



Through Smart Water Management and Healthy Tap Water Supply, K-water will make a much happier world

# Water for a Happier world

 2015 Sustainability Report





## About this Report

### Purpose of Publication

We publish the sustainability report in order to provide information on the corporate sustainable management openly to our stakeholders. K-water's sustainability report contains its sustainable business practices, responding to stakeholders' issues of concern, as the only state-owned water service company of the nation.

### Publication Cycle

This, K-water 2015 Sustainability Report is the 11th report. K-water has published annually since 2005.

### Reporting Standard

This report has been drafted in line with the GRI G4 Sustainability Reporting Guidelines (Core option).

### Reporting Period

The period covered in this report is from January 1 to December 31, 2014 while for qualitative performance the period covers up to July 2015.



## Awards

<b>Apr. 2008</b>	Korea Management Innovation 'Grand Prize' (Awarded by Korean Ministry of Knowledge Economy and Maeil Business Newspaper)
<b>Oct. 2008</b>	Korea Social Contribution 'Grand Award' (Korea Journalist Forum)
<b>Oct. 2008</b>	Sustainable Management 'Award of Highest Excellence' (Korean Ministry of Knowledge Economy and Korea Chamber of Commerce and Industry)
<b>Oct. 2008</b>	Korea Eco-Friendly Company 'Grand Award' (Korean Ministry of Environment)
<b>Oct. 2008</b>	Asian Most Admired Knowledge Enterprise (UK Teleos)
<b>Jan. 2009</b>	Continuity & Creation Management Award in Environmental Management (Korean Ministry of Knowledge Economy and UN Global Compact)
<b>Oct. 2009</b>	Low Carbon Green Growth Commendation (Green Growth Association and Korean Ministry of Environment)
<b>Oct. 2009</b>	New Regeneration Energy Awards 'Prime Minister Commendation' (Korean Ministry of Knowledge Economy)
<b>Oct. 2009</b>	Asian Most Admired Knowledge Enterprise (UK Teleos)
<b>Dec. 2010</b>	National Green Technology 'Grand Award' (Korean Ministry of Knowledge Economy and Korean Ministry of Education)
<b>Jun. 2011</b>	Korea Green Management Award (Korean Ministry of Knowledge Economy and Korean Ministry of Environment)
<b>Jun. 2011</b>	Eco-Star Eco-technology Award (Korean Ministry of Environment)
<b>Jan. 2012</b>	The first public company to be awarded the 'Smart Work Superior Institute Award' (Korean Ministry of Public Administration and Security)
<b>Feb. 2012</b>	The Most Admired Company In Korea (KMAC)
<b>Jun. 2012</b>	Environmental Impact Management 'Grand Prize' (Korean Ministry of Environment)
<b>Jun. 2012</b>	Global Social Contribution Institute of Excellence Commendation (Korean Ministry of Health and Welfare)
<b>Jun. 2012</b>	Selected as an excellent company with an outstanding performance in 'Labor and Management Relations' (Korean Ministry of Employment and Labor)

### Reporting Boundaries

This report basically covers business practices of the head office, 9 regional/business divisions and 60 branch offices. Business performances of oversea projects were included. It does not cover subsidiaries and affiliates, while for partnering companies in our corporate supply chain, their performances were partially included in relation with education service or subsidies for mutual growth over the corporate supply chain.

### Amendments

There were not any significant changes such as corporate structure and ownership during the reporting period when compared to the previous year. However, some figures were amended to reflect changes in calculation and application standards.

### Report Assurance

Data and statements included in this report were verified by Korea Productivity Center.

<b>Jul. 2012</b>	Korea Digital Innovation Award 'Public Sector Grand Prize' (Korean Ministry of Knowledge Economy)
<b>Sep. 2012</b>	Excellent enterprise with an outstanding performance in purchasing goods from small and medium enterprises (Small and Medium Business Administration of Korea)
<b>Oct. 2012</b>	Family-Friendly Enterprise (Korean Ministry of Gender Equality and Family)
<b>Oct. 2012</b>	Top 100 Enterprise selected as 'Great WorkPlace' (GWP Korea)
<b>Oct. 2012</b>	Asian Most Admired Knowledge Enterprise (UK Teleos)
<b>Nov. 2012</b>	Sustainability Grand Award, Innovation Management Award (Korean Ministry of Knowledge Economy)
<b>Dec. 2012</b>	State-owned Company Award 'Grand Prize' (Sisa Journal)
<b>Jul. 2013</b>	13th Korean Digital Green Management Award (Korean Ministry of Science, ICT and Future Planning)
<b>Oct. 2013</b>	Korea Green Architecture Competition 'Award of Excellence' (Presidential Commissions on Architecture Policy)
<b>Oct. 2013</b>	'Commendation for Service' in Renewable Energy Supply Obligation System (Korean Ministry of Trade, Industry and Energy)
<b>Nov. 2013</b>	The Natural Environment Grand Award (Korean Ministry of Environment)
<b>Nov. 2013</b>	Asian Most Admired Knowledge Enterprise (UK Teleos)
<b>Dec. 2013</b>	Global Most Admired Knowledge Enterprise (UK Teleos)
<b>Feb. 2014</b>	The Most Admired Company in Korea (KMAC)
<b>Aug. 2014</b>	14th Korean Digital Award (Korean Ministry of Science, ICT and Future Planning)
<b>Aug. 2014</b>	Achieved Carbon Trust Standard (UK Carbon Trust)
<b>Sep. 2014</b>	IWA Project Innovation Award (IWA)
<b>Oct. 2014</b>	Asian Most Admired Knowledge Enterprise (UK Teleos)
<b>Nov. 2014</b>	Korea Great Work Place Grand Prize (GWP Korea)
<b>Nov. 2014</b>	Korea Quality Management Enterprise Presidential Prize (Korean Ministry of Trade, Industry & Energy)
<b>Nov. 2014</b>	Advanced Public Enterprise in Mutual Growth Efforts (Korean Ministry of Trade, Industry & Energy)
<b>Dec. 2014</b>	Korea Social Outreach Award - Prime Ministers' Commendation (Korean Ministry of Government Administration and Home Affairs)
<b>Dec. 2014</b>	Global Most Admired Knowledge Enterprise (UK Teleos)



## Membership Activities

<b>1974</b>	Korean Society of Civil Engineers
<b>1976</b>	Korea Electric Association, International Contractors Association of Korea
<b>1993</b>	Korea Water Resources Association
<b>1995</b>	Environmental Impact Assessment
<b>1996</b>	Korean Association of Academic Societies, Korean Institute of Landscape Architecture
<b>1997</b>	Korea Electric Engineers Association
<b>1999</b>	Korea Disaster Prevention Association
<b>2001</b>	Korea New & Renewable Energy Association
<b>2002</b>	Korea Water and Wastewater Works Association
<b>2003</b>	Korean Society on Water Environment
<b>2005</b>	Korea Engineering & Consulting Association
<b>2006</b>	Ethical Management Forum, River Association, Korea Society for Environmental Analysis
<b>2007</b>	Korea Society of Environmental Restoration Technology, American Water Works Association, International Water Association, UN Global Compact
<b>2008</b>	Korean Society of Environmental Engineers, Membrane Society of Korea, Korean Society of Environment and Ecology
<b>2010</b>	Korean National Committee on Irrigation and Drainage, Korean Society for Fluid Machinery
<b>2011</b>	Society of Air-conditioning Refrigerating Engineers of Korea
<b>2012</b>	Korea Environmental Policy and Administration Society
<b>2013</b>	Architectural Institute of Korea
<b>2014</b>	Korea Society of Mechanical Engineers, Korean Society of Climate Change Research, Korea Photovoltaic Industry Association, Korea Society of Quality Management, International Hydropower Association
<b>2015</b>	Korean Society of Ecology and Infrastructure Engineering, Korea Society of Hazard Mitigation

## CONTENTS

### To Begin

<b>04</b>	CEO Message
<b>06</b>	Water Cycle Process and K-water
<b>08</b>	K-water, Total Water Service Provider
<b>11</b>	2014 K-water Sustainability Highlights
<b>12</b>	Water Business Environment

### K-water's Sustainable Management

<b>16</b>	Vision and Strategy
<b>19</b>	Governance and Responsible Management
<b>20</b>	Risk Management
<b>22</b>	Sustainable Management with Stakeholders
<b>24</b>	Sustainable Management Issues Identified by Stakeholders
<b>26</b>	In Depth Analysis of Sustainable Management Issues Identified by Stakeholders

### K-water's 4 Core Sustainability Issues

<b>30</b>	<b>1st Issue</b> Water Management's New Paradigm, Smart Water Management
<b>40</b>	<b>2nd Issue</b> Strategic Plan to Achieve 100 Years of Sustainable Growth
<b>47</b>	<b>3rd Issue</b> Responding to Climate Change and Ensuring Environmental Protection
<b>54</b>	<b>4th Issue</b> Transparency and Fairness Based on Improved Stakeholders' Trust

### Appendix

<b>68</b>	2014 Economic, Environment, and Social Performance Summary
<b>79</b>	Third Party Assurance
<b>82</b>	GRI G4 INDEX
<b>85</b>	ISO 26000
<b>86</b>	Code of Ethics, Green Management Policy, Customer Charter Statement, and Innovation Vision Statement
<b>88</b>	UN Global Compact's 10 Principles Support

## CEO Message



### “Open Communication for Positive Outcome”

**K-water believes that when many people’s ideas and knowledge are gathered, it can create a much more positive outcome for society and business. With this belief, K-water communicates with its stakeholders and practices open management.**

I would like to express my deepest gratitude for your interest in K-water, and I am pleased to present to you K-water’s 11th Sustainability Report.

K-water, as Korea’s only state-owned water provider, develops and manages water resource efficiently to protect people’s lives and property from water-related disasters such as floods and droughts. Also, K-water has provided leadership to promote the nation’s sustainable growth and the quality of all its citizens’ lives during the last 48 years. However, K-water’s business environment undergoes drastic changes. Due to climate change, droughts and floods have become more frequent and intense throughout the world. This

change is worsening water-related problems such as water shortages and water quality degradation, and thereby, escalating conflicts between regions over water. On the other hand, the domestic water market is being saturated rapidly despite growth of the global market. As a public corporation, K-water is required to meet customers’ demands for both improved service quality and higher service efficiency. Under this circumstance, K-water is placing its best efforts on turning unfavorable changes into business opportunities and satisfying its customers.

First, K-water is leading the way in developing a new water management paradigm - Smart Water Management Initiative (SWMI). K-water’s SWMI is to provide “smart” water service to its customers by combining cutting edge ICT (Information and Communication Technology) with existing water management technology, which features the Integrated Water Resource Management (IWRM) and “Healthy Tap Water”<sup>\*</sup> supply. K-water enhances the stability and efficiency of its water service through IWRM, responding to climate change, and supplies “Healthy Tap Water” to meet individuals’ growing demands on health and taste. In 2014, a pilot project of Healthy Tap Water supply has been successfully conducted in the city of Paju in South Korea with the result that the rate of tap water drinking increased from 1% to 19%. Moreover, detailed cooperation plans modelled on K-water’s IWRM are being discussed with Peru, Indonesia and Algeria. K-water’s SWMI facilitated the successful demonstration of K-water’s competency to the world at the 7th World Water Forum which was held last April in Daegu.

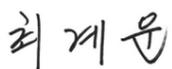
\* Healthy Tap Water: high quality tap water which is clean and safe, containing balanced minerals that are good for human health

With its competency based on the SWMI, K-water is making its way to the global water market beyond the domestic market for the company’s sustainable growth. In last July, K-water established a mid & long term road map to become a leading company in the global water market with its SWMI practice. As well as the efforts to grow its business globally, K-water has put the utmost efforts to fulfill its duties as the only state-owned water service provider. Implementing business restructuring and management improvement to ensure its solid financial structure, K-water continues to invest for its water service to reach out to all members across the society including an extension of its multi-regional waterworks to unserved rural areas. Its efforts led K-water to the best rating in the business performance evaluation for public service corporations by the Korean government.

In this, 2015 Sustainability Report, K-water details its efforts, preparation and results for becoming a global leader along with its plans for sustainable growth as per our mission, “Make a Happier World with Water”. Moving forward for another 50 years, K-water will endeavor to protect people from water risks and lead solutions to global water issues through open communication and participatory engagement of its stakeholders.

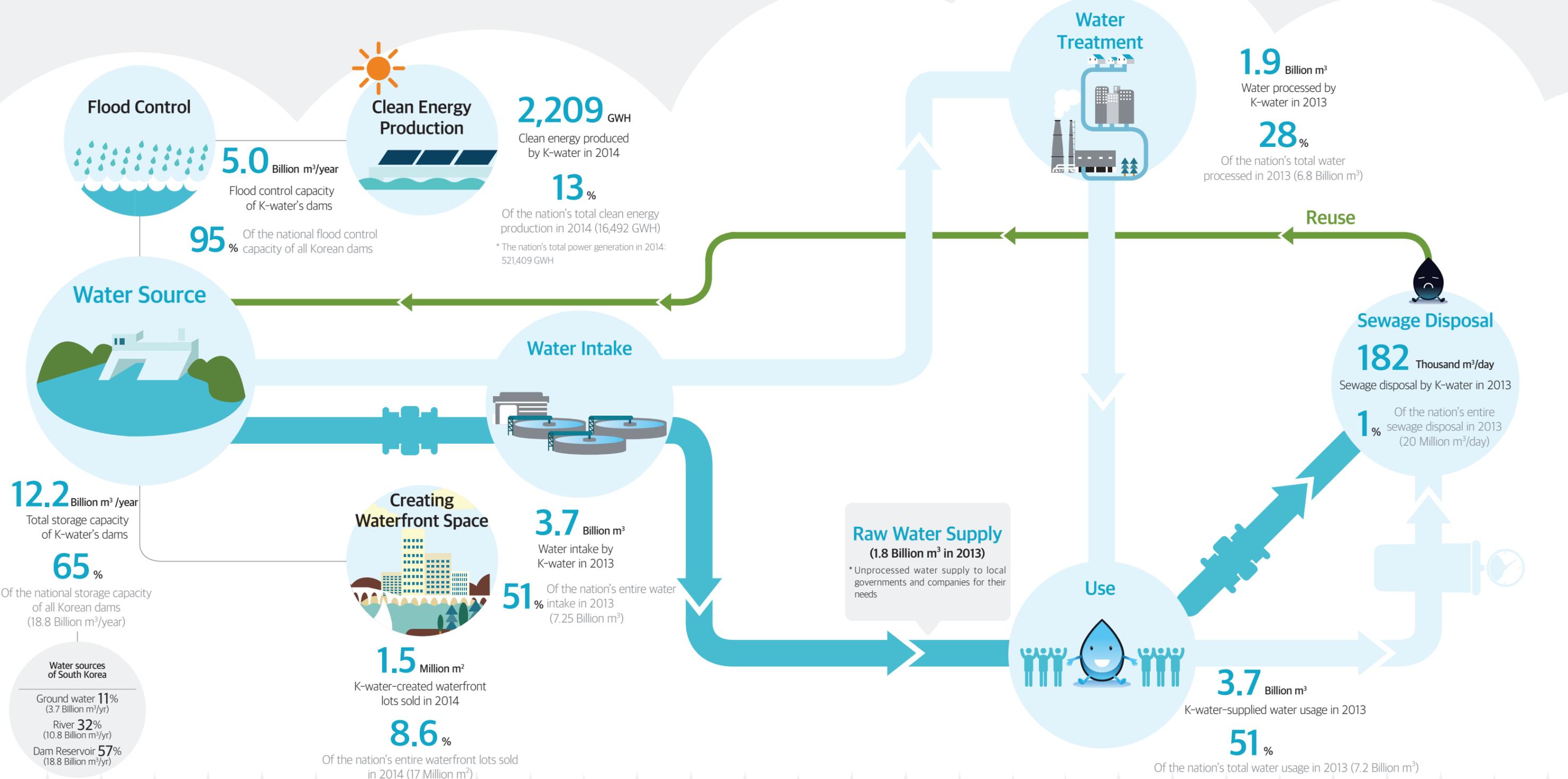
I thank you for your ongoing support and interest in K-water as we strive to become a globally renowned water supplier.

July 2015

Choi, Gye Woon   
K-water CEO

# Water Cycle Process and K-water

K-water endeavors to create a sustainable value with its service over the entire water cycle.



※ Data Source: Water Supply Statics (2013), Sewerage Statics (2013), Electric Power Statistics System (2014), National Industrial Sites Statics (2014)

# K-water, Total Water Service Provider

## Corporate Overview (as of Dec. 31, 2014)

<b>Company name</b>	Korea Water Resources Corporation, K-water	<b>Organization</b>	Head office: 4 Business Divisions and 26 Departments Onsite: 9 Divisions, 60 Regional Offices
<b>Institution Type</b>	Semi-market type state-owned enterprise	<b>Sales</b>	KRW 3.7 trillion
<b>Total Number of Employees</b>	4,308 people	<b>Credit Rating</b>	Domestic: AAA Overseas: Moody's Aa3(Stable), Fitch AA-(Stable)
<b>Total Assets</b>	KRW 25.4 trillion	<b>Subsidiaries and Affiliates</b>	<ul style="list-style-type: none"> <li>Kangsosim Susumu (Ownership 32.5%)</li> <li>Waterway Plus Co., Ltd. (Ownership 100%)</li> <li>Prunjangryang Co., Ltd. (Ownership 5.0%)</li> <li>P-Waters Co., Ltd. (Ownership 2.0%)</li> <li>Korea Construction Management Co., Ltd. (Ownership 18.9%)</li> <li>Angat Hydropower Co. (Ownership 40.0%)</li> <li>KDS Hydro Pte., Ltd. (Ownership 80.0%)</li> <li>K-water Thailand Co., Ltd. (Ownership 99.9%)</li> <li>KWPP Holdings Co. (Ownership 38.4%)</li> <li>Star Hydro Power Ltd. (Ownership 80.0%)</li> </ul>
<b>Total Liabilities</b>	KRW 13.5 trillion		
<b>Composition of Shareholders</b>	Korean Government 91.1%, The Korea Development Bank 8.8%, Local Government 0.1%		
<b>Date of Establishment</b>	November 16, 1967		
<b>Location</b>	200, Sintanjin-ro, Daedeok-gu, Daejeon, Zip Code 34350, Rep. of KOREA		

## Regional Offices and Overseas Projects



## Business Portfolio

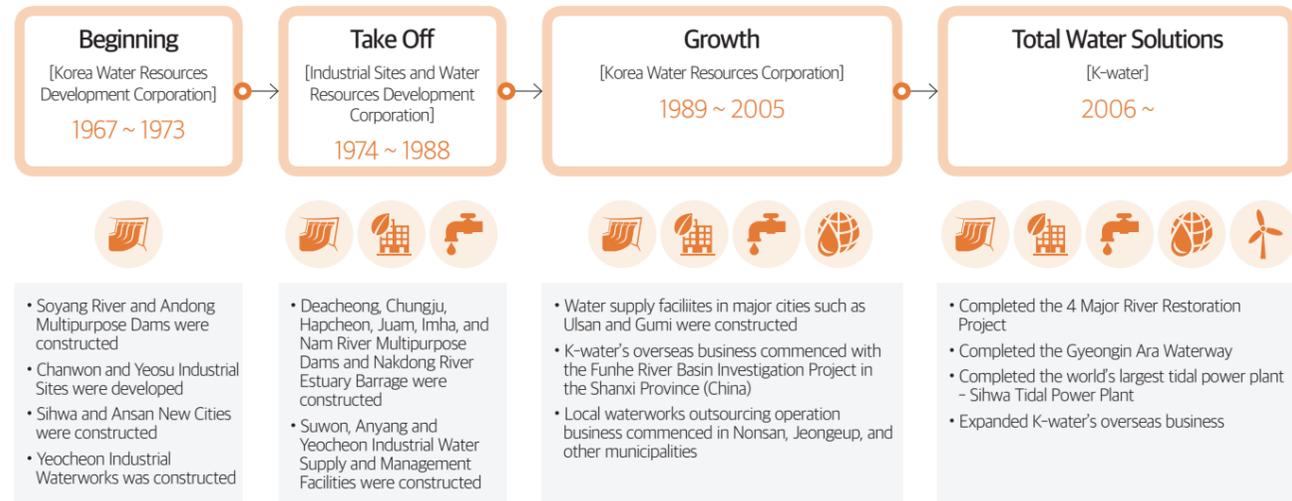
K-water is a total water service provider, who leads a new water management paradigm - Smart Water Management Initiative - in the global water industry.

