Clean Water

Integration

- Enact 「Framework Act on Water」

* Restructure the whole administrative system on water management

Establish Integrated Information System

Develop Integrated Water Management Plan

Safety

- Strengthen water quality management

* Tighten the quality standards for livestock wastewater

Introduce total pollution load program for industrial complexes

Clean up contaminated sediment



Confidence

- Tighten the control of small-amount hazardous substances in tap water & increase the number of advanced purification plants

- Improve tap water safety management & introduce “lifetime health standards”

* “Check tap water safety in my house” initiative
(25 municipalities newly joined.)



Living Together with Animals and Plants

Systematic Conservation

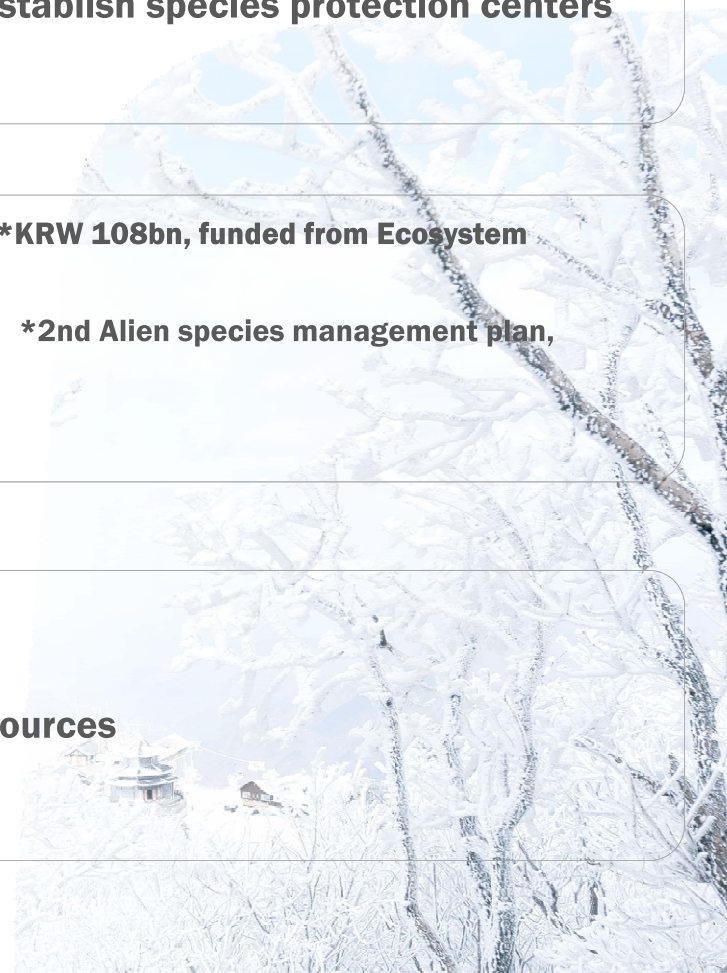
- **Expand protected areas** * Mt. Halla (153km²) **Jeju National Park** (673km²)
- **Restore degraded ecological axis** (identify 100 priority sites in 10 areas)
- **Restrict the trade of CITES species & establish species protection centers**

Sound Restoration

- **Promote city park restoration projects** *KRW 108bn, funded from Ecosystem Conservation Charges
- **Strengthen the control of alien species** *2nd Alien species management plan, mandatory *ex ante* risk assessment

Wise Use

- **Promote eco tourism**
- **Support R&D concerning biological resources**



Task3

**Promote
Environmental Policies
for People and with People**

Protection from Damages Caused by Environmental Pollutions



- **Strengthen health and environmental impact assessment around industrial facilities**
 - Taking into greater consideration on health and environmental impacts on neighboring communities when issuing permissions for factory construction
- **Assess health risks caused by the operation of industrial facilities and apply targeted measures for the pollution sources**



- **Conduct health and environmental impact survey in concerned areas e.g. industrial complex and power plant**
 - For detected problems: develop measures to address / For identified damages: provide support to prove the causality
- **For those damages with the proof of causal relationship, the government will give relief money first and claims the indemnity later. (Jan '18)**
 - Follow-up health monitoring of the victims

Information Disclosure and Participatory Policy Making

Participatory Policy Making

- **Citizen proposal on environmental policies**
 - Gov. will adopt the ideas of citizens (largely voted citizen proposals) in develop policy program
- **Participatory budgeting**
 - Citizens will make policy proposal on the environment, and the proposals will be materialized through public-private cooperation.