<h3>Integrated Water Resource Management</h3> <ul style="list-style-type: none"> <li><b>Flood Control Capacity of K-water's Dams</b> <b>5.0 Billion m<sup>3</sup>/year</b></li> <li>- 3 new multipurpose dams are being constructed</li> <li>- 1 dam is in process of expanding its flood control capacity, while 2 dams were completed.</li> <li><b>Total Storage Capacity of K-water's Dams</b> <b>12.2 Billion m<sup>3</sup>/year</b></li> <li>- K-water manages and operates 18 multipurpose dams, 14 water supply dams, 2 flood control dams, 1 estuary bank and 16 multi-functional river weirs.</li> </ul>	<h3>Healthy Tap Water Supply Business</h3> <ul style="list-style-type: none"> <li><b>Annual sales</b> <b>KRW 1.1 Trillion</b></li> <li>- K-water operates 35 multi-regional &amp; 13 industrial waterworks with a total capacity of 17.6 million m<sup>3</sup>/day, and 22 local waterworks with a total capacity of 1.4 million m<sup>3</sup>/day.</li> <li><b>Population served by K-water</b> <b>22 Million People</b></li> <li>* K-water's annual water supply was 3.7 billion m<sup>3</sup> in 2014.</li> </ul>
<h3>Waterfront Business</h3> <ul style="list-style-type: none"> <li><b>Waterfront City constructed by K-water</b> <b>90 Million m<sup>2</sup></b></li> <li>- Sihwa MTV, Sonsan Green City, and Busan Eco-delta City are being constructed including residential areas, theme parks, industry and research facilities.</li> </ul>	<h3>Clean Energy Business</h3> <ul style="list-style-type: none"> <li><b>Clean Energy Generation Capacity</b> <b>1,340.8 MW</b></li> <li>- Energy sources: hydropower, tidal power, solar energy and others</li> <li>* K-water produced 2,209 GWh of clean energy in 2014.</li> <li>- Replacing 3.37 million Barrels of crude oil annually</li> <li><b>Floating Photovoltaic System</b> <b>1,200 MW</b></li> <li>- Researched and developed by K-water, SOLATUS is the world's first commercialized floating solar power system (500 kW).</li> <li>- Having 12 additional dams installed by 2022</li> </ul>
<h3>Overseas Business</h3> <ul style="list-style-type: none"> <li><b>Completed</b> <b>54 businesses in 23 countries</b></li> <li><b>Conducting</b> <b>26 businesses in 15 countries</b></li> </ul>	

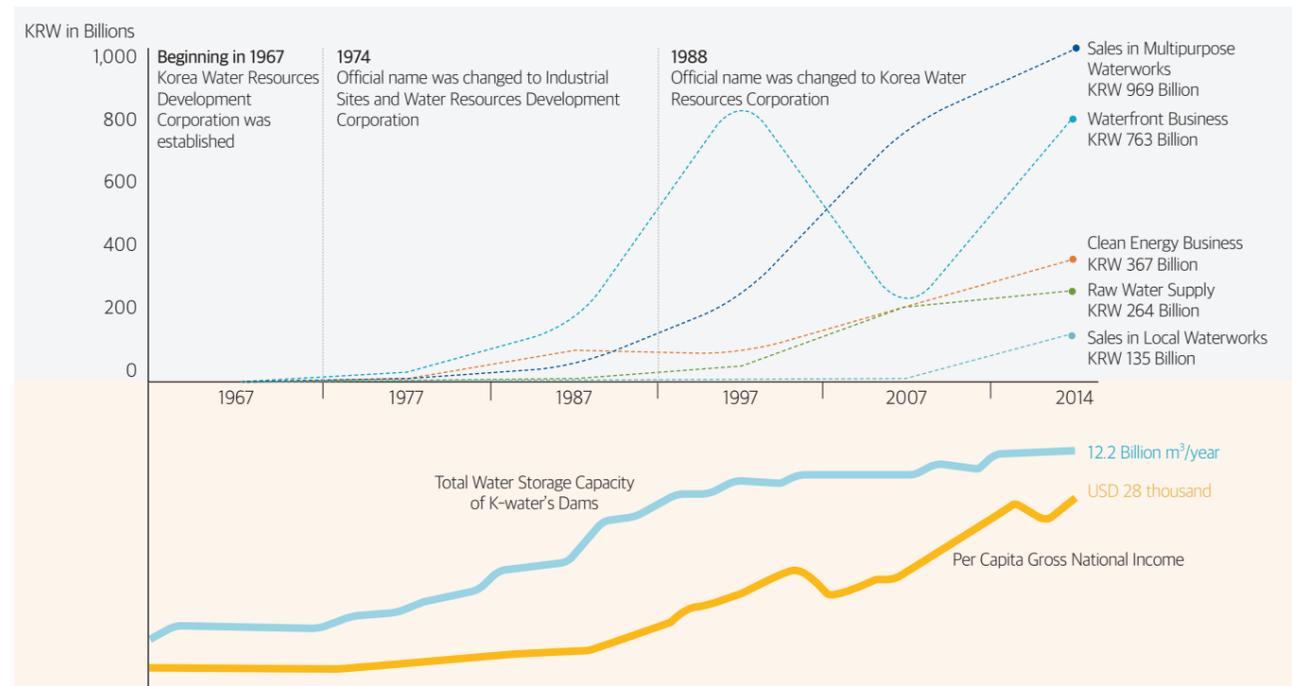
# K-water, Total Water Service Provider

## Developing hand-in-hand with Korea

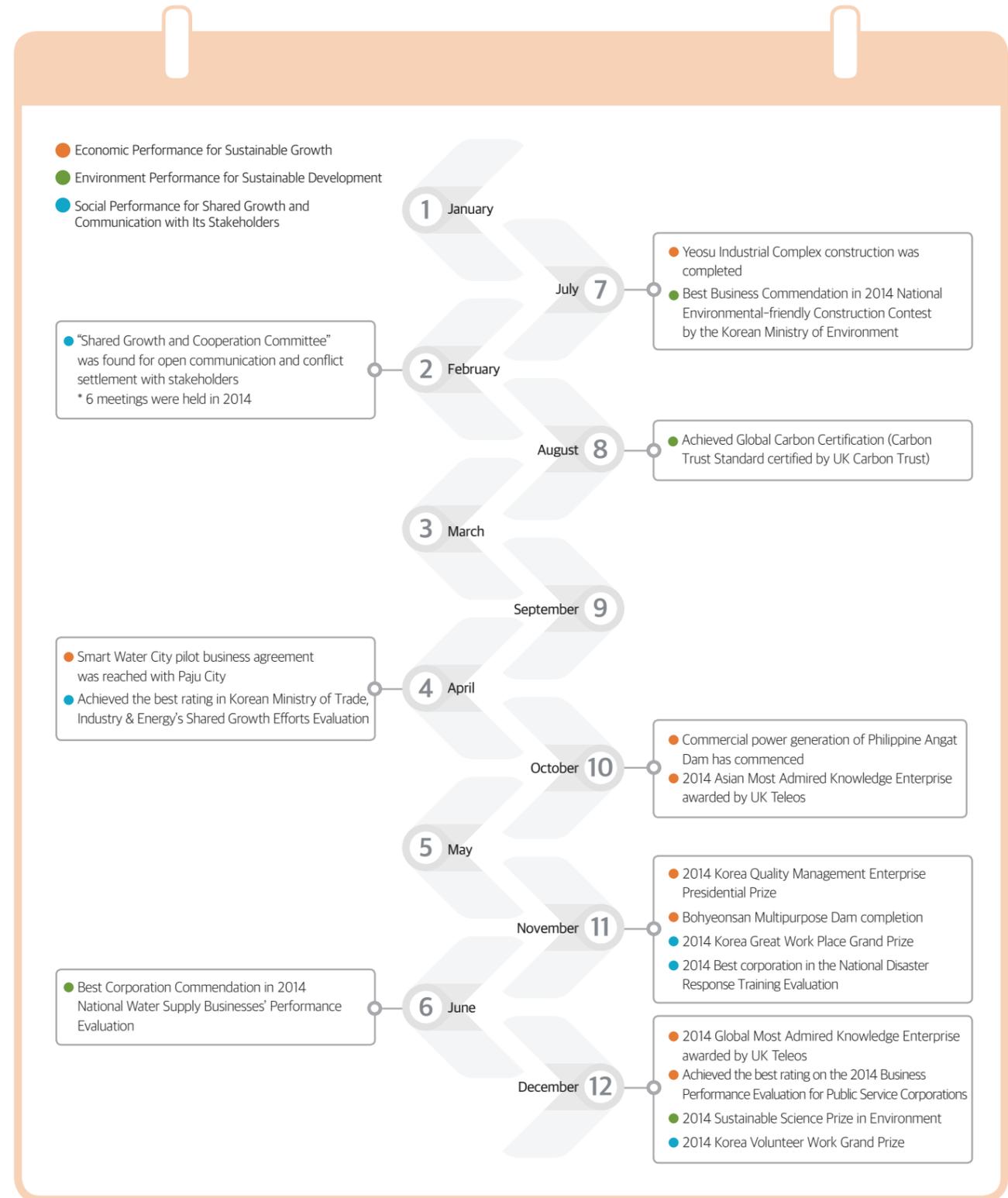
K-water has contributed to the nation's development with its growth by developing and managing the nation's water resource for the last 48 years. K-water has expanded its business territory to cover the entire water treatment process to ensure a safe, reliable and clean water supply since 1990s while the corporation relied on the sales of hydropower and industrial complex in the early stages of its establishment. As of 2014, the sales in water supply business accounts for over 50% of K-water's total sales.



## 【 National Income vs K-water's Sales Trend 】



# 2014 K-water Sustainability Highlights



# Water Business Environment

Water is no longer a resource that humankind can take for granted. Water is an asset which we must actively manage. Therefore, there is a need for futuristic “Smart Water Management” to respond water crises and to survive in a competitive market.

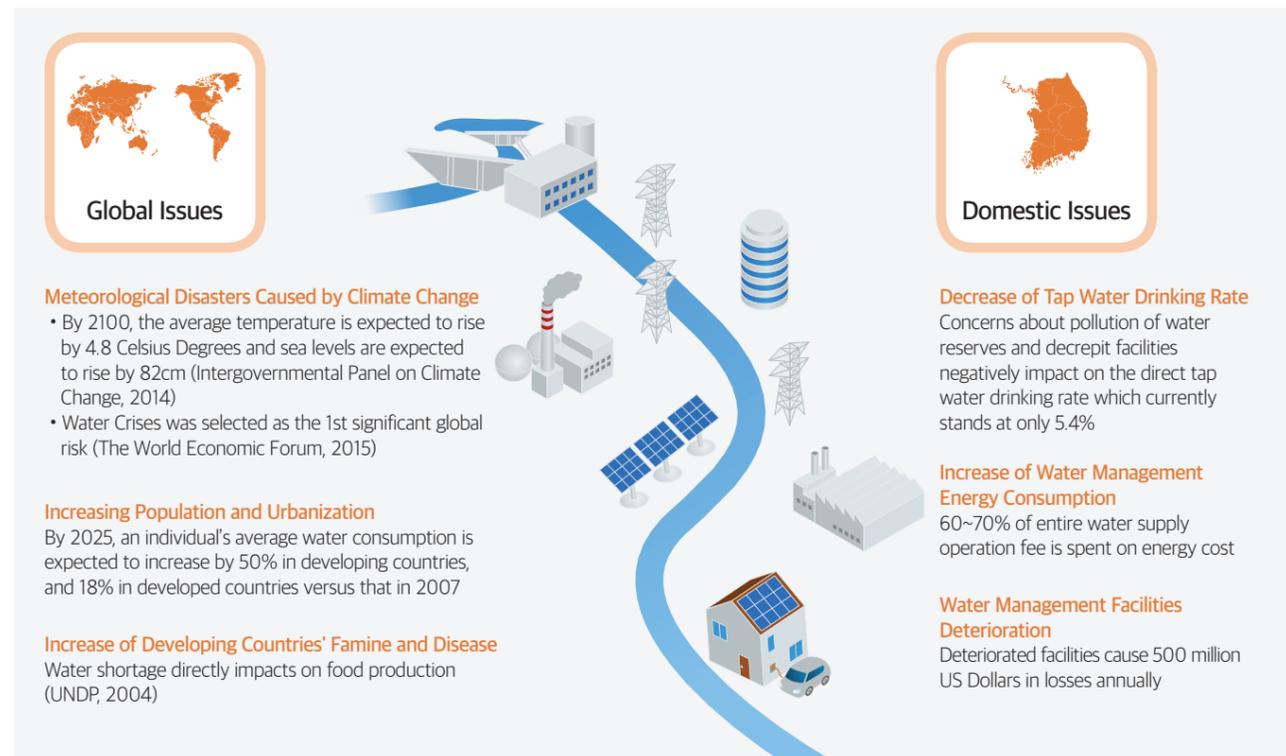
## Characteristic of the Water Industry

Water is a vital element for the survival of every organism. Therefore, the water industry is a fundamental industry for humanity’s welfare, and as such, economies of scale is required.

Also, it is important that various industries knowledge and technology are integrated throughout the entire water circulation process. In particular, water related technology has a direct impact on the environment and individuals’ health. Therefore, verified technological development is required. In addition, customer demands for the safety, taste and healthiness of tap water need to be satisfied.

Account needs to be also taken of the fact that countries and regions have differing water related laws and regulations as well as differing social and environmental aspects. Therefore, when entering an overseas market, these requirement must be met.

### 【 Major Issues in the Water Industry 】



**Global Issues**

**Meteorological Disasters Caused by Climate Change**

- By 2100, the average temperature is expected to rise by 4.8 Celsius Degrees and sea levels are expected to rise by 82cm (Intergovernmental Panel on Climate Change, 2014)
- Water Crises was selected as the 1st significant global risk (The World Economic Forum, 2015)

**Increasing Population and Urbanization**

By 2025, an individual’s average water consumption is expected to increase by 50% in developing countries, and 18% in developed countries versus that in 2007

**Increase of Developing Countries’ Famine and Disease**

Water shortage directly impacts on food production (UNDP, 2004)

**Domestic Issues**

**Decrease of Tap Water Drinking Rate**

Concerns about pollution of water reserves and decrepit facilities negatively impact on the direct tap water drinking rate which currently stands at only 5.4%

**Increase of Water Management Energy Consumption**

60~70% of entire water supply operation fee is spent on energy cost

**Water Management Facilities Deterioration**

Deteriorated facilities cause 500 million US Dollars in losses annually

## Water Crises

Global warming and environmental pollution cause water shortages. Globally, water shortages are worsening, yet the demand for water is increasing due to the acceleration of urbanization. And while water demand is increasing, access and mobility to water resource is becoming more challenging. Therefore, there is a need for proactive approaches to overcome water crises.

- According to IPCC’s 2014 report, the average temperature of the planet by the end of the 21st century (2081~2100) will be up to 4.8 Celsius Degrees higher and sea levels will be up to 82cm higher compared with the period from 1986~2005.
- The World Economic Forum selected water crises as the most significant risk which can cause negative impact on the global society in its 10th Global Risk Report.

Within these global water crises, Korea has its own risk factors. Seasonal and regional rainfall changes can be dramatic, so water usage and management is challenging. Meanwhile, the deterioration of facilities causes a worsening distrust in regards to tap water. As a result, the tap water drinking rate is only 5.4%.

## Business Opportunities in Water Industry

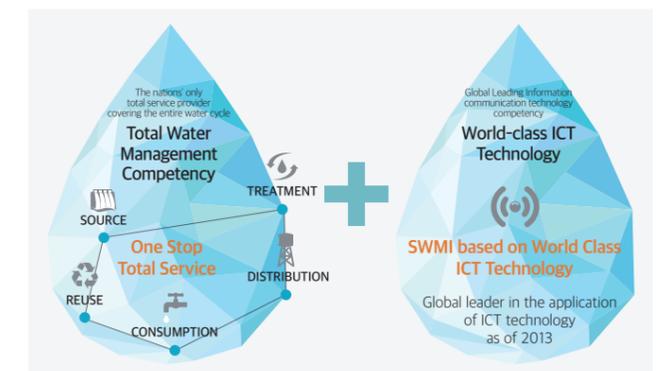
Acceleration of urbanization and climate change may be seen as challenges, but K-water also sees them as presenting business opportunities in the water industry. The OECD predicts that by 2025, the global water market will grow to be a KRW 1 quadrillion market. Due to the advancement of ICT (Information and Communication Technology), smart technology is proliferating in the water industry. In other words, the water industry is changing into an added value creation industry through a combination of existing water industry technology and advanced ICT. In addition, developed countries are leading the Integrated Water Resources Management (IWRM) which manages and utilizes water resource of the entire water cycle from an integrated perspective, covering the water storage, flood control, and ecological in-stream flow. Along with this paradigm change, there is a growing need for efficient water management from an integrated perspective, applying ICT.

- UN Water’s research results showed that by 2012, 68% of countries in the world had adopted IWRM.

## Smart Water Management Initiative (SWMI) led by K-water

K-water is well prepared to respond to the challenges in water management and expand its business in the global water market. K-water provides total services which cover the whole water cycle process and has the most advanced ICT. K-water’s new water management paradigm is based on a combination of K-water’s 48 years of experience in water management and the application of the world’s most advanced ICT. K-water is developing a smart water grid-based water management paradigm which will allow customers to access water quality information in real time.

### 【K-water’s Smart Water Management Initiative】





*Pure*

**Just as Nature Intended**

K-water delivers the value of nature in the form of clean drinking water, containing balanced minerals that are good for health

**CREATING SUSTAINABLE VALUE**

**K-water's Sustainable Management**

- 16\_ Vision and Strategy
- 19\_ Governance and Responsible Management
- 20\_ Risk Management
- 22\_ Sustainable Management with Stakeholders
- 24\_ Sustainable Management Issues Identified by Stakeholders
- 26\_ In Depth Analysis of Sustainable Management Issues Identified by Stakeholders

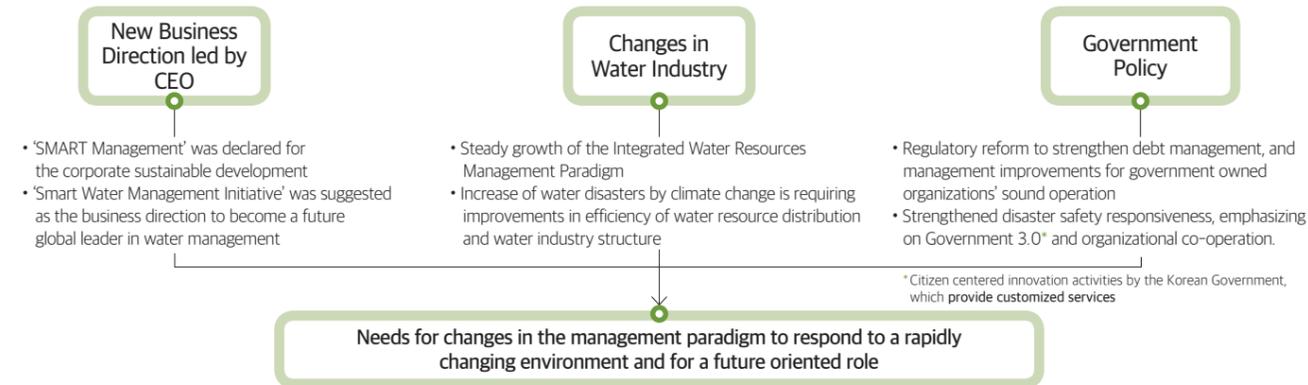
# Vision and Strategy

K-water places utmost effort on creating sustainable values to pursue a balance of environmental integrity and social responsibility based on economic efficiency.

## Declaration of 'SMART Management' to Become a Leading Global Water Supplier

K-water has newly launched 'SMART Management System' since 2014. This SMART Management System is for K-water to lead a new paradigm, 'Smart Water Management Initiative', by creating a holistic perspective of water management, and also to play a future oriented role to respond to the global water market's sustainable growth. K-water established challenging and yet achievable goals to strengthen its role with its SMART Management System.

### 【 Needs for Changes in the Management Paradigm 】



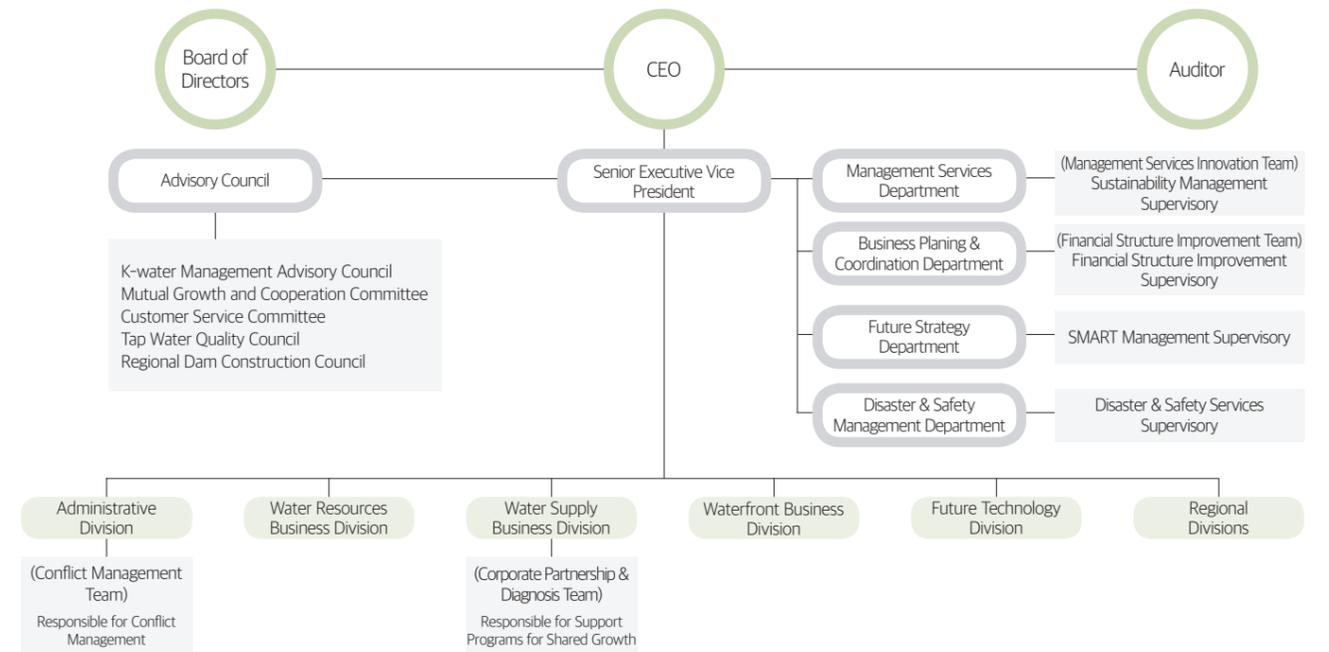
### 【 K-water's Strategy for Sustainable Management 】

<b>Purpose of Establishment</b>	• Total water resources development and management   Water supply   Water quality improvement	➤ <b>Improving Public Welfare</b>
<b>Mission</b>	• We Make a Happier World with Water	
<b>Vision</b>	• The World-class Total Water Service Provider	
<b>Management Policies</b>	<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid green; border-radius: 15px; padding: 10px; width: 30%;"> <p style="text-align: center; background-color: #e0f0e0; border-radius: 50%; padding: 5px;"><b>Leading Future Water Management</b></p> <ul style="list-style-type: none"> <li>• Sales KRW 6.4 trillion</li> <li>• Accumulated Value of Overseas Orders USD 11.5 billion</li> </ul> <p>• Core business performance indicators, which show advanced competencies to become a global leading company</p> </div> <div style="border: 1px solid green; border-radius: 15px; padding: 10px; width: 30%;"> <p style="text-align: center; background-color: #e0f0e0; border-radius: 50%; padding: 5px;"><b>Smart Welfare</b></p> <ul style="list-style-type: none"> <li>• Tap Water Drinking Rate 30%</li> </ul> <p>• Result indicator for public trust and satisfaction on tap water quality, which shows K-water's strong willingness to improve of tap water quality</p> </div> <div style="border: 1px solid green; border-radius: 15px; padding: 10px; width: 30%;"> <p style="text-align: center; background-color: #e0f0e0; border-radius: 50%; padding: 5px;"><b>Customer Satisfaction Management</b></p> <ul style="list-style-type: none"> <li>• Debt Ratio 93%</li> <li>• Public-service Customer Satisfaction Index 98.3 points</li> </ul> <p>• Indicators for the corporate financial soundness</p> <p>• Indicators to measure customer related performance objectively, which are comparable with other state owned companies</p> </div> </div>	
<b>Strategic Goal</b>	<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid green; border-radius: 15px; padding: 10px; width: 30%;"> <ul style="list-style-type: none"> <li>• Dam Water Supply, Accumulated Value of Oversea Orders and others (in total, 8 indicators)</li> </ul> </div> <div style="border: 1px solid green; border-radius: 15px; padding: 10px; width: 30%;"> <ul style="list-style-type: none"> <li>• Global Water Quality Standard Achievement Rate, Replacement of Aging Pipelines, and others (7 indicators)</li> </ul> </div> <div style="border: 1px solid green; border-radius: 15px; padding: 10px; width: 30%;"> <ul style="list-style-type: none"> <li>• Sales Increase Rate, Profit Rate, Social Contribution Activity Index, Level of Corporate Integrity, and others (8 indicators)</li> </ul> </div> </div>	
<b>Reasons</b>		
<b>Key Performance Indicators (23 Indicators)</b>		

## Sustainable Management System

K-water's Management Services Department, under the Office of the Senior Executive Vice President, is in charge of K-water's sustainable management, and has been publishing a sustainability report annually to provide reliable information to its stakeholders since 2005. The head office and each regional office undertake business activities with economic, social and environmental perspectives in an organic manner and strengthen major competencies with consideration of business changes. In 2014, K-water established the Disaster & Safety Management Department under the Office of the Senior Executive Vice President in order to strengthen disaster and safety management. Also, the Organizational Culture Improvement Task Force was founded under the Management Services Department to conduct various organizational culture improvement activities. Along with these internal departments, K-water operates advisory committees and councils to take into account stakeholders' various opinions.

### 【 Sustainable Management Organization 】



### 【 Sustainable Management and Related New Organization 】



# Vision and Strategy

## Key Performance Indicators

To measure and improve sustainable management performance and efficiency, 23 key performance indicators have been established. With its efforts for management improvements, K-water's sustainable management received public acknowledgement of excellence in the Korea Business Index - Sustainability Management Evaluation, for four consecutive years.

### 【 K-water Mid-long Term Sustainable Management Key Performance Indicators 】

☹ Unsatisfactory ☺ Good

Strategic Direction	Key Performance Indicator(KPI)	2013		2014		Result
		Performed	Goal	Performed	Goal	
Global Water Management Leader	• Dam Water Supply (100 million m <sup>3</sup> ) <small>* Only domestic and industrial water supply by K-water's dams is measured, while the total water supply by K-water's dams is 12.2 billion m<sup>3</sup></small>	55.0	55.7	55.2		☹
	• Flood Control Capacity (100 million m <sup>3</sup> )	49.3	49.5	49.5		☺
	• Industrial Water Sales (KRW in billions)	19.8	24.3	24.9		☺
	• Waterfront Lots Sales (KRW in billions, accumulated)	562.3	991.5	1,040.7		☺
	• Clean Energy Supply (GWh)	3,040	2,854	2,209		☹
	• Accumulated Value of Oversea Orders (USD in billions)	0.99	5.80	1.01		☹
	• Talent Fostering Rate (%)	40.5	40.0	41.3		☺
Water Welfare Services with National Safety	• 'Star Brand Technology' (key technology) Project (including ongoing and completed projects)	4	4	4		☺
	• Water Supply (million m <sup>3</sup> ) <small>* Raw and treated water supplied by K-water</small>	3,709	3,772	3,722		☹
	• Global Water Quality Standard Achievement Rate (%)	99.99	99.62	99.73		☺
	• Replacement of Aging Pipelines (km)	32.7	27.6	27.6		☺
	• Flowrate in Pipelines of Local Waterworks (%)	81.4	80.0	82.1		☺
	• Level of Risk Management (point)	93.5	95.1	95.2		☺
	• Rate of Accident Prevention Efforts (%)	0.52	0.46	0.69		☹
Public Company Which Empathizes with Customers and Provides Complete Transparency	• Level of Corporate Integrity (grade)	Unsatisfactory	Outstanding	Outstanding		☺
	• Debt Ratio (%)	120.6	121.6 points below	112.4		☺
	• Sales Increase Rate (%) <small>* Excluding the profit of privately financed construction business</small>	37.9	6.7	16.6		☺
	• Profit Rate (%) <small>* Excluding the profit of privately financed construction business</small>	16.7	12.5	11.8		☹
	• Trust Management Index (point)	66	69	56		☹
	• Environmental Performance Evaluation Index (point)	151	150 points above	153		☺
	• Social Contribution Activity Index (point)	89.6	90 points above	92.2		☺
• Public-service Customer Satisfaction Index (point)	97.2	90 points above	96.2		☺	
• Level of Creativity and Innovation (%)	81.0	91.8	91.8		☺	

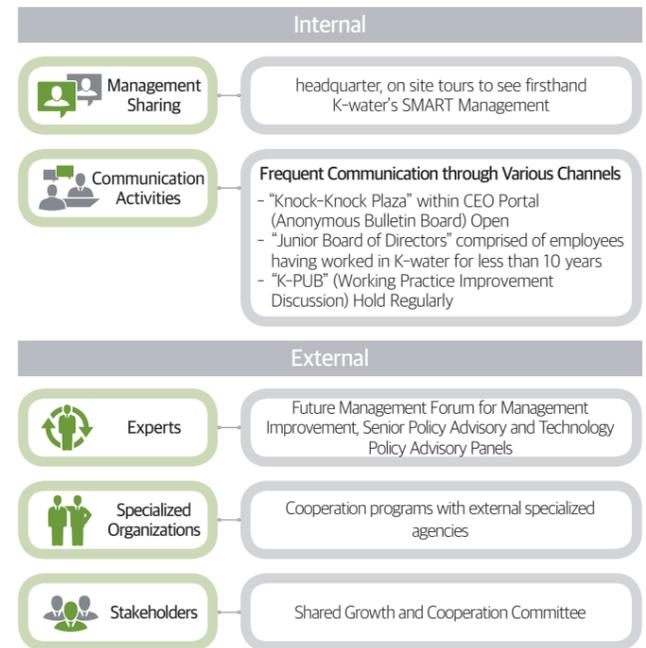
# Governance and Responsible Management

## Composition of Shareholders

The Korea Water Resources Corporation Act limits K-water's investors to the national government, local governments, and the Korea Development Bank (KDB). The law also states that "the national government must invest more than 50% of the total capital." As of 2013, K-water's shareholders are comprised of the national government (91.3%), KDB (8.6%), and local governments (0.1%).

## Responsible Leadership through Internal and External Open Dialog

K-water proposed the new SMART management direction for establishing K-water's future role to become a leading global water supplier. K-water is establishing mutual understanding of the new SMART management direction through internal and external communication.



## Role and Composition of Board of Directors

K-water's Board of Directors (BOD), its highest decision-making body, deliberates and passes resolutions on K-water's major issues

for its management goals by taking into account economic, social, and environmental issues. The BOD also checks and supports the executives concurrently. K-water's Board of Directors is comprised of 15 directors: 7 executive directors and 8 non-executive directors. Various specialists are appointed as non-executive directors to improve various areas of management. More than half the members of the Board, Executive Recommendation Committee, and the Audit Committee are outside directors to ensure independence and the role of checks and balances.

## Board of Directors' Remuneration Policy

The executive directors receive performance-based payments according to the results of government evaluations, which consider quantified and non-quantified outcomes and implementation efforts. Based on this remuneration policy, K-water's CEO was paid about KRW 176 million in 2014, two and a half times of the average employee compensation rate. The auditor was paid KRW 142 million and the executive directors were paid an average of KRW 148 million each. Non-executive directors were paid based on their attendance rates with payment ceilings of KRW 30 million each.

### 【 Board of Directors Status 】

(as of July 2015)

Position	Name	Title
Executive Director	Choi, Gye Woon	President
	Choi, Ho Sang	General Auditor
	Lee, Hak Su	Senior Executive Vice President
	Han, Kyu Beom	Vice President of Administrative Division
	Choi, Byeong Seub	Vice President of Water Resources Business Division
	Kim, Jae Bok	Vice President of Water Supply Business Division
	Seo, Eul Seong	Vice President of Water and Human Settlement Division
	Kim, Kab Sung	Chairman/ Professor, Department of Urban Engineering, Yonsei University
	Kim, Won Tae	Professor, Graduate School of Public Policy, Hanyang University
	Park, Seung Ki	CEO, Hyundai SNC Co., Ltd.
Non-Executive Directors	Lee, Won Suk	Committee Member, the Federation of Happy Smart Exercises
	Kim, Keun Sik	Former Chief Director, Kyeongin Regional Center of CBS Broadcast Group
	Choi, Yun Ho	Formal Secretary, Reserve Officer's Training Corps. Political Affairs Forum
	Cho, Young Jae	CEO, Daejin E & D Co., Ltd.
	Park, Woo ho	CEO, Seyoung Accounting Corporation

# Risk Management

## K-water Risk Management System

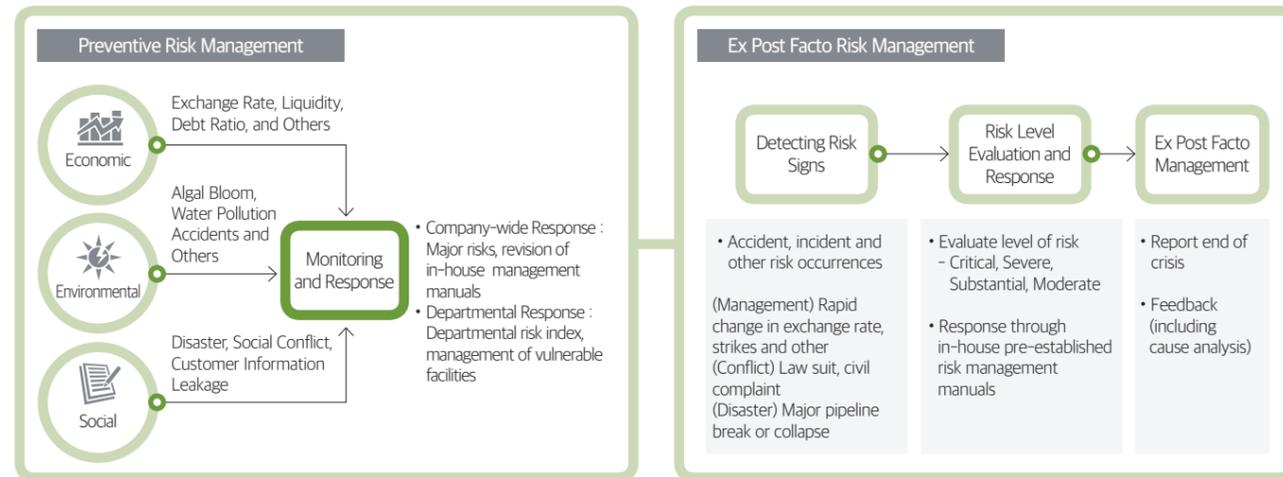
Risk refers to a broad concept of the risk and dangers that have a possibility of becoming reality. K-water's risk management can be divided into two major activities; preventive activities and risk response activities.

K-water defines economic, environmental, and social risk factors. K-water has multi-layered prevention systems to prevent risks from occurring. K-water's Risk Based Internal Audit manages and mitigates audit risks in advance by investigating audit cases, while the Divisional Accounting System and the Financial Risk Management System monitor financial risks.

Also, if risk signs are detected during monitoring, risk levels are evaluated based on an in-house policy (the Risk Management Policy) to enable company-wide action to be taken in accordance with the relevant pre-established manuals. Risks are divided into types and levels and then distributed to the governing departments and onsite departments so each can establish its emergency response office to take necessary action. If there is need for a company-wide response, the Chief Risk Officer calls the Risk Management Committee to oversee the risk. Also, when a state of crisis has ended, a follow-up management process including a root cause analysis is conducted.



\* ERM: Enterprise Risk Management  
 \*\* KRM: K-water Risk Management  
 \*\*\* BCM: Business Continuity Management



## Advancement of the Risk Management System

To reflect Korean government policy that highlights public safety, K-water has measured "Level of Risk Management" as one of its Key Performance Index for the SMART Management System since 2012, and in 2014, established newly a supervisory department for its risk management ("Disaster & Safety Management Department"). Due to its efforts, economic, environmental, and social risk factors were identified and necessary measurements were put in place to prevent any risk occurrences.

## K-water's 2014 Risk Management Key Performance

Corporate level of risk management was scored **95.2** points above the goal (95.1 points) in 2014  
\* It has been continuously improved since 2012 when it was invented as KPI



### Economical

- \* Risk Exchange rate, interest rate, liquidity, debt ratio, etc.
- \* Response Established in-house manuals to respond to financial liquidity
- \* Result Reduction in debt ratio & Global credit rating improved  
 Moody's credit rating improved: **A1(2013) → Aa3(2014)**



### Environmental

- \* Risk Algal blooms, water pollution accidents in upstream regions, etc.
- \* Response Commenced daily water quality forecast (Feb. 2015 ~) and algal bloom forecast web services (Mar. 2015 ~) for major dam reservoirs and rivers to take timely preventative measures for water quality
- \* Result **Reduced annual average algae content in water** (annual average chlorophyll-a concentration in water) at K-water's dam reservoirs continuously since 2011



### Social

- \* Risk Disaster (wind, flood, drought), social conflicts, customer information leakage
- \* Response Established the Disaster & Safety Management Department which is in charge of the corporate risk management  
 • Conduct regularly company-wide training (May, October), and government joint training (May, June) to improve on-site response  
 • Scientific prediction-based **integrated operation** of dam and river weirs for prevention of disasters  
 • Introduced LED electronic display and text message service to promote safety awareness for the first time as the country's public company
- \* Result **Flood damaged area** around 4 Major Rivers (Han, Nakdong, Keum, and Seomjin River) was **ZERO** in 2014

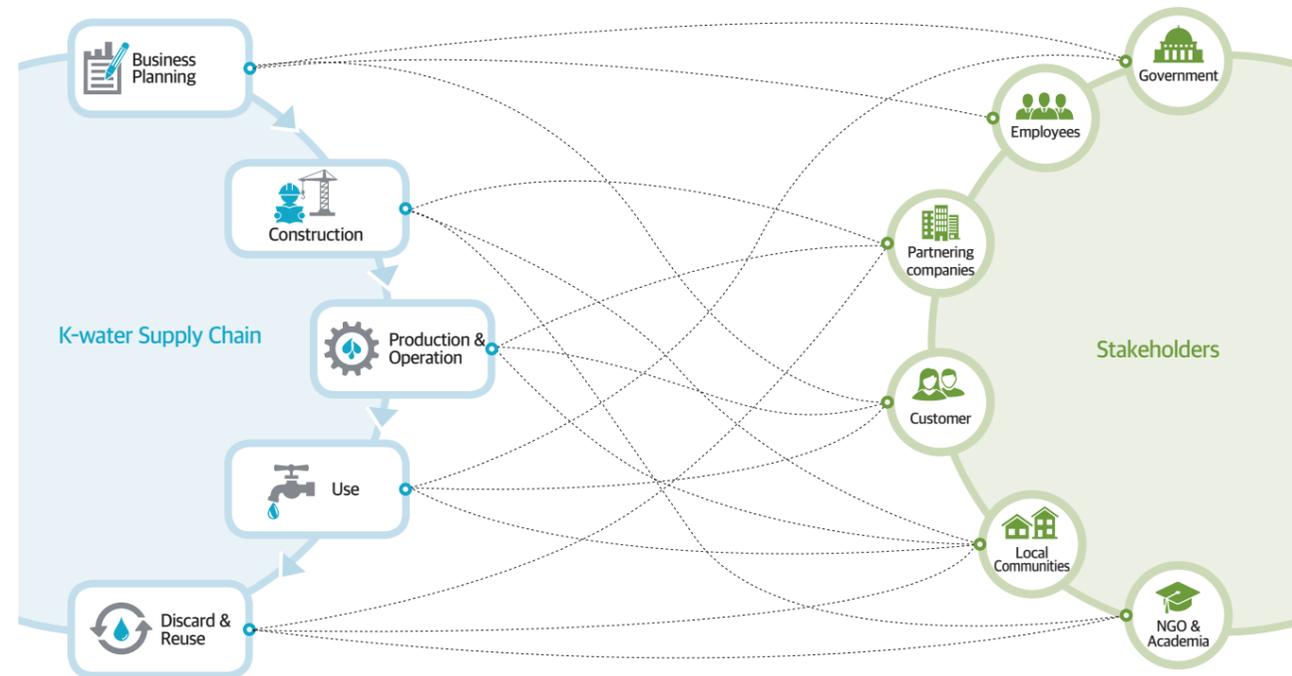
# Sustainable Management with Stakeholders

## K-water's Stakeholders

K-water's stakeholders include customers that directly receive services from K-water, the Korean government that is a major shareholder of K-water, local communities which affect and are affected indirectly by K-water's businesses, NGO & Academia which influence K-water's businesses, partnering companies involved in K-water's business processes, and its employees.

Due to the nature of public business, various stakeholders exist during the business process of K-water, and therefore, conflicts are unavoidable. K-water endeavors to identify stakeholder groups which affect and are affected at each stage of its supply chain and to understand stakeholders' needs in the corporate supply chain context. With this, K-water is strengthening its open communication and cooperation with stakeholders to meet their needs and prevent any conflicts for efficient business implementation. K-water hopes to positively impact the economy, the environment and society by establishing a cooperative partnership with its stakeholders.

### 【 K-water's Major Stakeholders 】



※ A dotted line connects each stage of K-water's supply chain with a stakeholder group that affects and is affected most significantly at the stage of the supply chain

<b>Government</b>	• K-water business related policy maker, Shareholder, etc.	<b>Customer</b>	• (Domestic) Local government (supplied tap water from the multi-regional and local waterworks that K-water operates), tap water users, Korea Electronic Power Corp., Waterfront lots buyers • (Overseas) Local governments, Residents, Multi-lateral Development Banks
<b>Employees</b>	• Domestic and internal top-management, Employee, Labor union, etc.	<b>Local Communities</b>	• Local residents in business areas, etc.
<b>Partnering Companies</b>	• Raw material supplier, Equipment, Maintenance, and Construction company, etc.	<b>NGO &amp; Academia</b>	• Academic society and association, Non Profit Organizations (NGO), etc.

## Strengthening Open Communication and Cooperation with its Stakeholders

The water management paradigm has changed to emphasize on public-private partnerships and management, while it was government-led and development-centered. In particular, local meetings have been introduced so that K-water can communicate with its stakeholders when constructing dams in local communities, from the planning through to the post construction phase.

K-water proactively communicates with its various stakeholders in response to and in order to lead these paradigm changes. K-water's stakeholders could involve directly and indirectly in its business processes through various communication channels.

### 【 2014 Shared Growth and Cooperation Committee Meetings and Performance 】

Unit	Discussion Topic
First (February)	Need for changes in K-water business after national policy projects' completion
Second (April)	New direction for Korea's water management policy
Third (May)	Improvement in dam business process
Fourth (July)	Water supply operation efficiency
Fifth (September)	Reformation of Korea's water policy
Sixth (November)	Seomjin River water supply operation plan

- A proposal of recommendation on improved process of dam business for government was drawn
- A technology meeting for the Chungju Dam Flood Control Capacity Enhancement Project was held

**Enhanced Corporate Capacity for Conflict Prevention and Mediation**

In particular, in 2014 K-water introduced the "Shared Growth and Cooperation Committee" to collect various stakeholder's opinions and constructive criticisms. During the Shared Growth and Cooperation Committee's general meeting, environmental-friendly alternatives for K-water's businesses were suggested through discussion. In particular, customer oriented improvements in dam business process were suggested through 2014 meetings.

### 【 K-water's Stakeholder Communication Channels 】



## Key Performances through Partnership with Various Stakeholders

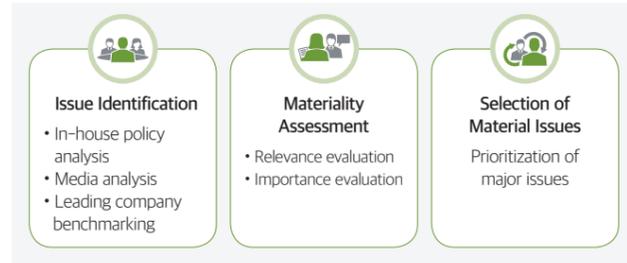
### Selected as 2014 Best Practice for Shared Growth by the Korean Government

K-water places utmost efforts to increase the value of our water resource by including various stakeholders in its governance. In particular, in order to respond to increasing public demands for waterfront leisure space, K-water has been supporting waterfront tourism, culture and leisure activities in conjunction with various stakeholders including Ansan city and 11 other local governments, as well as public companies, private companies and the local arts and culture organizations. This cooperation has resulted in creating the value of waterfront space and advancing the local economy along with other positive impacts.

# Sustainable Management Issues Identified by Stakeholders

## Materiality Test Process

K-water selected material issues on its sustainable management based on the interests of internal and external stakeholders, and made efforts to answer fully to stakeholders' interested issues in this report. The material issues were selected during a three step materiality test process which included issue identification, materiality assessment, and material issues selection.



## [Step 1] Issue Identification

24 external environment trends issues and 38 operation impact issues were identified with consideration of the mid-long term business strategy, business process innovation study, global competitiveness analysis report, media analysis, competitors and global water suppliers' issues which related to K-water's sustainable management.



\* External Environment Trends: External economical, social, and environmental changes which affect K-water's management  
 \*\* Operation Impacts: Economic, social and environmental changes which are effected by K-water's management

## [Step 2] Materiality Assessment

62 issues were assessed based on their relevance and importance using the ISO 26000 Sustainable Management Guidelines and the Global Report Initiative guidelines (G4). K-water then analyzed the interests of its stakeholders and its own performance through an internal and external stakeholder survey. K-water then prioritized the identified issues to show the interests of its stakeholders against K-water's lower performance on the issues (i.e. the gap between the interests of its stakeholders and K-water's performance).