Information Disclosure

- **Open to the public: information concerning public safety and health**
 - **(Asbestos)** Release the results of building inspection, develop maps of natural asbestos generation, open demolition process to residents
 - **(Tap water)** Publicize quality test results: more test items (3 → 26), Indoor pipe test result (0 → 7)
 - * Extend "Tap Water Safety Check" program (25 municipalities newly joined)

Task4

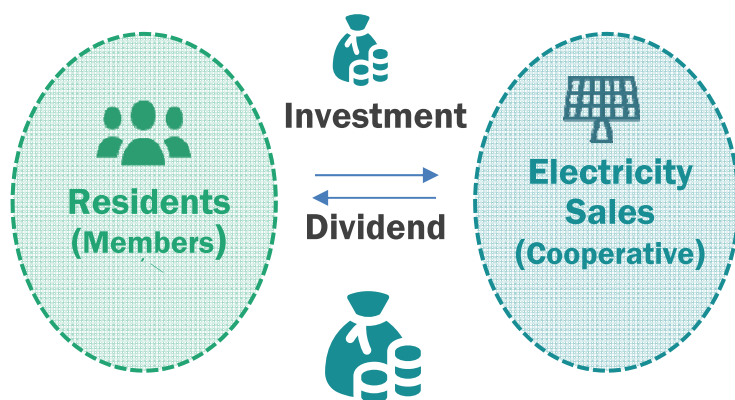
**Create Jobs
through the Innovation
in Environmental Industry**

Environmental Projects that Bring Benefits to People

Participatory Renewable Project

- Local communities invest in solar panels installed in environmental facilities (e.g. water purification plant)

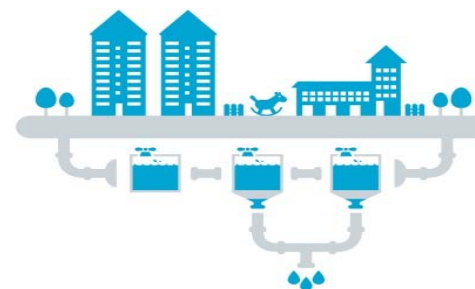
- Encourage active engagement of community cooperative



Brand New Project Concepts

- (Model 1) Move urban sewer plants into underground and use the above space for the citizens
- (Model 2) Utilize the space above retention tanks (in industrial complexes) for commercial purpose

* (e.g.) Daycare center, warehouse



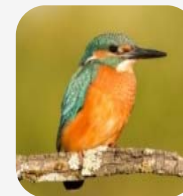
Environmental industry for Future Generations

Overseas Opportunity

- **Diversify the regions**
 - Replicate the success in China into India (MOU, 1st half, '18)
 - Send market development missions (India & Serbia, 2nd half, '18)
 - * Exports supported by KME program : ('17) KRW9tn → ('18) KRW10tn (target)
- **Raise the fund for future environmental industry (promote the investment)**
 - * ('17) KRW42bn → ('18) KRW63bn

New Industries

* E.g. Research on birds feathers for the development of reflective display

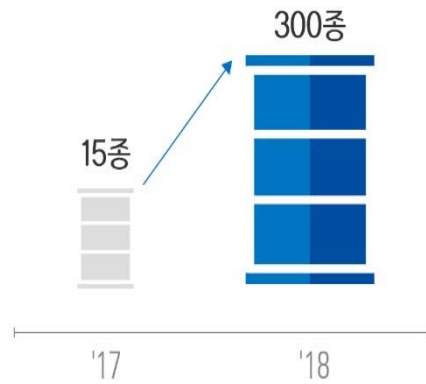


Beak of Kingfisher

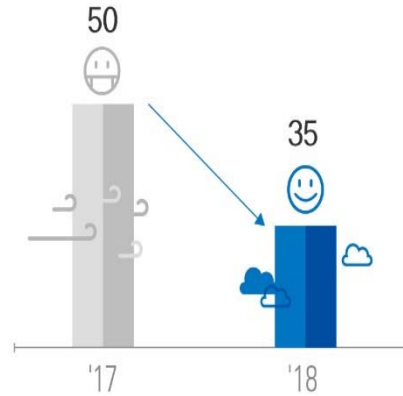


Shinkansen

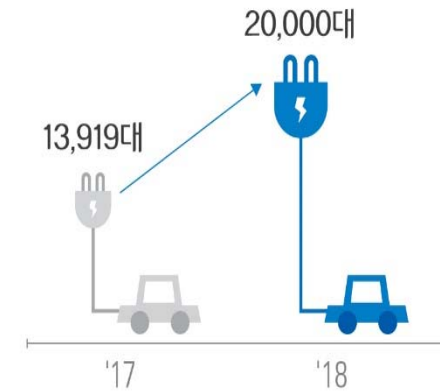
Chemicals with Registered Risk Information



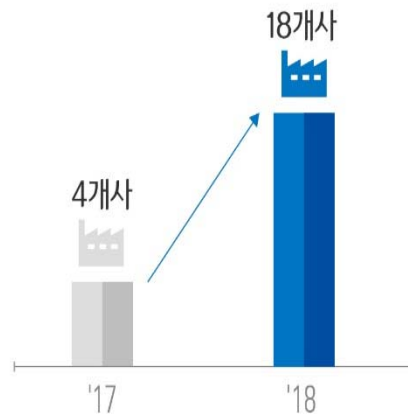
PM2.5 Standards (mg/m3)