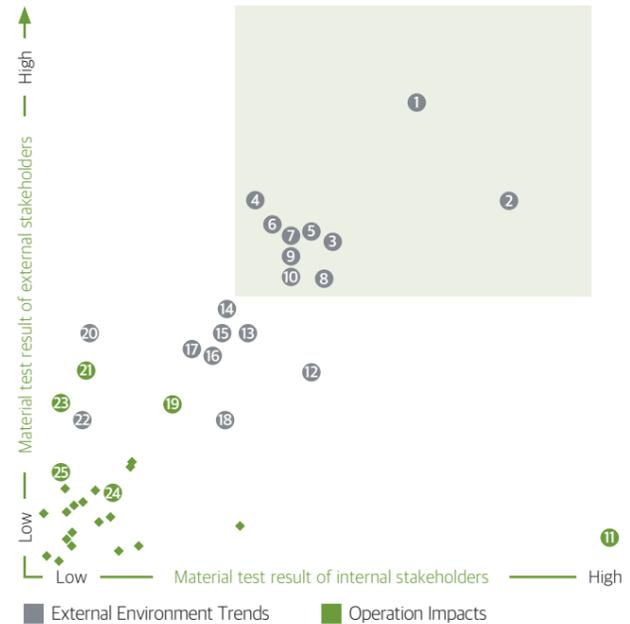
In this report, K-water identified material issues that its stakeholders are interested in each stage of K-water's supply chain (which was elaborated in both the chapters of "Sustainable Management with Stakeholders" on pages 22~23 and "In Depth Analysis of Sustainable Management Issues Identified by Stakeholders" on pages 26~27). K-water then attempted to understand its stakeholder's demands in the context of its supply chain and to reply to them through the chapter of "K-water's 4 Core Sustainability Issues" on pages 30~66 of this report.

## [Step 3] Selection of Material Issues

The material test result was displayed in the materiality test diagram on page 25. The horizontal axis of the diagram displays the materiality test result of internal stakeholders, while its vertical axis shows the materiality test result of external stakeholders. K-water selected the 10 most important issues, considering both the internal and external stakeholders' interests\*, and provided a detailed report on those material issues.

\* K-water selected 10 issues which located above the data point (0.50 which stands for a gap between internal stakeholders' interest and K-water's performance, 0.70 which stands for a gap between external stakeholders' interest and K-water's performance) in order to reflect the internal and external stakeholders' interests in balance

## [ Materiality Test Diagram ]



## [ Issues ]

1	Increased demand for more transparent and ethical management
2	Importance of securing talent and managing human resources
3	Increased interests in corporate social responsibility
4	Natural resource depletion (water, fossil fuel, etc.)
5	Increased demand for fair trading
6	Environment protection (air, water, soil, etc.)
7	Climate change
8	Accelerated technology development (water management improvement)
9	Intensified business competition (technology development, patents, overseas business expansion, etc.)
10	Ensuring the safety of products and services (e.g. water quality)
11	Increased demand for employees welfare (a balance of work and life)
12	Demographic changes (aging, low birth rate, etc.)
13	Strengthened environmental laws and regulations
14	Increase of health, eco-friendly, and eco-social oriented customers
15	Increase in variety and intensity of customer demand
16	Increase in unemployment rate of young generation and temporary workers
17	Increase in demand for fair competition
18	Corporate social responsibility in the supply chain (environment protection, safety, labor practices, human rights, etc.)
19	Anti-corruption
20	Increase in the importance of shared growth with partnering companies
21	Water usage
22	Increased demand for customer information security
23	Energy usage reduction and new and renewable energy production
24	Economic performance (economic value creation and distribution)
25	Indirect economic effects through water resource development and supply

■ K-water's material issues selected

## K-water's 4 Core Issues for Sustainable Management

K-water selected 10 top issues in which K-water did not meet the interests of stakeholders. These issues were then redefined as its "4 Core Issues" and K-water provided a detailed report on the matters that both its internal and external stakeholders deemed to be the 10 most important issues.

Material Issues	K-water's Response	GRI G4		Aspect Boundary	
		Category	Aspect	Internal	External
<ul style="list-style-type: none"> <li>Accelerated technology development (water management improvement)</li> <li>Ensuring the safety of products and services (e.g. water quality)</li> </ul>	<b>Core Issue 1</b> Water Management's New Paradigm, Smart Water Management (pages 30~39)	Society	Customer safety and health	Domestic, Overseas	Customers
		Society	Product and service labeling	Domestic, Overseas	Customers
<ul style="list-style-type: none"> <li>Intensified business competition (technology development, patents, overseas business expansion, etc.)</li> </ul>	<b>Core Issue 2</b> Strategic Plan to Achieve 100 Years of Sustainable Growth (pages 40~46)	Economy	Economic performance	Domestic, Overseas	Government (shareholder)
		Economy	Indirect economic impacts	Domestic	Government, Local communities
<ul style="list-style-type: none"> <li>Natural resource depletion (water, fossil fuel, etc.)</li> <li>Environment protection (air, water, soil, etc.)</li> <li>Climate change</li> </ul>	<b>Core Issue 3</b> Responding to Climate Change and Ensuring Environmental Protection (pages 47~53)	Environment	Energy	Domestic	Local communities, NGO-Academia
		Environment	Water	Domestic	Local communities, NGO-Academia
		Environment	Emissions	Domestic	Local communities, NGO-Academia
		Environment	Wastes	Domestic	Local communities, NGO-Academia
<ul style="list-style-type: none"> <li>Increased demand for fair trading</li> <li>Increased demand for more transparent and ethical management</li> <li>Importance of securing talents and managing human resources</li> <li>Increased interests in corporate social responsibility</li> </ul>	<b>Core Issue 4</b> Transparency and Fairness Based on Improved Stakeholders' Trust (pages 54~66)	Economy	Procurement practices	Domestic, Overseas	Partnering companies, Local communities
		Society	Employment	Domestic, Overseas	-
		Society	Occupational health and safety	Domestic, Overseas	-
		Society	Education and training	Domestic, Overseas	-
		Society	Diversity & Equal Opportunity	Domestic, Overseas	-
		Society	Equal remuneration	Domestic, Overseas	-
		Society	Anti-corruption	Domestic, Overseas	Government, Partnering companies, Customers, NGO - Academia

# SPECIAL ISSUE In Depth Analysis of Sustainable Management Issues Identified by Stakeholders

## Changes in the interests of stakeholders (2011~15)

The interests of stakeholders has changed in terms of K-water's sustainable management issues over the past five years and these are explained below.

1

**Heightened expectation towards business transparency (ethical management) and shared growth (fair trading and cooperation)**

A recent materiality test result highly ranked social issues such as business transparency and shared growth, while environmental issues were highly ranked during 2011~13. It suggests stakeholders' concerns towards lax management or moral hazard which might occur during the course of large scale national policy projects (e.g. 4 Major River Restoration Project). Stakeholders also showed an increased expectation for K-water's efforts to ensure shared growth.

2

**Increased concerns towards resources depletion and health & safety issues**

Due to the development of dams and rivers, the interests of stakeholders and their concerns around environmental impact and water quality have increased. However, as the development was finalized, the concerns have shifted towards health and safety. In addition, the interest of stakeholders has placed the corporation's fundamental environment management focus on improving energy and resource efficiency so as to respond to climate change.

3

**Concerns and interests towards K-water's preparation for future growth**

Stakeholders' concerns and interests have shifted from business plans and improvement of the management system to future growth as seen from the following selected issues: intensified competition, tapping into new markets and new business, technology development, innovation and R&D, and financial soundness. It suggests that stakeholders are concerned and interested in K-water's preparation for future growth in an intensified competitive market.

■ Economy ■ Environment ■ Society

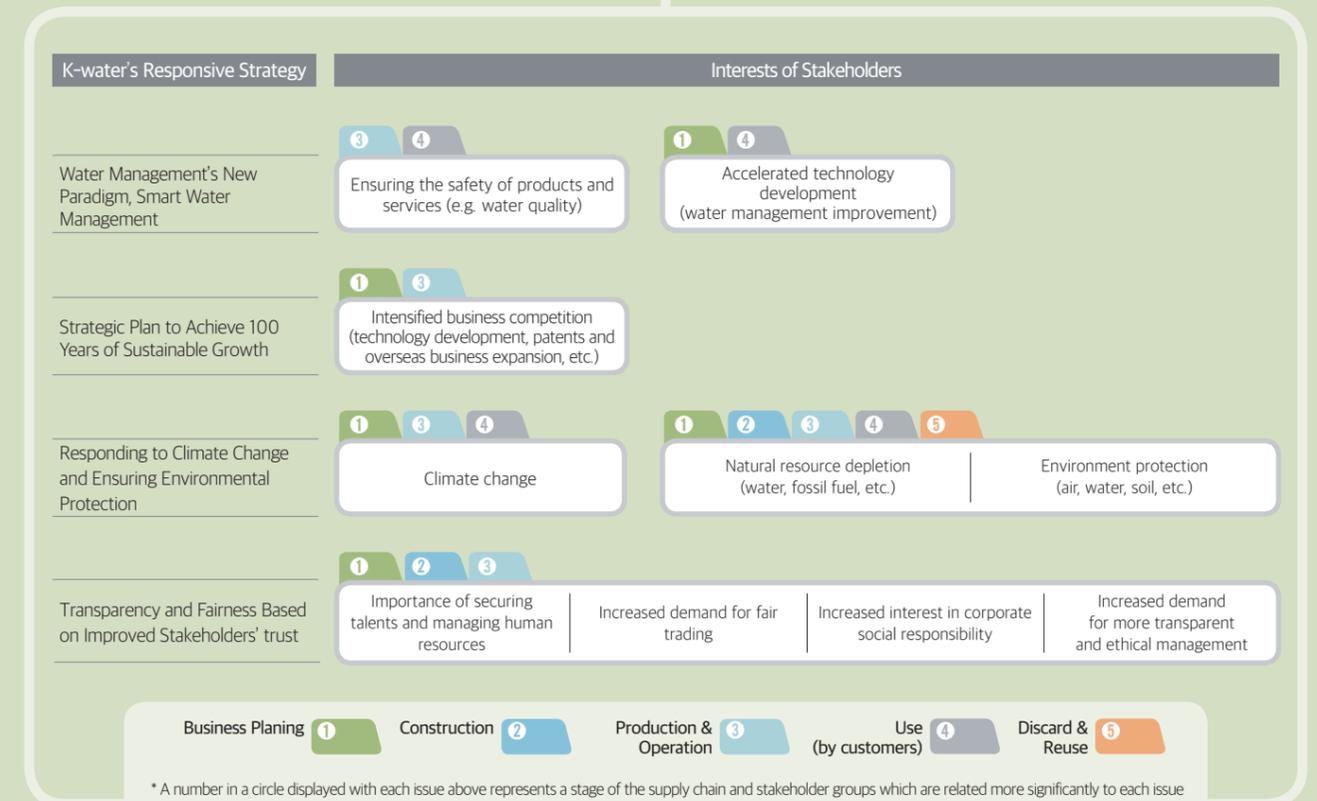
	2011	2012	2013	2014	2015
1	Eco-friendly water resource development and dam and river weir operation	Eco-friendly water resource development	Eco-friendly water resource development	Sustainable management initiative	Increased demand for more transparent and ethical management
2	Climate change response and new & renewable energy development	K-water's business portfolio	Business strategy and management system improvement	Shared growth	Importance of securing talents and managing human resources
3	K-water's business portfolio	Business strategy and management system improvement	Quality of raw and tap water	New market and new business	Increased interest in corporate social responsibility
4	Business strategy and management system improvement	Quality of raw and tap water	Climate change response and risk management	Financial performance	Natural resource depletion (water, fossil fuel, etc.)
5	Quality of raw and tap water	Technology innovation and R&D	Customer satisfaction	Climate change response	Increased demand for fair trading
6	Water bill	Customer satisfaction	New business creation (e.g. overseas business, new & renewable energy business)	Local community contribution	Environment protection (air, water, soil, etc.)
7	Customer satisfaction	Climate change response and risk management	Technology innovation and R&D	Financial soundness	Climate change
8	Ethical management	Corporate government and ethical management	Public relation of company and social contribution	Fair human resources management policy	Accelerated technology development (water management improvement)
9	Technology innovation and R&D	New business creation	Communication with stakeholders	Social contribution activities	Intensified business competition (technology development, patents, overseas business expansion, etc.)
10	Social contribution	Social contribution and cooperation	Ethical and transparent management	Ethical management	Ensuring the safety of products and services (e.g. water quality)

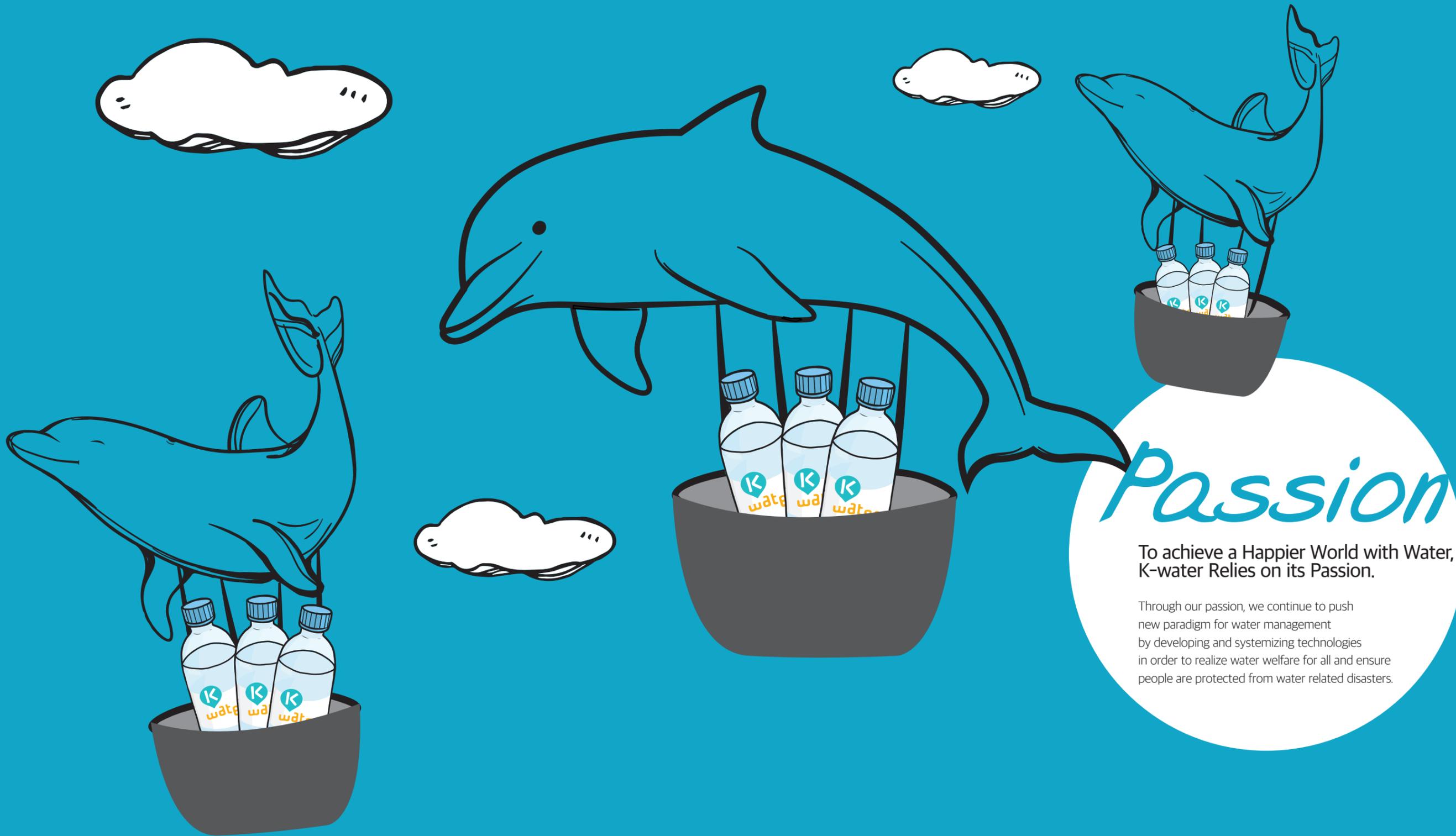
## K-water's Supply Chain and Interests of Stakeholders

### 【 Stakeholders in the Supply Chain 】



### 【 Major Issues and K-water's Response 】





# Passion

To achieve a Happier World with Water, K-water Relies on its Passion.

Through our passion, we continue to push new paradigm for water management by developing and systemizing technologies in order to realize water welfare for all and ensure people are protected from water related disasters.

## SUSTAINABLE VALUE EFFORTS

### K-water's 4 Core Sustainability Issues

30\_1st Issue Water Management's New Paradigm, Smart Water Management

40\_2nd Issue Strategic Plan to Achieve 100 Years of Sustainable Growth

47\_3rd Issue Responding to Climate Change and Ensuring Environmental Protection

54\_4th Issue Transparency and Fairness Based on Improved Stakeholders' Trust

## Water Management's New Paradigm, Smart Water Management

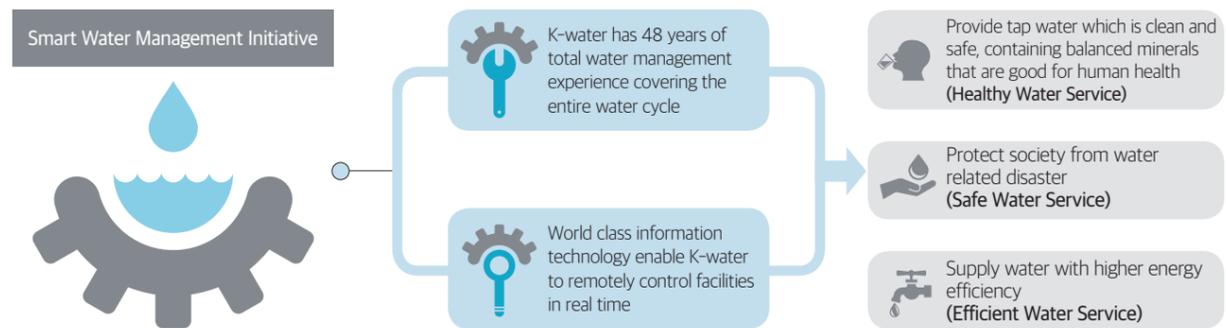


### Importance of Smart Water Management

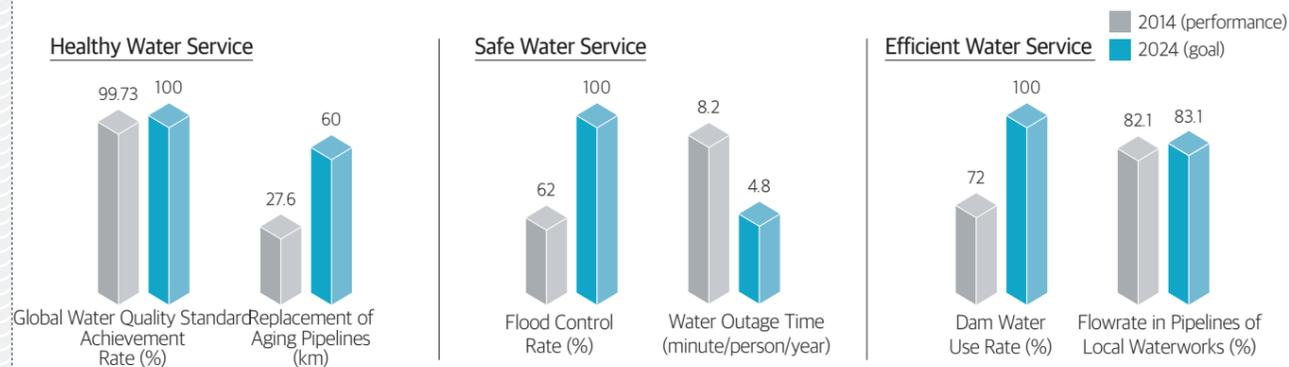
Water is a pivotal resource for every organism, and as the World Economic Forum's 'Global Risks 2015' report rightly points out, water crises are one of the most influential risk factors that the global community faces, largely due to climate change, with people's health and safety at risk. Water needs to be clean and supplied efficiently in a way that property and life are protected from any water shortages, whether it be due to a weather phenomenon, an energy or resource shortage, or an environmental-pollution issue. As the only company specialized in water supply in Korea, K-water has a deep understanding on how to provide clean and safe water to its customers and this is at the center of everything K-water does.

### K-water's Approach to Smart Water Management

In order to secure clean, safe and efficient water supply through advanced water management, K-water is currently pursuing Smart Water Management Initiative (SWMI) using advanced information and communication technologies to manage the entire water cycle.



### K-water's Performance Management



## Smart Water Management Initiative



### What Is the Smart Water Management Initiative?

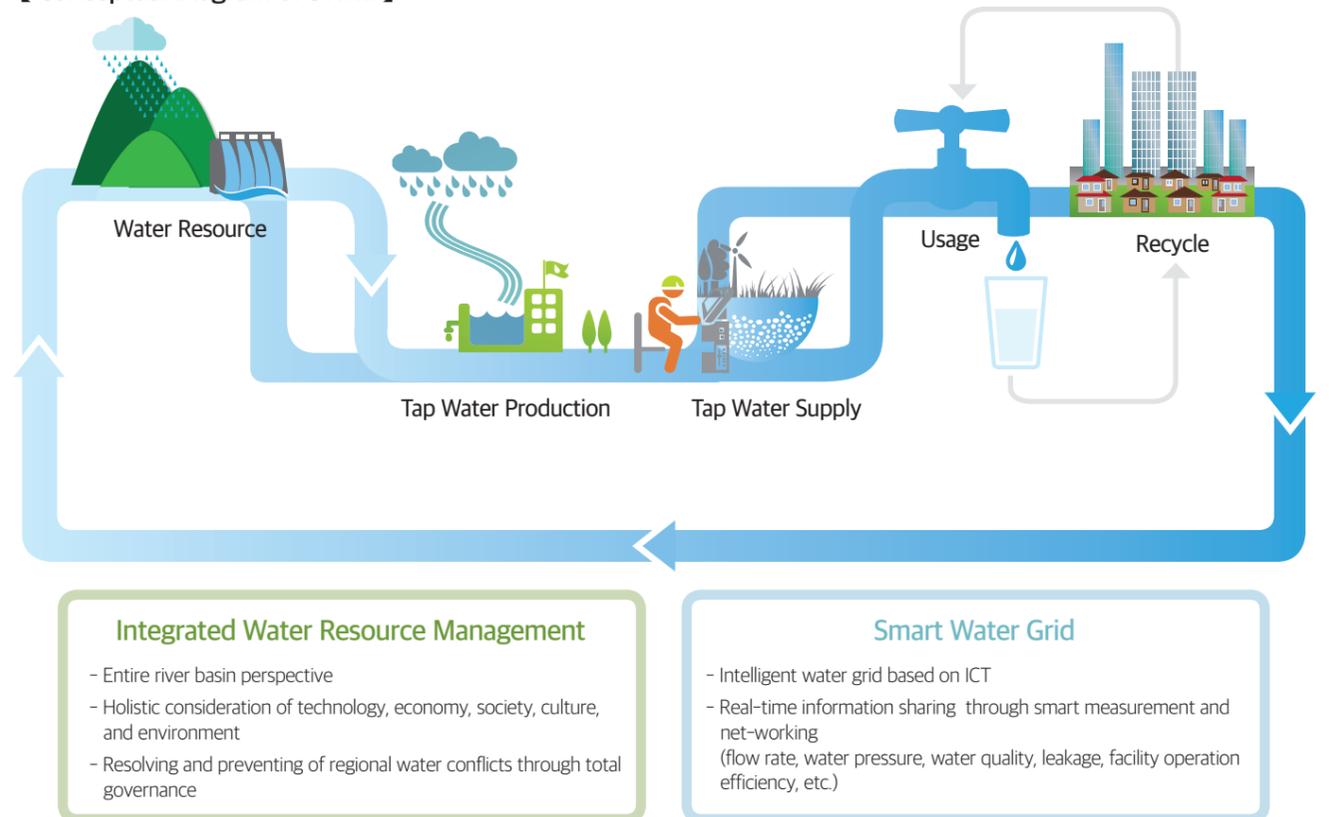


"Combining information communication technology with traditional water management technology will enable us to overcome the existing challenges." **President Park Geun Hye**, 7th World Water Forum opening ceremony (2015. 04. 12)

The Smart Water Management Initiative (SWMI) uses cutting-edge information and communication technology to efficiently manage the entire water cycle, from water sources to household taps. Existing water management practices are conducted separately at each facility and region, resulting in less efficient and effective water management in term so of water quantity, water quality, and disaster control.

K-water hopes to improve the quality, safety and efficiency of water management through its Integrated Water Resource Management system, which is designed to manage water quality and quantity throughout the entire water cycle. Moreover, K-water is establishing a Smart Water Grid - combining the existing grid with advanced information and communication technologies (ICT) - to minimize energy consumption throughout the entire water production and supply system and provide "Healthy Tap Water", tap water which is clean and safe, containing balanced minerals that are good for human health to its customers.

### 【 Conceptual Diagram of SWMI 】



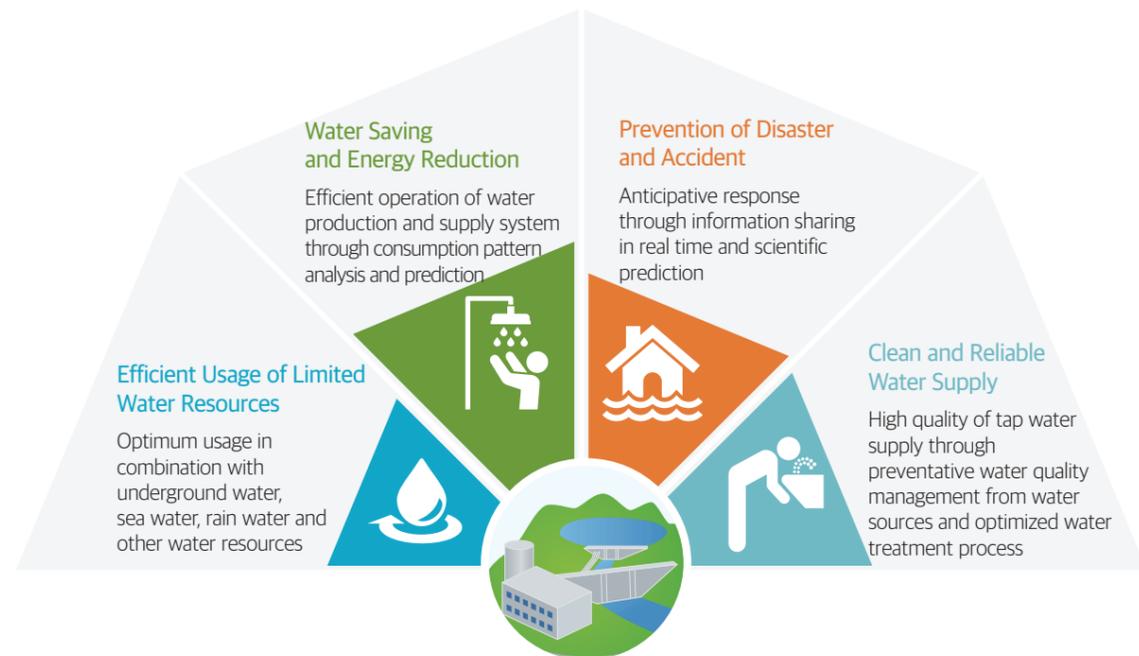
## Smart Water Management Initiative

### How K-water's Smart Water Management Initiative is Progressing?

K-water's smart water management initiative is based on a combination of smart devices, smart solution (technology), and smart services. K-water is developing customized water services to meet customer's demands by combining various advanced smart devices, information and communication technology, and K-water's 48 years of experiences in water service to collect and analyze data from the source of water to the tap, and respond to customers' requests in real time.



### Global Effects of the Changes will Brought to Humanity by SWMI



## Healthy Water Service

### Customer Oriented Healthy Water Service

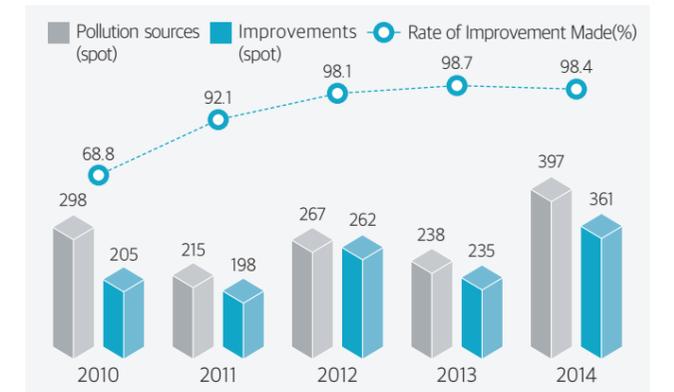
As peoples' income levels increase, so does their interest in health. When choosing drinking water, taste and the health benefits of water have significant influences on water consumption. K-water is introducing an advanced water treatment system as well as an enhanced water quality monitoring with 250 water quality indicators, which was much tougher than a monitoring just on the government's 85 recommended water quality indicators. Despite the effort, Korea's tap water drinking rate is only 5.4% (2013 Tap Water Drinking Satisfaction Survey, Korean Tap Water Drinking Promotion Association) - very low compared to countries such as the U.S (56%) and Japan (52%). Results of the 2013 Tap Water Drinking Satisfaction Survey shows that the reasons for not drinking tap water include "Concerns regarding old pipelines and water tanks" (30.8%), and "Concerns regarding the water quality of water sources (e.g. dam reservoirs, rivers)" (28.1%). Furthermore, 34.1% of individuals surveyed said they did not drink tap water because it had a disinfectant-type odor. Therefore, K-water places utmost effort to gain the public's trust in tap water by upgrading pipelines and water tanks, improving preventative water quality management in water sources, and minimizing disinfectant-related odor in tap water as long as the effect of disinfection is ensured.

### Proactive Water Quality Management and Algal Bloom Response in Water Sources

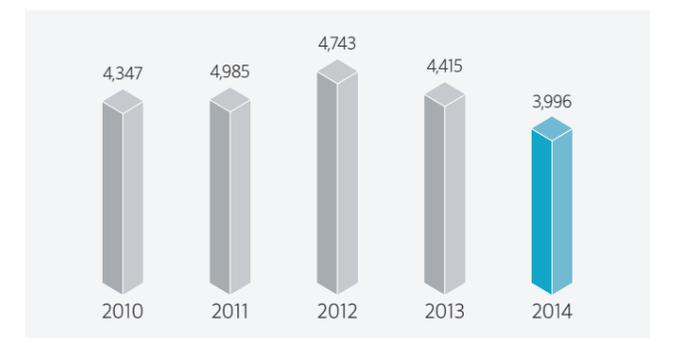
K-water regularly inspects potential pollution sources in upstream regions of dam reservoirs to prevent muddy water and freshwater harmful algal bloom occurrence. Also, in order to prevent pollutant inflows from upstream pollution sources, the company installed measures such as wetlands, silt protectors, and detention ponds. In particular, we have propelled the "Save Own Creek" campaign based on local residents' participation to improve local drinking water sources (local river environments).

As well, K-water established real-time algal bloom monitoring and alert systems in rivers and dam reservoirs. In addition, in partnership with the Ministry of Environment and the National Institute of Environmental Research, the company has introduced a "Algal Bloom Response Collective Council" to advance algal bloom suppression and elimination technologies. K-water also applies eco-friendly measures to control algal blooms over its business sites, such as water discharge adjustment by an integrated operation of dams and river weirs. These efforts resulted in reduced chlorophyll-a concentration (photosynthetic pigment that is essential for photosynthesis, which is an indicator to show the contents of algae in water) on average over K-water's business sites by 9.5% in 2014 against the previous year.

【 Preventative Pollution Sources Improvements in Upstream Regions 】



【 Annual Average Chlorophyll-a of 29 Dam Reservoirs Managed by K-water\* 】 (Unit: mg/m)



\* 29 dam reservoirs' annual average chlorophyll-a concentration was calculated as the sum of each dam reservoir's concentration at a ratio of each dam reservoir's storage to a total of 29 dam reservoir storage.

# Healthy Water Service

## Satisfying Global Water Quality Standards through Stringent Water Treatment Process

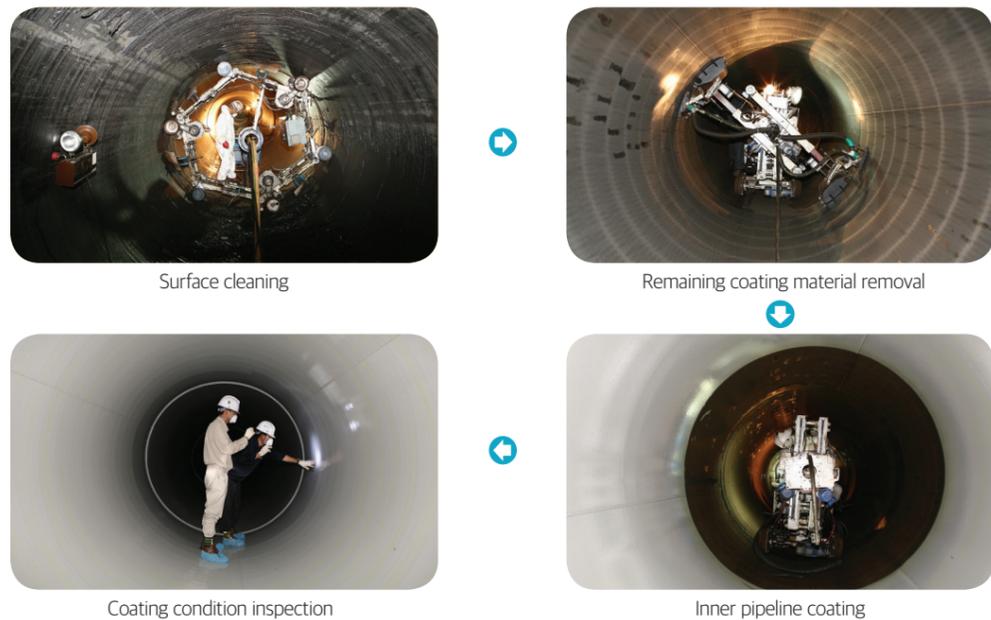
K-water applies the strictest water quality standards among the ones used in developed countries as well as the WHO's standard, which are redefined "Global Water Quality Standards". It manages all its water service processes with the aim of satisfying these Global Water Quality Standards. K-water produces and supplies "Healthy Tap Water", tap water which is clean and safe, containing balanced minerals that are good for human health, through using the optimum amount of water purification chemicals, introducing advanced water treatment systems, and improving aging facilities. As a result, 99.73% of water from K-water's purification plants satisfied the Global Water Quality Standards in 2014. Meanwhile, there was not a single violation of any safety and health related acts or regulations.

## Water Supply Process Management

K-water continuously invests in the improvement of aging pipelines. While it has optimized the funds spent by increasing the efficiency of aging pipeline improvement methods, the company has cleaned the inside of pipelines to decrease algal blooms and odors from remaining disinfectants, so as to create a safe water supply system.

<p><b>Replacement of Aging Pipelines</b></p> <ul style="list-style-type: none"> <li>• <b>(Multi-regional waterworks)</b> 27.6 km replaced in 2014 (260 km in total till 2014) * KRW 3.9 trillion will be invested by 2030</li> <li>• <b>(Local waterworks)</b> 178km replaced in 2014 (1,204 km in total till 2014) * KRW 92.1 billion will be invested by 2024</li> </ul>	<p><b>Cleaning of Inner Pipelines</b></p> <ul style="list-style-type: none"> <li>• <b>(Local waterworks)</b> 79.1 km cleaned in 2014</li> <li>• Stagnant water in pipelines is discharged in a proactive manner to ensure water quality</li> </ul>	<p><b>Reduction of Disinfectant-related Odor</b></p> <ul style="list-style-type: none"> <li>• <b>(Multi-regional waterworks)</b> Remaining disinfectant equalization was conducted to minimize disinfectant-related odors at a total of 7 places * 16 places will be conducted by 2016</li> </ul>
--	--	---

### 【 Aging Pipelines Improvement 】



## Smart Water City: Responsible Service to Household Taps

K-water is developing "Smart Water City" projects including an improved tap water supply system and individually customized customer services. The Smart Water City project is K-water's new water management model to gain the public's trust in tap water by providing a water quality inspection visiting service, open access to water tap water quality information, and "Safe Tap Water Assurance", a program to compensate a customer over human or material damages caused by tap water quality degradation. In 2014, K-water's Smart Water City pilot project was successfully completed in Paju City, and K-water is planning to introduce the Smart Water Cities on a nationwide basis.

**【 Concept of Smart Water City Project 】**

- Stabilization of tap water supply system
- Enhancement of water quality management through cleaning of pipelines, etc.
- Establishment of realtime water grid inspection and diagnosis system
- Improved accessibility of water quality information through mobile devices, water quality display
- Door-to-door services such as water quality inspection visiting services and inside building pipelines diagnosis
- Tap water responsible services such as "Safe Tap Water Assurance"
- Partnership with NGOs by providing "Drink Tap" trainings
- Customer involved "Drink Tap" campaign in which youths and women participate
- Installation of tap water fountain to promote tap water drinking culture

**【 Success of the Paju Smart Water City Project 】**

**Project Contents**

- Re-chlorination stations for ensuring injection of the optimum amount of disinfectants were installed and pipelines were cleaned for reduction of disinfectant related odors
- Real time water quality monitoring and open access to water quality information using information and communication technologies
- Door-to-door service including a water quality inspection visiting services, inside building pipelines inspection and cleaning

 <b>470 times</b> Water quality inspection visiting service	 <b>150 times</b> Inside building pipelines inspection using endoscope	 <b>319 times</b> Inside building pipelines cleaning
--	---	---

**Project Performance**

- Tap water quality stability improved and disinfectant-related odor reduced
- Tap water drinking increased from 1% to 19.3%
- Customer satisfaction index increased from 55% to 92.3%

 <b>1% → 19.3%</b> Tap water drinking rate	 <b>55% → 92.3%</b> Customer satisfaction index
---	--

# Safe Water Service

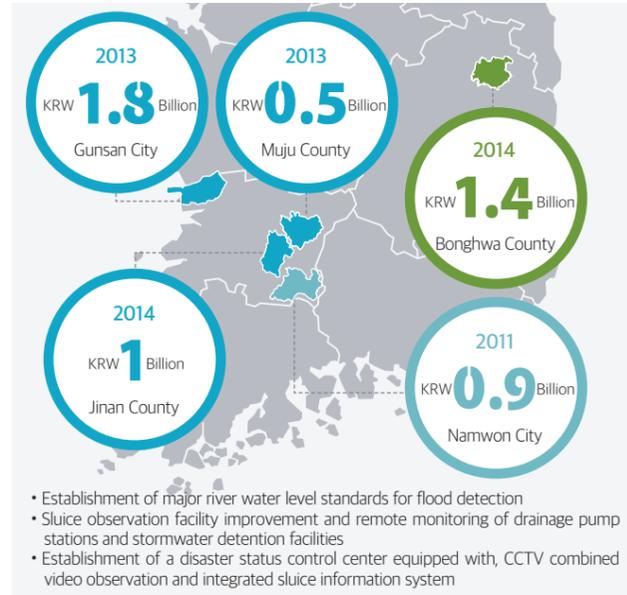
## Preventative Perspective of Safe Water Management

Korea's average rainfall of 1,277mm is 1.6 times higher than the global rainfall average of 807mm. But because of Korea's high population density, rainfall per person stands at only 2,629m<sup>3</sup>, just 17% of the global average of 16,427m<sup>3</sup>. Korea is classified as a "water stressed" country due to the substantial seasonal and regional rainfall variances. As well, the steep slopes of rivers result in fast moving run-off which is hard to manage and can lead to intensified floods and droughts. In particular, the complexity and uncertainty in regards to water management increased due to frequent occurrence of localized heavy downpours and drought. K-water places utmost efforts to take preventative actions in regards to water quality accidents so as to stably supply water to its customers through total flood management, a total basin prediction system, preventative water disaster facilities, and by adhering to global standards in regards to water safety management.

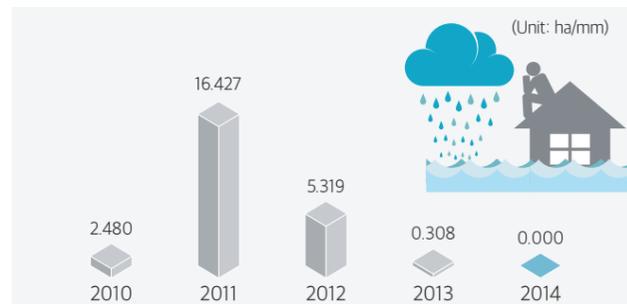
 Korea has been categorized as a highly water stressed nation amongst the 34 OECD countries  
OECD Environmental Outlook to 2050: The Consequences of Inaction (2014)

## Flood Damage Reduction in Small-to-Medium Sized Rivers through Integrated Flood Management

In 2012, the National Assembly Budget Office stated that 87% of natural disasters over a period of 5 years from 2007 to 2011 were caused by localized heavy downpours and typhoons-of which 98.7% occurred in small-to-medium sized river basins. Therefore, K-water is planning to establish an integrated flood management system covering a river basin with local governments in Korea. In its first step to do this, K-water has shared its 48 years of experience with and provided technical skills to local governments to improve flood management in small-to-medium sized river areas. In 2014, flood management system improvement was conducted in the counties of Bonghwa and Jinan. K-water will continue to improve the flood management system in 17 regions with its local government partners to build its integrated flood management system covering the entire river basin ultimately. Also, in order to ensure the identification of flood situations and information sharing, K-water has enhanced its flood warning system by improving data collection network speed from 10 minutes to 10 second interval and replaced a total of 152 aging alert facilities. As well, K-water has established a 'first response' manual and conducted flood response exercises with some 23 local governments to ensure appropriate actions can be taken within 2 hours. As a result,



### 【 2014 Flood Damaged Areas\* 】



\* It was the sum of flood damaged area of each major river basin (Han, Nakdong, Keom, and Seomjin River) divided by 2014 flood season precipitation of each basin.

in August, 2014, K-water successfully prevented flood damages despite torrential rains in the southern part of Korea including the second highest number of rainfall days in Korean history. Also, K-water places utmost efforts on minimizing inconvenience to the public through drought prevention efforts. This enabled it to effectively manage dam reservoir levels and dam water supply levels in cooperation with related authorities, to support emergency water in drought affected areas during the severe drought from June to July 2014.

## Preventative Water Management through the Total Prediction System

Precise predictions of water quantity and quality is an essential requirement for safe water management. In this regard, K-water developed and introduced "K-HIT", a package which includes a decision support tool with advanced information and communication technologies in 2012. It supports holistic decision making through the combination of meteorology, sluices, stormwater, dams and hydropower plants operating information. In addition, SURIAN (Supercom-based River Analysis Network), a supercomputing-based, three-dimensional water prediction response model, was developed and introduced in 2013. With these advanced technologies, since February 2014, K-water has been conducting daily water quality forecasts (with 6 Indicators: algae contents, water temperature, biotic and chemical oxygen demands, total nitrogen and phosphorus levels, and suspended solids) for dam reservoirs and 27 rivers in Korea, with algal bloom forecast for the country's eight major dams being provided through K-water's website from March 2015.

## Safety Enhancement of Water Disaster Prevention Facilities

 2 multipurpose dams were built to improve flood control capacity and secure new water sources

Gimcheon-Buhang Dam	Bohyeonsan Dam
<p><b>(Background)</b> Hurricane Rusa and Meami caused massive flood damage, 39 casualty, property damage of KRW 483.3 billion</p> <p><b>(Effect)</b> Flood control capacity of 12.3 million m<sup>3</sup>, and water storage of 36 million m<sup>3</sup> per year</p>	<p><b>(Background)</b> The region of Yeongcheon County has been damaged by frequent floods including 190 flood victims and 24 damaged buildings, etc.</p> <p><b>(Effect)</b> Flood control capacity of 3.4 million m<sup>3</sup>, and water storage of 14.8 million m<sup>3</sup> per year</p>

 Enhancement of flood defense capabilities for existing dams to prepare for extreme flooding

Deacheong Dam	Andong Dam	Chungju Dam (ongoing)
14,700m <sup>3</sup> /sec → 21,742m <sup>3</sup> /sec	8,350m <sup>3</sup> /sec → 15,094m <sup>3</sup> /sec	17,500m <sup>3</sup> /sec → 28,500m <sup>3</sup> /sec

 Renovation of aging dam facilities

Dam Body Enhancement	14 Water Storage Dams	16 Multipurpose Dams
<ul style="list-style-type: none"> <li>Angye Dam was renovated in 2003 (KRW 5.9 billion)</li> <li>Dalbang Dam and Yeoncho Dam were renovated in 2014 (KRW 3.7 billion)</li> </ul>	Renovation plan as well as vulnerability investigation were established in December 2014	Renovation plan is supposed to be established in 2015~2017, while vulnerability investigation was completed in December 2014

# Safe Water Service

## From Drinking Water Sources to the Tap; K-water's Advanced Water Safety Management

All of K-water's waterworks have applied the Water Safety Plan (WSP)\* since 2012 to ensure the safety of tap water. WSP is designed to identify and respond to potential water quality risks in the process of water treatment and supply to improve tap water quality and safety, and K-water is the nation's first water supplier, who applied WSP. Along with its application of WSP, the company has established "Water Safety Index" (WSI), which measures the level of tap water safety service and classes it into five grades: Excellent (0.9), Good (0.9~0.8) Fair (0.8~0.7), Marginal (0.7~0.6), and Poor (below 0.6). Higher safety is achieved as the WSI score approaches 1. K-water sets its own WSI goal to achieve annually and thereby, continues to improve its water service.