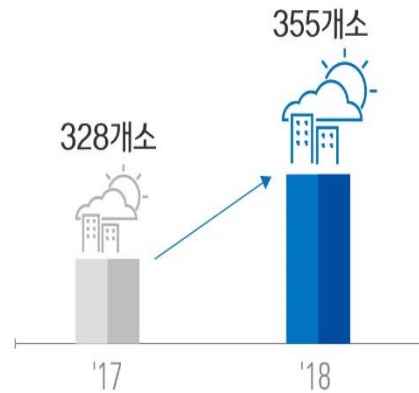
New EVs



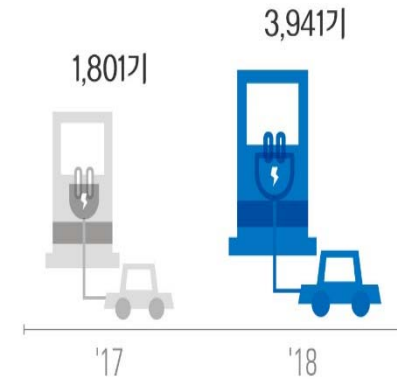
Companies performing total disclosure of chemical ingredients



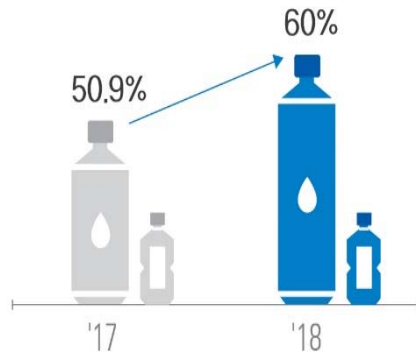
Urban AQ Monitoring Sites



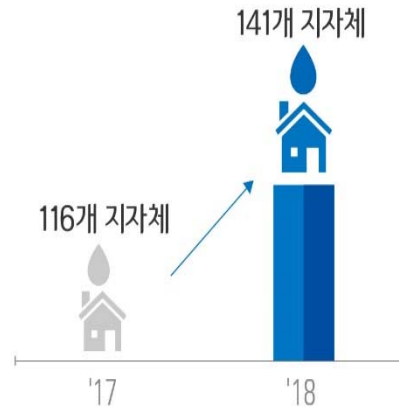
Quick EV Chargers



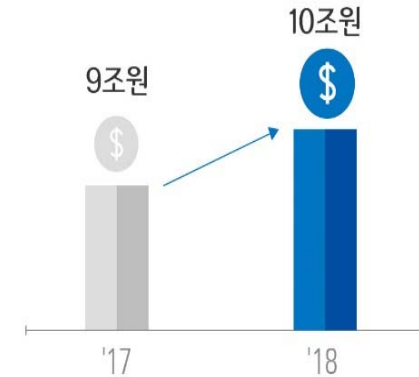
Returned Bottles



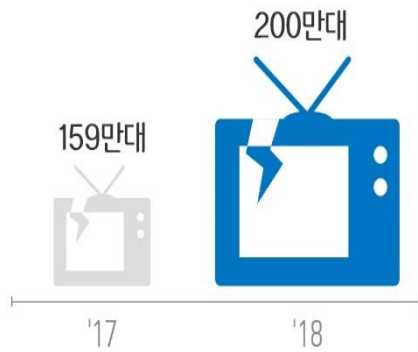
Tap Water Safety Check (participating municipalities)



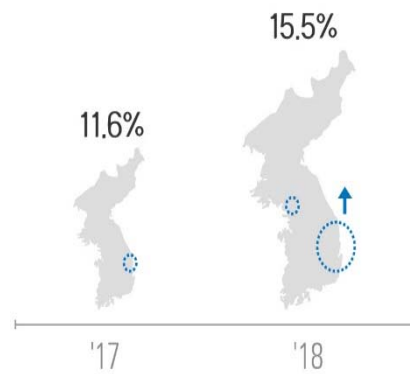
Export of Environmental Businesses



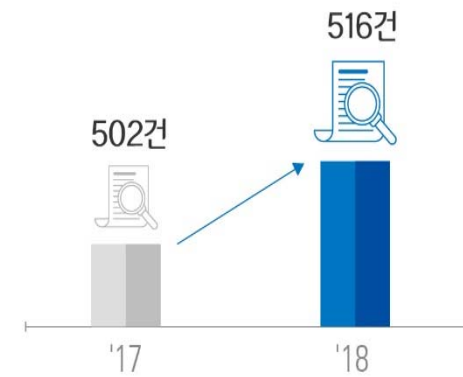
Free E-waste Collection



Protected Areas (relative to territory area)



Disclosure of Environmental Information



Thank you