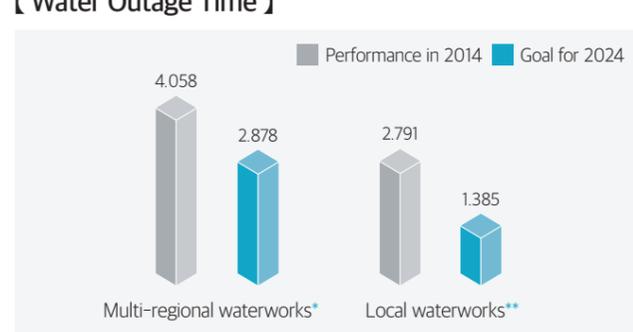
\* Water Safety Plan: Global guidelines for drinking water quality management which World Health Organization and International Water Association developed and encouraged for global water suppliers to introduce for ensuring the safety of tap water

In 2014, the average WSI of K-water's 37 multi-regional waterworks was evaluated as being higher than the previous year, suggesting the improvement of K-water's tap water safety service. It was resulted from K-water's continuous efforts for improvement across a total of 202 tap water quality issues, which include establishing a water quality accident response system covering the whole water cycle from drinking water sources to household taps; enhancing hazard substance inflow monitoring for drinking water sources; managing disinfection byproducts in the purification process; and reducing remaining disinfectant variability.

### 【 Water Safety Index(WSI) 】



### 【 Water Outage Time 】



\* 100x outage time(hr)/total pipeline length(km)  
 \*\* Σ(individuals experienced water outage (people) x water outage time (minutes) / tap water service population (people)

### BEST PRACTICE

## Water Safety Portal

**Selected as Excellent Water Safety Plan Performer (WSP Champion) of Asia-Pacific Region**

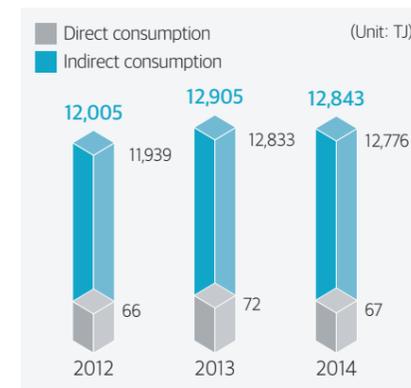
K-water was acknowledged for its systematic efforts to ensure tap water safety by World Health Organization and International Water Association. K-water's "Healthy Tap Water" service led the company to the WSP Champion of Asia-Pacific region in July 2015.

# Efficient Water Service

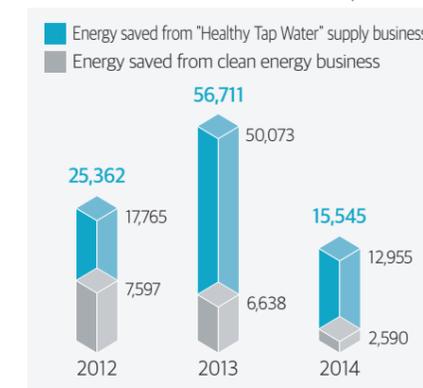
## Improvement of Energy and Resource Efficiency

Energy consumption in K-water's business activities occurs mainly during water treatment and supply process including water intake, water grid and pump operation for water transport. In 2014, total energy consumption of the corporation was 12,843 TJ (0.5% lower than the previous year), with direct energy consumption mainly by fuel usage, accounting for 67 TJ, and indirect consumption mainly by electricity usage, accounting for 12,776 TJ. Compared with sales, energy intensity was measured 3.47 (TJ/KRW 100 million) in 2014, 0.07 less than the previous year. It means that K-water used less energy by 0.07 TJ for KRW 100 million sales than the previous year, implying the corporate increased energy efficiency.

### 【 Energy Usage 】



### 【 Energy Reduction 】



\* Energy reduction performances made over 2013-14 were counted in the performance of 2013

### 【 Energy Intensity (Energy usage against sales) 】



### Low Carbon Tap Water Producer Certified by the Korean Government

Minimized greenhouse gas emission by using less raw materials, injecting the optimum level of purification chemicals and using light weight packaging materials  
 → The nation's first water supplier certified (K-water's 10 waterworks achieved the certification as of 2014)



### Efficient Tap Water Supply System that Meets Global Standards for Energy Management System (ISO 50001)

Introduced the equipment of new and renewable energy powered (e.g. solar powered equipment) and high energy efficiency (e.g. LED), and established intelligent energy management system for its waterworks  
 → The nation's first water supplier certified with global standards (Geumsan Waterworks, May 2014)



### Energy Reduction through Cooperation with Local Governments

Optimized water grid operation according to the water levels of distributing reservoirs through information sharing on 40 distributing reservoirs operation with 23 local governments  
 → Cost Reduction of KRW 5.3 billion per year (4% of the corporation's annual energy cost)

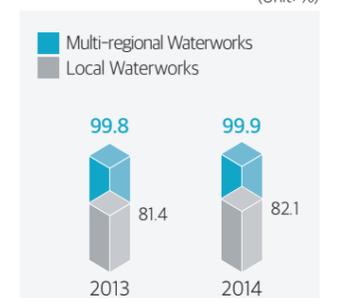


### Highest Recorded Flowrate\* through Waterworks Operation Innovation

Water leakage exploration using endoscope, remote leakage monitoring, and replacing of aging and vulnerable pipelines  
 → Local waterworks leakage reduced by 1.5 million m<sup>3</sup> (cost reduction of KRW 4 billion)

\*Flowrate: The ratio of tap water transported from a purification plant to household taps through water pipelines. Lower flowrate implies higher water leakage in pipelines.

### 【 Water Flow Rate 】



## Strategic Plan to Achieve 100 Years of Sustainable Growth



### Importance of Strategic Plan for Sustainable Growth

K-water has faced the tough reality of saturation in the domestic water market, within the constraint of a stagnation in its existing business and shrinking opportunities for new business due to the nature of public company of which business scope is strictly limited. However, since it started out as the Korea Water Resources Development Corporation in 1967, K-water has been breaking through a difficult environment by pioneering the business of the industrial complex development in 1973, the multipurpose dams development and operation in 1973, and multi-regional waterworks construction and operation in 1989, and local waterworks outsourcing operation in 2003. Based on its 48 years of experience and competency, now is the time for K-water to prepare for its growth over the next century of the company.

### K-water's Approach to Strategic Plan for Sustainable Growth

K-water abandoned its previous domestic/government centered paradigm and took on the challenge of changing into a self-developing, sustainable growth business. Towards this end, in January 2014, K-water announced newly the SMART Management System and Smart Water Management Initiative (SWMI), and its mid-to-long term business strategy was built around these. In December, 2014, as part of the efficiency drive aspect of SMART Management practices, K-water reconstructed its business units and departments. And in July 2015, K-water announced its "Global Leading Strategic Plan", a roadmap to become a leading global water supplier.



### K-water's Performance Management

#### 【 Financial Soundness 】



#### 【 SWMI based Business Platform 】



## Financial Performance and Financial Restructuring

### How Much does K-water Earn and What are Its Expenses?

K-water generates income from a variety of businesses, including the construction, operation and management of multipurpose dams, river weirs and multi-regional waterworks, as well as local waterworks outsourcing operations, waterfront developments, new and renewable energy production, and overseas businesses. As per the financial statements for the past 5 years, while finalizing work on the 4 Major River Project and the Gyeongin Ara Waterway, along with other direct investment projects, resulted in a decline in sales in 2012~13, K-water's sales has gradually increased through its waterfront business and clean energy business, along with asset-growth through the development of Gyeongin Ara Waterway, new dams and waterworks. While the direct investment projects saw K-water's debt rise, this was offset by the increased profitability of its clean energy business.

In 2014, energy business sales declined 33.2% against the previous year due to the extreme drought. However, total sales rose KRW 53 billion through the waterfront lots sales and tap water sales through operation of multi-regional and local waterworks - albeit with higher electricity costs in tap water production which accounted for 60% of total production cost and higher other operating costs causing net profit to decline against the previous year. Of K-water's created economic performance, 91.7% was distributed to operating, labor, and capital costs. In particular, approximately KRW 2.64 trillion was invested to improve the flood control capability of dams, tap water supply system, new and renewable energy plants, and other social infra-structures in contribution towards Korea's economy along with the safety of its residents and the improvement of its living environment.

#### 【 Comprehensive Financial Statement 】

(Unit: KRW in millions)

Perspective	Category	2010	2011	2012	2013	2014
Growth	Sales	2,144,750	6,325,786	3,668,445	3,645,387	3,698,372
	Asset	18,484,424	23,425,915	25,016,383	25,603,907	25,439,099
Stability	Debt	7,960,714	12,580,936	13,777,921	13,998,452	13,461,435
Profitability	Net income	142,104	293,267	308,295	348,118	299,326
Productivity	Added value price	1,240,833	1,432,827	1,605,534	1,745,689	1,704,065

\* Consolidated standard as per application of K-IFRS since 2011

#### 【 Economic Performance Creation and Distribution 】

(Unit: KRW in millions)

Category	Distributed to	2010	2011	2012	2013	2014
<b>Created Economic Value(1)</b>		2,167,345	6,354,088	3,694,659	3,682,884	3,739,658
a) Net Sales		2,144,750	6,325,786	3,668,445	3,645,388	3,698,372
b) Interest Income, Lease, Asset Sales, etc.		22,595	28,302	26,214	37,496	41,286
<b>Others (Government subsidies)</b>		4,309	236,679	298,786	309,286	317,196
<b>Distributed Economic Value(2)</b>		1,678,756	6,139,990	3,492,452	3,259,297	3,429,512
a) Operating Cost: Production Cost, Asset Purchase Cost	Partnering Companies	1,077,896	5,260,373	2,493,275	2,128,902	2,378,105
b) Wage and Welfare: Labor Cost	Employees	341,990	357,221	360,591	377,361	359,206
c) Capital Cost : Paid Interest, Dividend	Shareholders, Financial Institutes	160,662	399,552	501,674	541,310	537,615
d) Tax: Corporate Tax, Local Tax Payment, etc.	Government, Local Governments	37,708	68,159	73,677	138,349	79,636
e) Local Community Investment: Donation	Customers, Local Communities	60,500	54,685	63,235	73,375	74,950
<b>Surplus Economic Value(1-2)</b>		488,589	214,098	202,207	423,587	310,146

\* Consolidated standard as per application of K-IFRS since 2011

# Financial Performance and Financial Restructuring

## What Efforts Are in Place to Strengthen K-water's Financial Soundness?

K-water has placed utmost efforts on strengthening its financial soundness to become one of Korea's most trusted public companies. While the 4 Major River Project and the Gyeongin Ara Waterway, along with other national policy projects and existing business investments increased debt ratios, these are long-term investments whose cost will be recovered over time.

K-water has established a mid-long term financial management plan to reduce its debt by KRW 1.9 trillion till 2017. In 2014, through business restructuring, management improvements and other measures, debt was reduced by KRW 537 billion which resulted in 8.2% reduction of debt ratio. K-water's efforts in this regard were reflected in the Korean government's evaluation of public companies, with K-water categorized as "Excellent" in financial restructuring.



### 【 Effort for Financial Restructuring 】

	<b>Business Restructuring</b> Contents of Plan   Reduced non-essential and urgent investments, and improved investment efficiency through business review Debt Reduction   KRW 324.4 billion
	<b>Profit Improvement</b> Contents of Plan   Diversified sale channels through detailed market analysis Debt Reduction   KRW 17.5 billion
	<b>Cost Reduction</b> Contents of Plan   Cost reduction including operation cost and advertising expense (20% of material cost reduction through company-wide innovation) Debt Reduction   KRW 13.1 billion
	<b>Property Sale</b> Contents of Plan   Property sale including company buildings and unused sites Debt Reduction   KRW 30.4 billion
	<b>Management Improvement</b> Contents of Plan   Executive's wage voluntary return, pension system improvement and others Debt Reduction   KRW 12.2 billion

## Effort Towards Financial Soundness Will Not Impact the Quality of K-water's Public Service and Business Growth

K-water is improving its fundamental structure so that its effort towards financial soundness will not impact the quality of its public service and business growth. Above all, K-water is eliminating inefficiencies in its fund raising and investment. Next, K-water is improving its investment efficiency by thoroughly reviewing the value of waterfront developments, its energy business, as well as other mid-long term investments, and restructuring its business, focusing on the water service - all aimed at fulfilling its role as a public company. Within these initiatives, K-water has established and implemented systematic tools such as internal inspection and its total investment setting.

# Sustainable Development through its SMART Management

## Strengthening K-water's Business Strategy for Global Competitiveness

K-water has established and is executing a mid-to-long term plan aimed at achieving 100 years of sustainable growth with its SMART Management System and the Smart Water Management Initiative (SWMI) being key pillars of this, through increased its brand value since January 2014. To achieve sustainable growth with its SWMI and revitalize business opportunities, K-water has evaluated its internal and external business environment, including its business competitiveness in comparison with other global water suppliers, the results of which have been reflected in K-water's overall business operations.

### 【 Global Competitiveness Analysis's Indication 】



### 【 Business Unit Restructuring 】



## Preparation for the Future through its SMART Management System

K-water is moving fast to prepare for the future through business and functional improvement through actualizing its management direction for 2015 already in November 2014. New sales channels have been established in K-water's domestic operations, where demands for our existing service have been increased through our SWMI business platform. At the same time, we are diversifying overseas business operations and through raising private capital and local government financing. In particular, to increase the company's brand value in the global market, K-water has established a road map and named it "Global Leading Strategic Plan" in July 2015, as discussed on the page 46.

Business Unit	Business Environment	Business Direction	Tasks
<b>Integrated Water Resource Management (IWRM) Business</b>	• Expansion of IWRM paradigm • Flood and drought increased and worsened because of climate change	• Improve water resource management efficiency • Strengthen water management to respond to climate change	• Improve Seomjin River and Keum River water resource management efficiency • Enhance water security
<b>Healthy Tap Water Water Supply Business</b>	• Increased demand for high quality tap water service • Introduction of Smart Water Grid using information and communication Technologies	• Expand "Healthy Tap Water" service sales • Improve water service quality for rural regions	• Expand "Smart Water City" Project • Expand water grid of multi-regional waterworks to rural regions • Promote "Healthy Tap Water" service
<b>Related Business</b>	<b>Waterfront Development Business</b>	• Increased demand for waterfront leisure space	• Provide high quality waterfront leisure space • Invite a global theme park, and Develop tourism resources including Sihwa Lake, existing dam surroundings, and Gyeongin Ara Waterway
	<b>Clean Energy Production Business</b>	• Government's new and renewable energy support policy	• Develop new business model • Develop hydrothermal energy using business model (e.g. cooling and heating system using hydrothermal energy) • Rehabilitation of aging facilities and localization
	<b>Overseas and North Korea Business</b>	• Prospect of continuous growth in global water market	• Enlarge overseas business and strengthen financing • Progress existing businesses • Lead a global water management agenda

# Sustainable Development through its SMART Management



## 【 Integrated Water Resource Management (IWRM) Business 】

<p><b>Vision</b></p> <p>Actualizing IWRM over a river basin covering the entire water cycle to respond efficiently to climate change</p>	<p><b>Road Map</b></p> <ul style="list-style-type: none"> <li>Strengthening of IWRM business platform (2014~18)</li> <li>Implementing of IWRM business (2019~21)</li> <li>Implementing of IWRM business (2022~24)</li> </ul>	<p><b>Business Activities</b></p> <ul style="list-style-type: none"> <li>Water resource investigation</li> <li>Water resource development</li> <li>Integrated water resource management</li> <li>Water resource facility operation and management</li> </ul>
--	--	--



## 【 Healthy Tap Water Supply Business 】

<p><b>Vision</b></p> <p>Implementing Healthy Tap Water supply based on Smart Water Grid*</p> <p>*High efficiency intelligent water pipeline network</p>	<p><b>Road Map</b></p> <ul style="list-style-type: none"> <li>Stabilization of existing water supply system (2014~18)</li> <li>Establishing of Smart Water Grid (2019~21)</li> <li>Supply of Healthy Tap Water (2022~24)</li> </ul>	<p><b>Business Activities</b></p> <ul style="list-style-type: none"> <li>Waterworks planning and construction</li> <li>Waterworks operation and management</li> <li>Tap water quality improvement</li> <li>Water treatment technology development</li> </ul>
---	---	--

### Related Business



## 【 Overseas Business 】

<p><b>Vision</b></p> <p>Establishing a business foundation to become a global leading water supplier by enhancing overseas business operations</p>	<p><b>Road Map</b></p> <ul style="list-style-type: none"> <li>Strengthening of overseas business foundation (2014~18)</li> <li>Expansion of overseas business fields (2019~21)</li> <li>Pioneering of new market (2022~24)</li> </ul>	<p><b>Business Activities</b></p> <ul style="list-style-type: none"> <li>Water resource development</li> <li>Waterworks operation and management</li> <li>New and renewable energy development</li> </ul>
--	---	---



## 【 Clean Energy Business 】

<p><b>Vision</b></p> <p>Leading the domestic new and renewable energy market through a combination of water and energy</p>	<p><b>Road Map</b></p> <ul style="list-style-type: none"> <li>Large hydropower-tidal power centered business (2014~18)</li> <li>Diversifying energy resources (2019~21)</li> <li>Leading new and renewable energy market (2022~24)</li> </ul>	<p><b>Business Activities</b></p> <ul style="list-style-type: none"> <li>New and renewable energy development</li> <li>Profits creation through Greenhouse gas reductions</li> </ul>
--	---	--



## 【 Waterfront Business 】

<p><b>Vision</b></p> <p>Pulling the nation's economic growth through eco-friendly waterfront city development</p>	<p><b>Road Map</b></p> <ul style="list-style-type: none"> <li>Development of high quality waterfront space (2014~18)</li> <li>Creation of waterfront business demands (2019~21)</li> <li>Development of world-class waterfront cities (2022~24)</li> </ul>	<p><b>Business Activities</b></p> <ul style="list-style-type: none"> <li>Waterfront city development</li> <li>Gyeongin Ara Waterway operation and management</li> </ul>
---	--	---



# To Become a Global Leading Company in Water Industry

## The 7th World Water Forum and K-water

The 7th World Water Forum (WWF) held in Daegu City, Kyeongbuk came to a successful close in April of 2015 with a final declaration to resolve global water crises. The WWF is the water industry's biggest global event with 170 countries and 46,000 individuals participating this year. K-water, as a representative of the Republic of Korea, outlined its Smart Water Management Initiative at the WWF as part of its contribution to the establishment of a global agenda and policy framework. K-water will use the experience of the 7th WWF to expand its Smart Water Management Initiative and other water management businesses overseas to achieve its sustainable growth.



“Emphasis on Combination of Information & Communication Technology and Water Resource Management”  
7th WWF Minister Declaration, Gyeongju

“Smart Water Management will play a key role in achieving UN Sustainable Development Goals”  
Benedito Braga, President of International Water Council, 7th WWF Smart Water Management Initiative Launching Ceremony

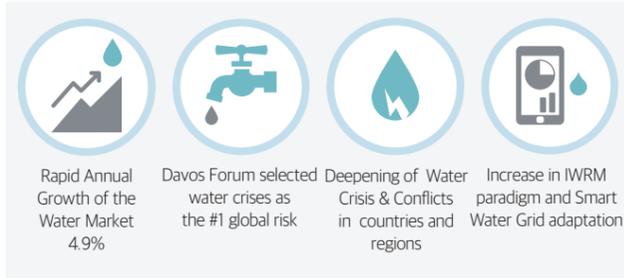
# To Become a Global Leading Company in Water Industry

## K-water: A Global Leading Water Supplier

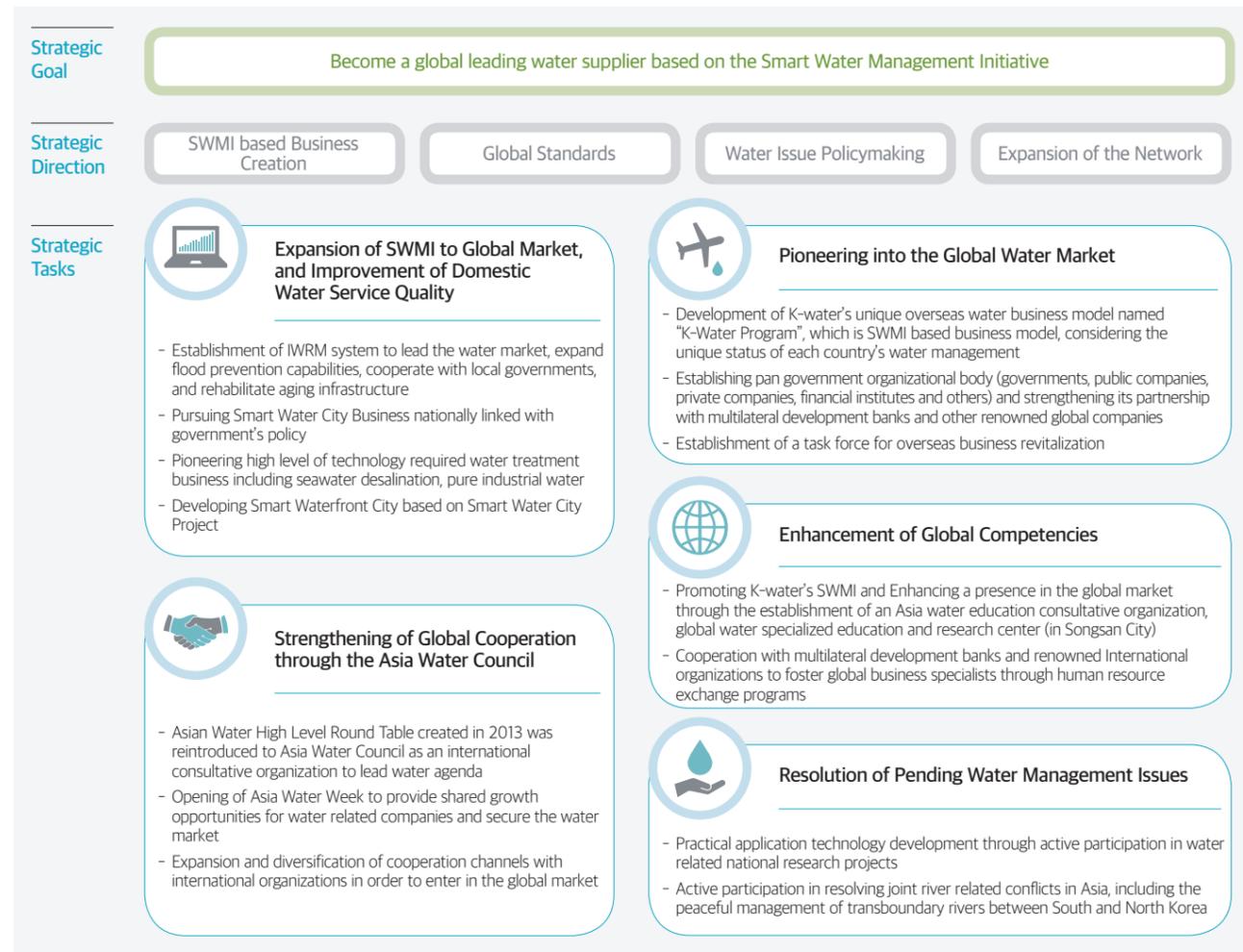
Following the 7th WWF success, K-water is pursuing its "Global Leading Strategic Plan" both internally and externally. The "Global Leading Strategic Plan" is K-water's road map to become a global water supplier and for sustainable growth in a challenging environment. Moreover, K-water is expanding its presence in the global market through a diversified business portfolio including local government financing business and technological support.

This is increasing K-water's brand value along with other measures such as the provision of global water specialist training, partnership with global financial institutes and other global companies for the establishment of international consultative organizations.

### 【 Global Market Environment 】

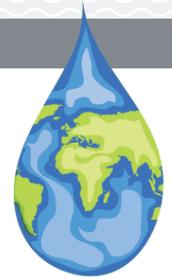


### 【 Global Leading Strategic Plan 】



## DMA(DISCLOSURES ON MANAGEMENT APPROACH)

# Responding to Climate Change and Ensuring Environmental Protection



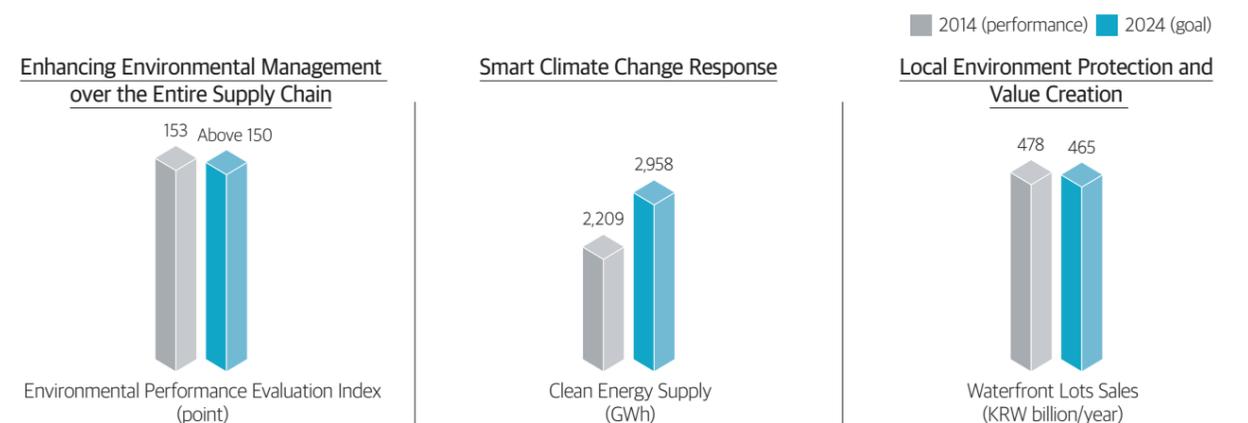
### ➤ Importance of Responding to Climate Change and Ensuring Environmental Protection

K-water's business activities effect and are affected by climate change and environmental pollution. Climate changes causing sudden heavy localized precipitation and extreme drought, algal blooms, water quality accidents and environmental pollution threaten the stability of K-water's water services. However, K-water's business activities may generate greenhouse gases, wastes, and geographical changes which may negatively impact the environment and the climate. Therefore, responding to climate change and environmental pollution is not only important for the stability of K-water's business, but also K-water's social responsibility which is the only public company managing the nation's water resource.

### ➤ K-water's Approach to Responding to Climate Change and Ensuring Environmental Protection



### ➤ K-water's Performance Management



# Environmental Management over K-water's Entire Supply Chain

Climate change and environmental pollution have been caused by human activities since the industrialization and civilization, with every human being and all companies being directly and/or indirectly affected by it. K-water is pursuing management activities in consideration of not only K-water's environmental effects, but also the effects on its entire supply chain. K-water places utmost effort on improving environmental safety in K-water's entire business process covering plan, construction, production, and facility operations, as well as the usage and disposal of materials by its partnering companies and customers.

- Unprecedented climate change is observed in all continents and oceans  
Intergovernmental Panel on Climate Change, 5th report, 2014
- Radioactive materials from the Fukushima Nuclear Power Plant Accident leaked across the Pacific Ocean 4 years ago were detected along the Canadian Coast in April 2015  
Woods Hole Oceanographic Institution (WHOI), April 2015

## K-water's Environmental Management Overview

### Execution System

ISO Certified Quality and Environmental Management System

- Acquisition of International Standard Organization (ISO) certifications: ISO 9001 (Quality Management System) and ISO 14001 (Environment Management System)
- Entire departments are annually evaluated by specialized external institutions and internal specialists about each of quality, environment and green management

### Performance Index

Environmental Performance Evaluation Index (EPE)

- Measuring of the corporate environmental management performance to quantitative index for all management areas
- Comparing the improvement level of the corporate environmental management performance with base year (2006)
- Measuring since 2007 and managing as K-water's key performance indicator
- Scored 153 points in the 2014 Environmental Performance Evaluation, and, compared with the base year (2006), performance has been improved by 53%

Year	2010	2011	2012	2013	2014
Score	137	141	145	151	153

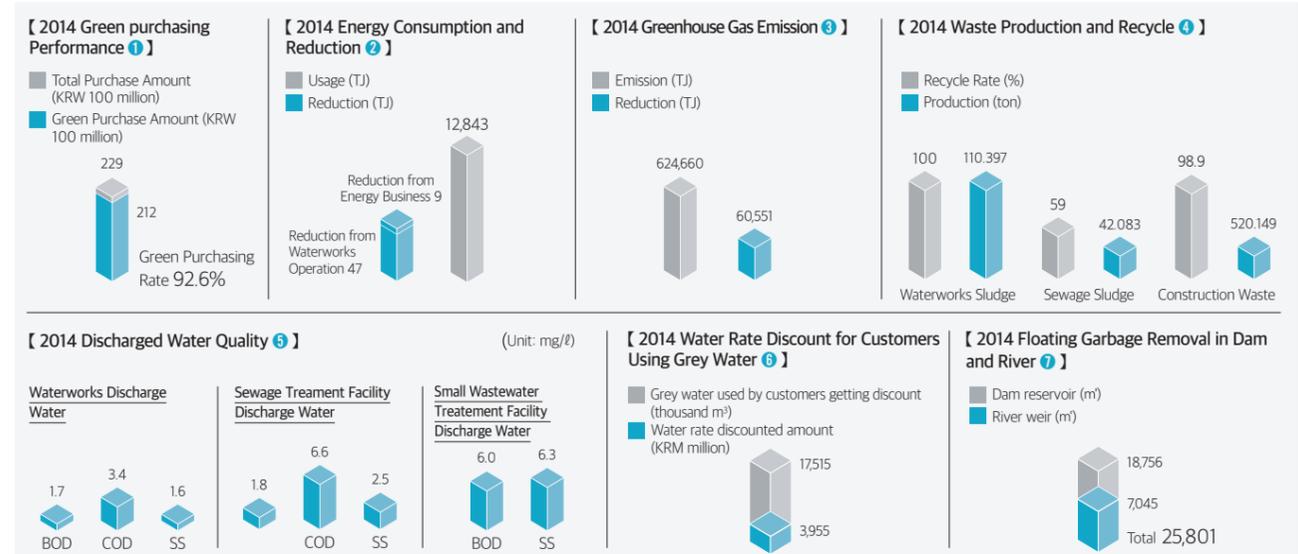
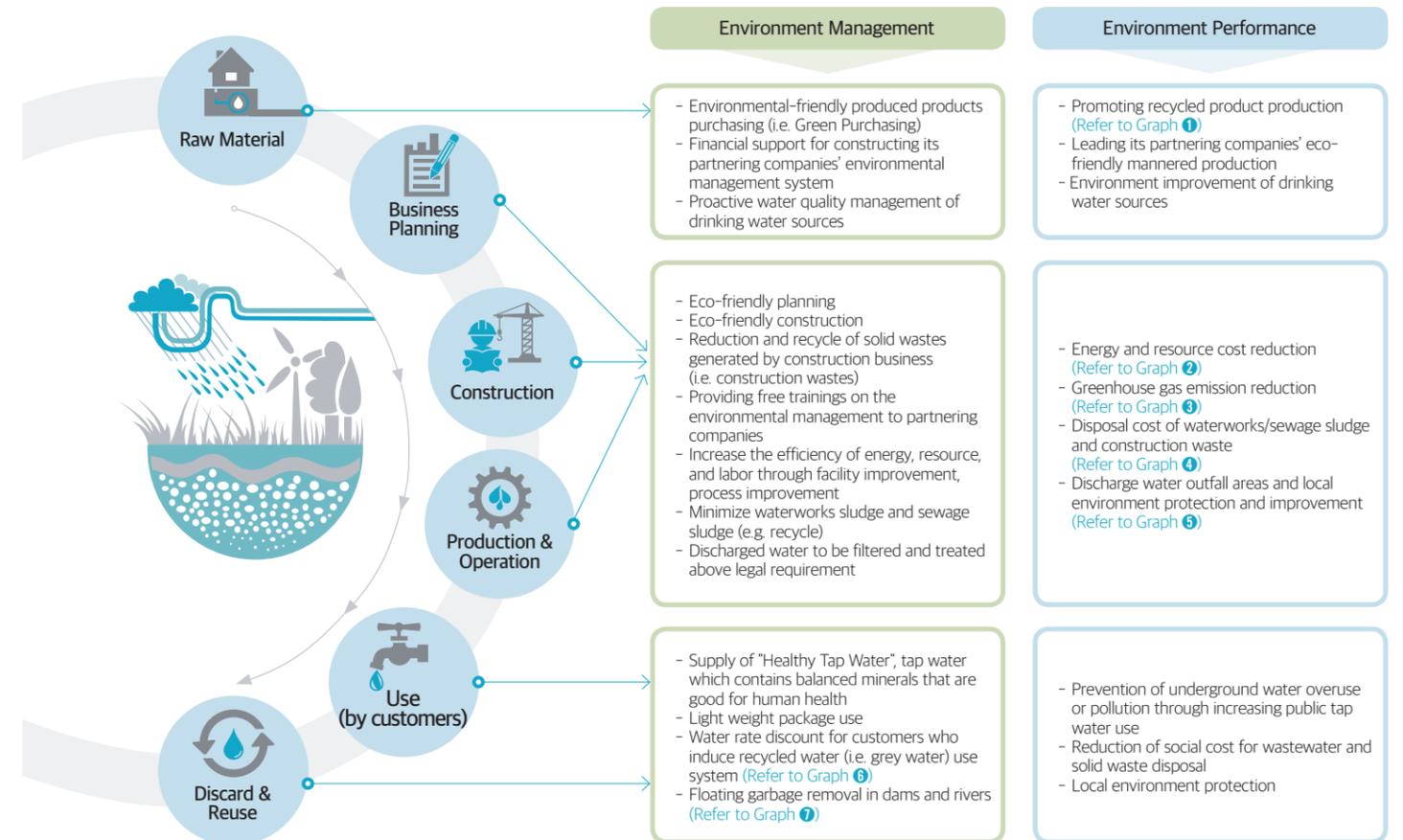
### Support Base

Fostering internal specialists in quality and environmental management

- Since 2007, training opportunities for becoming ISO certified auditors in corporate quality and environmental system have been provided to internally selected employees
- By the end of 2014, 149 ISO certified auditors in corporate quality and environmental system were fostered (as of successful candidates who passed the examination)



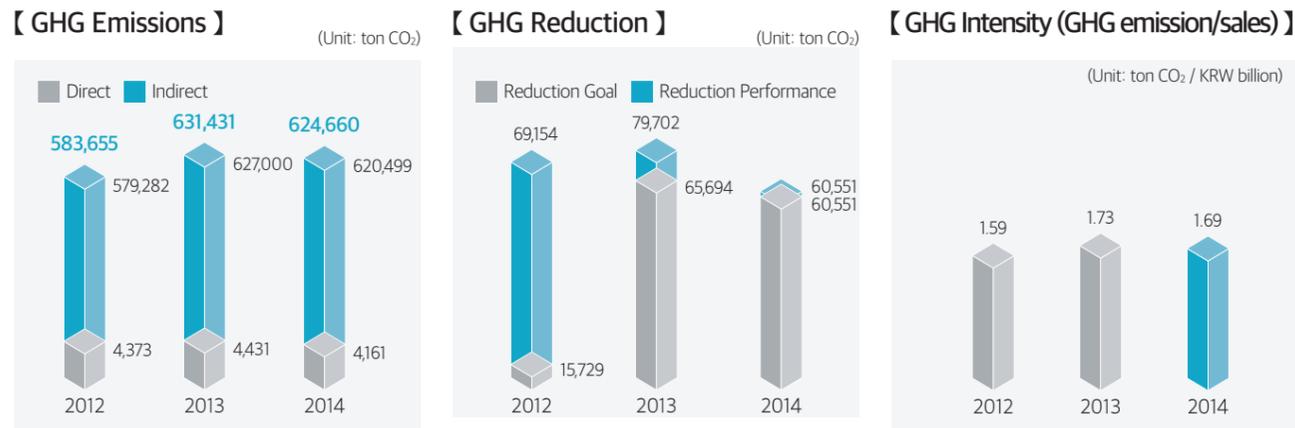
## K-water's Supply Chain & Environmental Management



# K-water's Smart Climate Change Response

## Achievement of Greenhouse Gas Emission Reduction Goal for Three Consecutive Years

K-water is a participating public company in the Korean government's national greenhouse gas (GHG) emission reduction goal management program, and has been fulfilling its commitments. Since the introduction of the GHG emission reduction goal in 2012, it has met its annual targets for three consecutive years. In 2014, K-water's GHG emissions were reduced to 624,660 ton of CO<sub>2</sub>, down 1% from 2013 through energy and resource reduction efforts. K-water's directly emitted GHG is mostly from pump operation for tap water supply, while biogenic GHG emission is not measured. GHG intensity was 1.69 (ton CO<sub>2</sub>/KRW million), down approximately 0.4 ton CO<sub>2</sub> in 2013.



\* Criteria: Average GHG emission of past 3 years (for enhancing trust in calculation of GHG emission)  
 \*\* GHG emission reduction performance of the year 2014 included parts of "early reduction" approved by the government

### BEST PRACTICE

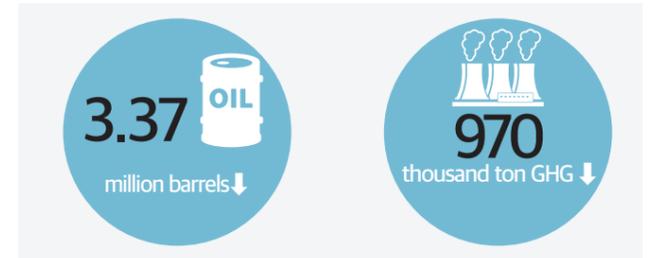
## Certified as a Global Best Company in Climate Change Response

In August 2014, K-water became the first Korean water supplier to receive the Carbon Trust Standard (CTS) Certification. This certification is public acknowledgement of K-water's efforts in climate change response. CTS is a certification system developed by UK Carbon Trust and is a globally recognized certification designated to publically acknowledge companies that systematically respond to climate change through energy management and GHG reduction activities. K-water has been placing its efforts in establishing a GHG inventory system (certified by Det Norske Veritas (Norway)), improving its water supply system through adopting high efficiency pumps, appointing a dedicated "Carbon Managers", who are selected employees designated to lead a departmental action for GHG reduction, and introducing "Carbon Task Guidelines" which suggest required GHG reduction actions for employees. As a result, K-water achieved a 4.5% reduction of GHG intensity in 2013 against 2011, resulting in its CTS certification.



## Korea's #1 Clean Energy Producer

In 2014, K-water operated a total of 90 various clean energy resourced power plants, producing 2,209 GWh of clean energy - equivalent to 3.77 million barrels of crude oil or a reduction of 970 thousand tons of CO<sub>2</sub>. We have been proactively pursuing leadership in new forms of non-environmental damaging, clean energy businesses such as the Sihwa Tidal Power Plant which has the world's largest by installed capacity, the world's first floating solar power generation system installed in dam reservoir, and hydrothermal energy using cooling and heating system. With this, K-water is planning to invest KRW 630 billion on advancing hydropower systems by 2032. As well, it places utmost efforts to localize hydropower generation system planning and production technology and is entering the global market in partnership with small-to-medium sized companies in Korea through national R&D business participation, technology sharing and other forms of cooperation.



## Profit Creation Through Clean Energy Production

The Korean government is actively participating in global efforts to respond to climate by introducing a GHG emission trading scheme in January 2015 and announcing the nation's 2030 GHG reduction goal of 37% against BAU (Business As Usual) in June 2015. Due to the GHG emission trading scheme designated to buy and sell rights to emit GHG, risks and opportunities coexist for the participating companies. K-water is developing new growth opportunities to profit from the emission trading scheme through various GHG reduction efforts. K-water is the nation's first public company which registered 12 Clean Development Mechanism (CDM) businesses to UNFCCC. K-water's 12 CDM businesses including the Sihwa Tidal Power Plant and small hydropower plants installed in 16 river weirs, is the most in the nation. Since September 2008, a total of 477,319 CERs have been sold and generated approximately KRW 1.3 billion in profit.

## 【 Clean Energy Generation Facility Operation and Development 】 【 CDM Business 】

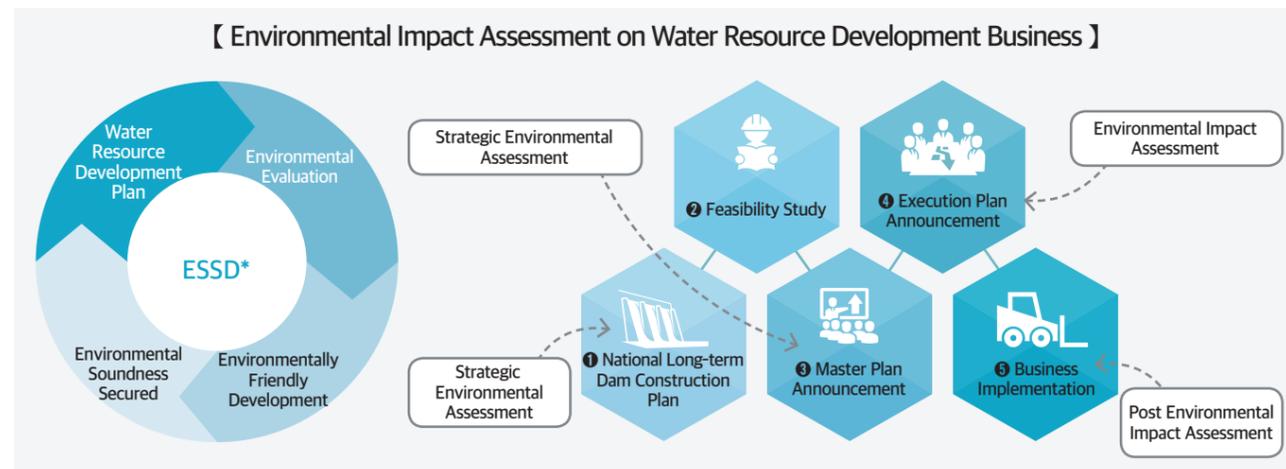
Category	Operation State		Development State		Name of Business	Subject	UN Registration Date	As of December 31, 2014		
	Contents	Capacity (MW)	Contents	Capacity (MW)				Annual Generation (MWh/y)	GHG Reduction (ton CO <sub>2</sub> /y)	
Total	-	1,340.8	-	5.0	Tidal Power	Sihwa Tidal Power Plant	June 2006	507,629	315,440	
Hydro Power	Large Hydro Power	Soyang River Dam and others (in total, 9 dams)	1,000.6	-	Small Hydro Power 1	Andong, Jangheung, Seongnam 1st Plant	Oct. 2006	13,490	8,103	
	Small Hydro Power	Andong Small Hydro Power Plant and others (41 plants)	72.8	Ilсан, Yongdam-gosan, Donghwa Plants	1.1	Small Hydro Power 2	Deacheong, Juam, Dalbang, Seongnam 2nd Plant	Feb. 2007	13,944	8,331
	Tidal Power	Sihwa Tidal Power Plant (World's Biggest)	254.0	-	-	Sihwa Wind Power	Sihwa Wind Power Plant	Nov. 2007	6,293	4,013
Wind Power	Sihwa Bangeori, Keongin Port, Kampo Dam and others (3 plants)	8.0	-	-	Small Hydro Power 3	Kosan, Pankyo Plant	Nov. 2009	5,557	2,987	
Solar	Bonpo Solar Energy and others (25 plants)	5.3	Boryeong (floating solar power), Deokso, Gumi, Koseong Plants	3.8	Small Hydro power 4	Seongdeok, Gimcheon-Buhang Dam Plant	Oct. 2010	4,963	2,759	
	Hydrothermal Energy	Hakya Water Treatment Plant and others (11 plants)	585RT*	Jangheung Dam	40RT*	Small Hydro Power 5	Angye, Hoengseong Dam 2nd Plant	Apr. 2012	4,603	3,100
					Waterworks Efficiency Improvement	Paldang 3rd Intake Facility	Aug. 2012	-	7,044	
					Hydro Power 6	Ipo, Yeosu, Kangcheon Weir	Oct. 2012	76,406	50,772	
					Hydro Power 7	Sejong, Kongju, Beakje, Sangju Weir	Sep. 2010	57,541	38,237	
					Hydro Power 8	Nakdan, Gumi, Chilgok, Kangjeong Koryeong Weir	Sep. 2010	58,170	38,654	
					Hydro Power 9	Dalseong, Hapcheon-Changnyeong, Changnyeong-Haman, Seungchon, Juksan Weir	Sep. 2010	79,597	52,892	
					Total			828,193	532,332	

\* Refrigeration Ton: Capacity of cooling and heating system using hydrothermal energy

# Environmental Protection and Value Creation for Local Communities

## Eco-friendly Development through Environmental Impact Assessment

K-water studies its environmental impacts before beginning any development project, and conducts environmental impact studies and evaluations through all key stages of business development. In 2014, K-water conducted environmental impact evaluations on the projects of Chungju Dam flood control capacity improvement, Seongduck Dam, Youngju Dam, Pyeonghail Dam, and Hantan River Dam construction.



\* Environmentally sound and sustainable development (ESSD)

## Environmental Mitigation Measures and Post Environmental Impact Assessment

K-water has established and conducted environmental impact reduction plans to minimize environmental damage on natural ecosystems, and to minimize the environmental effects of K-water's construction sites. Post environmental impact evaluation is an environment monitoring system designed to identify and evaluate any impacts caused during and after a project, and also enables K-water to respond to unforeseen environmental impacts. The result of 2014 post environmental impact assessment satisfied environmental standards across all of K-water's project sites (as per the results of K-water's post environmental impact assessment included in the appendix on page 73).

### BEST PRACTICE

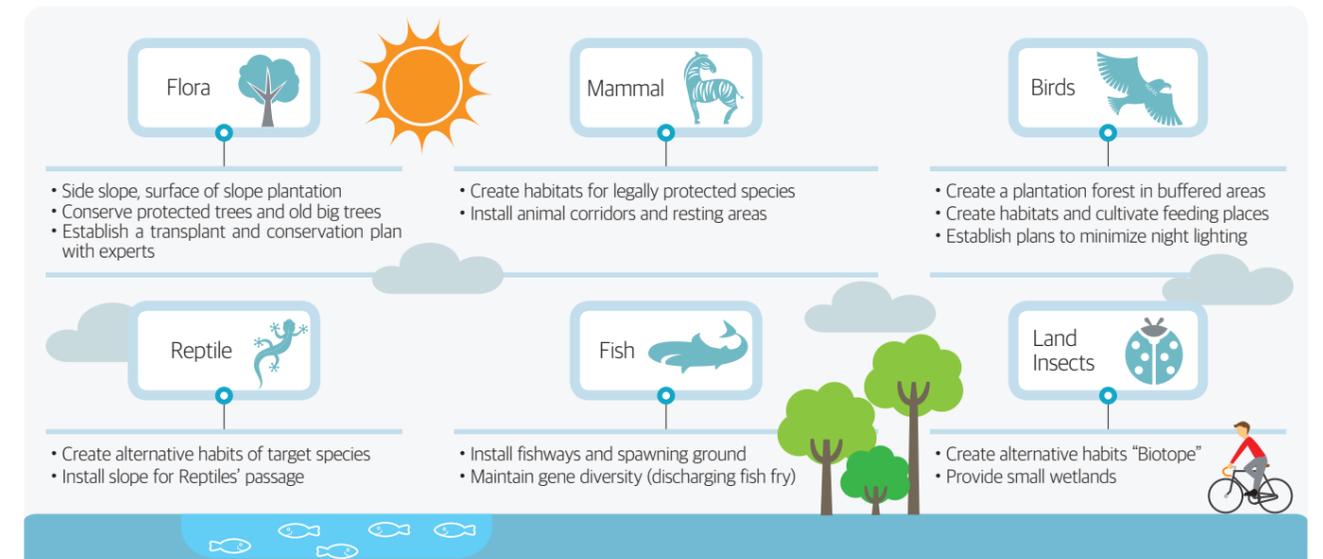
#### 2014 Excellent Company in Environmental-friendly Construction Awarded by the Ministry of Environment

K-water's Gimcheon-Buhang Dam and Hantan River Dam have received public recognition of their efforts in environmental-friendly construction including new technology development and application, fulfillment of environmental mitigation measures, etc. K-water has been acknowledged for its environmental-friendly construction business during 3 consecutive years (2012~14).



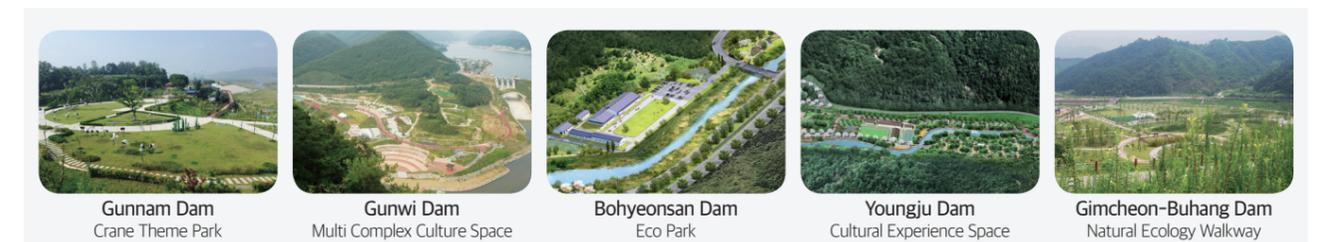
## Ecosystem Restoration and Eco-network Creation

K-water is pursuing various restoration plans for ecosystems to ensure protection of various animal and plant habitats in the surrounding areas of dams (detailed information of ecosystem restoration is included in the appendix on page 73).



## Creation of Ecological Culture Space

K-water conducts ecosystem restoration projects to mitigate environmental impacts caused during its development projects and conserve wildlife habitats. Along with the restoration projects, K-water is endeavoring to improve local residents' lives by creating ecological culture spaces in dam reservoirs and their surrounding areas that reflect local ecology, culture and history.



### BEST PRACTICE

#### Success of Korean Golden Frog Habitat Restoration in Ansan City

The Korean Golden Frog is an endangered species designated by the Korean government, which inhabits a wetland area in the center of Ansan, around the old railroad. However damage to the wetland as well as pollution and neglected wastes have caused its population to decline. K-water has successfully restored the Korean Golden Frog's habitats through various environmental improvement efforts around the old railroad area.



## Transparency and Fairness Based on Improved Stakeholders' Trust



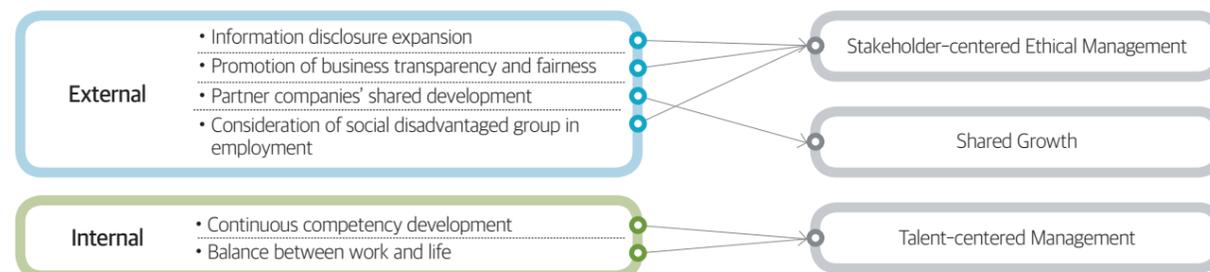
K-water acknowledges that a key element in its value creation and sustainability is through open communication, transparency and fair manner actions towards both its internal and external stakeholders. Therefore, K-water places utmost efforts on gaining the trust of its stakeholders through ethical management, talent centered management and shared growth.

### Importance of Corporate Transparency and Fair Trade

K-water, as a public service provider, understands the social cost burden when it fails to resolve disputes with its stakeholders. Also, when K-water fails to gain the trust of its employees, it can negatively impact the implementation of its strategic business plans. Therefore, gaining stakeholder trust through transparency and fairness in its business operations are fundamental elements for K-water's sustainable growth.

### K-water's Approach to Corporate Transparency and Fair Trade

K-water is endeavoring to build trust and cooperation with its various stakeholders through stakeholder-centered ethical management, talent-centered management, and shared growth with partner companies, such as in K-water's supply chain.



### K-water's Performance Management

Classification	Internal Inspection	External Inspection
Ethical Management	Measure the level of the corporate ethical management annually 87.1 points in 2014 ( 87.2 points in 2013)	Highest grade in KoBEX-SM (Korea Business Index - Sustainability Management) for four consecutive years Excellent Company in anti-corruption policy evaluation for 9 Consecutive Years.
Shared Growth	Contract assurances issued for developed technologies in cooperation with small and medium partnering companies for shared growth 19 cases issued in 2014 (8 cases in 2013)	Achieved the highest rating in the Ministry of Industry & Energy's Shared Growth Efforts Evaluation for two consecutive years Commendation of President in public procurement Commendation of Prime Minister for best company for shared growth
Talent-centered Management	Talent Fostering Rate 41.3 points in 2014 (40.5 points in 2013)	Excellence award in high school graduate recruitment essay contest by the Ministry of Strategy and Finance Challenged individuals employment quota achieved (above 3%)

## Ethical Management

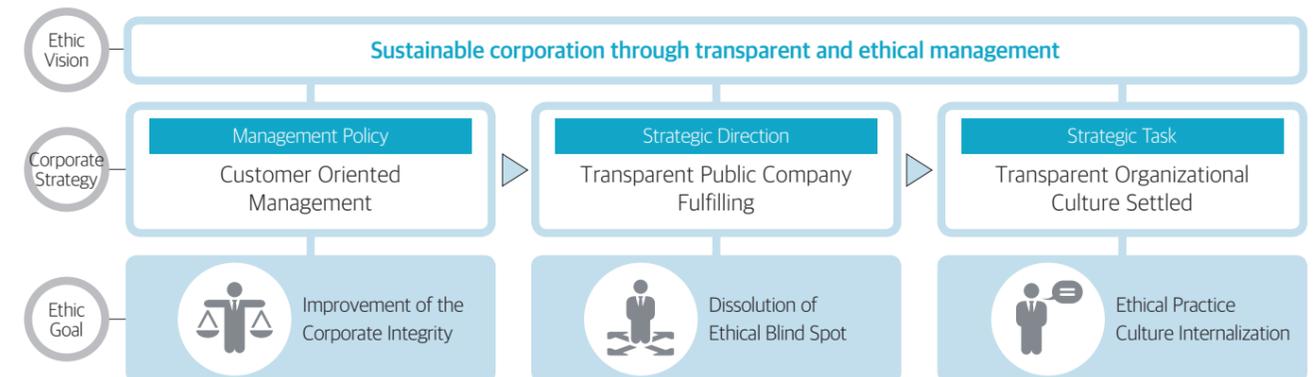
K-water is placing utmost efforts on becoming a trusted sustainable company through transparent ethical management.



### Feasible Ethic Vision and Goal Integrated with K-water's Established Strategy

K-water is proactively pursuing ethical management by putting in place the highest standards for its business value system and establishing ethical goals that are integrated into K-water's strategies. In 2009, it included "Pure" as its core value to emphasize its determination to do business honestly and create public value that is embedded in water resource. In 2014, K-water enhanced ethical management by revising its management policy, strategic direction and assignments (tasks) under its new management system, "SMART Management", in line with its core value, "Pure".

#### 【 K-water's Ethical Management Integrated with Corporate Strategy 】



### Equipment of A Code of Ethics, Promotion Organization, Implement Inspection System

K-water has in-house ethical standards in place, as promotion organization and has implemented a inspection system to ensure the achievement of its ethical goals. K-water's ethical standards comprise the Code of Ethics for the corporate ethical management, as well as a code of conduct for employees and a task integrity contract system for its board members. In 2014, it enhanced its overall ethical standards by implementing an internal informant protection system, and by extending its employee code of conduct to outsourced employees.

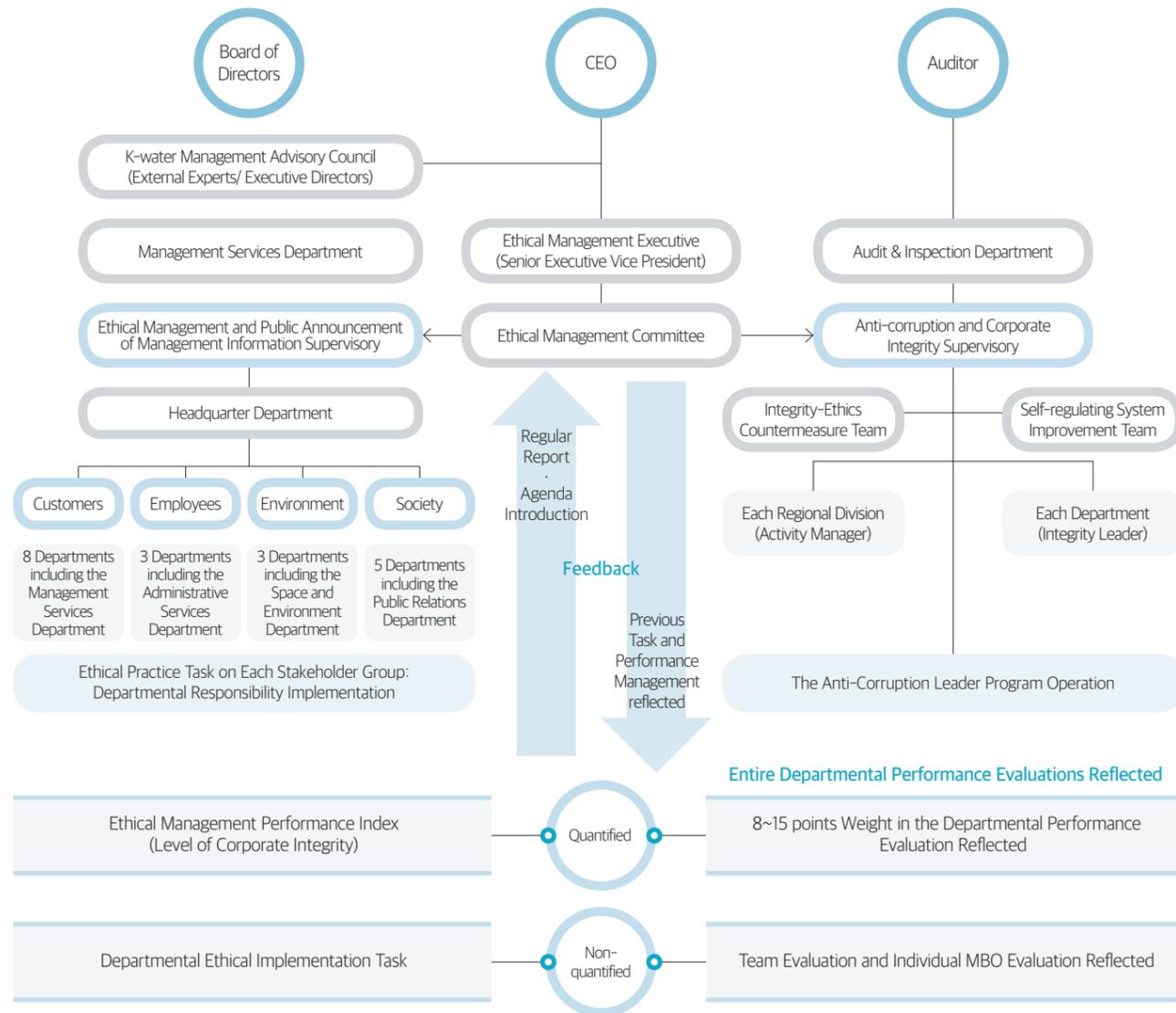
K-water's ethical management is centered on its high-level Ethical Management Committee, which flows through to the Management Services Dept. that supervises ethical management tasks, as well as the Audit and Inspection Dept. which is responsible for anti-corruption and other integrity related tasks. Also, K-water employs departmental integrity leaders and a voluntary ethical implementation task system to ensure systematic voluntary ethical activities. In 2014, K-water established the Organizational Culture Improvement Task Force to promote an ethical organizational culture, while it has been monitoring and inquiring of various ethical issues through the Ethical Management Committee.

# Ethical Management

## 【 2014 Ethical Standards Enhancement 】

Ethical Standards	Existing	Improvement
Code of Conducts	<ul style="list-style-type: none"> <li>Limited application to K-water employees</li> </ul>	<ul style="list-style-type: none"> <li>Expanded to all employees work at K-water</li> </ul>
Personnel Policy	<ul style="list-style-type: none"> <li>Demotion was excluded in disciplinary action</li> </ul>	<ul style="list-style-type: none"> <li>Demotion and promotion restrictions have been included in cases of disciplinary action</li> </ul>
Accusation Standard	<ul style="list-style-type: none"> <li>Accused party denials lead to delays in criminal process</li> </ul>	<ul style="list-style-type: none"> <li>When criminal negligence is apparent, K-water is obligated to proceed with criminal process</li> </ul>
Internal Report	<ul style="list-style-type: none"> <li>No standards exist for Whistleblower protection</li> </ul>	<ul style="list-style-type: none"> <li>Whistleblower protection standards were introduced</li> </ul>

## 【 K-water Ethical Management Promotion Organization 】



## Preventative Ethical Implementation Activities

K-water has been pursuing preventative ethical implementation through activities such as the CEO's pledge of ethical management, Executives' task integrity contracts, and integrity training activities for employees. In 2014, the ethical pledge was expanded from K-water's management to all its employees and ethical oaths were introduced for new recruits. Also, in order to promote an ethical organizational culture, K-water has enhanced the ethical training for its executives and the "Departmental Integrity Leaders", who are employees designated to lead the departmental integrity improving activities.

	Existing	Improvement
Ethics Pledge	<ul style="list-style-type: none"> <li>Conducting ethical management pledge and task integrity contract for executives</li> </ul>	<ul style="list-style-type: none"> <li>(Executive) Ethical management pledge and task integrity contract continue</li> <li>(New) all employees' pledge and new employees' oaths of ethical management</li> </ul>
Ethical Training	<ul style="list-style-type: none"> <li>Internal training for executives(2.0hr)</li> <li>Training for "Departmental Integrity Leaders" (7.0hr)</li> <li>Mandatory of ethics training as a part of regular positional and task trainings</li> </ul>	<ul style="list-style-type: none"> <li>(Executive) External commissioned education and other executive training enhancement (10.0hr)</li> <li>(Integrity leader) Competency improvement through internal and external training (21.0hr)</li> <li>Life-cycle based ethics training for all employees</li> </ul>

## Effort to Continuous Monitoring System for Eliminating Corruption Inducing Factors

K-water proactively conducts internal anti-corruption activities. Firstly, as a preventative measure, it regularly does a major system analysis to identify areas of potential corruption. Onsite departments identified by these indicators are regulated through K-water's "e-Audit system". Also, in 2014, K-water published the "Task Handbook" which contains various mock corruption cases and provides a check list to help employees identify and report potential corruption.

Also, a confidential in-house 'Integrity Help-Line' is being operated to encourage internal corruption reporting and systemically enhance standards to effectively respond to corruption, as part of its strict zero-tolerance approach towards corruption. Moreover, K-water places utmost efforts on maintaining service discipline by operating a 'Joint Inspection Team' comprised of related departments, which conducts monthly inspections operated by the head of each department during corruption-vulnerable periods. K-water has also implemented an 'unreasonable practice' inspection and audit notice system.

## 【 Inspection Model for Anti-Corruption Induction Factor Elimination 】



# Ethical Management

## Proactive Stakeholder-centered Ethical Management Practices

K-water is aware that in order to pursue proper ethical management, gaining various stakeholder's trust is needed.

In 2014, K-water carried out an 'Ethical Practice Assignment' on each of its key stakeholders. In addition, K-water expanded its open access to information, as related to "Government 3.0"\*, whilst also taking measures to secure K-water's retained information. As a result, K-water received various public recognitions as an excellent company, such as in information disclosure from the Ministry of Land, Infrastructure, and Transport, and a commendation from the President as a National Cyber Security Excellent Company in 2014.

\* Citizen centered innovation activities by Korean Government, which provide customized services to citizens

K-water's ethical practice assignments were also given public recognition as was its "Work Smart With Customer" declaration, new and renewable energy developments, and environmentally-friendly and ecological rest area for local residents.

	Improvement	Performance
Society	<ul style="list-style-type: none"> <li>Advance Information disclosure expanded (18 Cases), leading in "Government 3.0"* by management announcement and self-inspection</li> <li>Portion of employee's payment financed to socially disadvantaged group's waterworks improvement</li> </ul>	<ul style="list-style-type: none"> <li>Excellent institution in information disclosure by the Ministry of Land, infrastructure and Transport</li> <li>Social contribution grand prize, Commendation of Prime Minister and others</li> </ul>
Customers	<ul style="list-style-type: none"> <li>CEO's declaration for work smart with customer (61 assignments drawn)</li> <li>Healthy Tap Water Supply Pilot Business (Paju Smart Water City)</li> </ul>	<ul style="list-style-type: none"> <li>Excellence in shared growth by the Ministry of Trade, industry &amp; Energy achieved</li> <li>Direct Tap Water Drinking Rate Improvement (1.0%→19.3%)</li> </ul>
Employees	<ul style="list-style-type: none"> <li>Organizational culture and task process improvement through a dedicated team (26 innovation assignment conducted)</li> <li>Pursuing employee in charge of compensation task integrity pledge (open to public) and other compensation customer satisfaction activities</li> </ul>	<ul style="list-style-type: none"> <li>Award the Grand Prize for best 100 companies to work for (selected as "Korea Great Work Place" for 2 consecutive years)</li> <li>Highest scored in integrity for compensation</li> </ul>
Environment	<ul style="list-style-type: none"> <li>Cooperation with civil society and cooperation project resolving K-water's pending issues</li> <li>New and renewable energy development and expansion of environmentally friendly ecological parks for local residents</li> </ul>	<ul style="list-style-type: none"> <li>Sustainable science prize in environment awarded</li> <li>Grand prize in Korea's landscape (Kunnam)</li> </ul>

## Excellent Company in Anti-Corruption Policy Evaluation for 9 Consecutive Years

K-water places utmost efforts on establishing a company-wide anti-corruption and integrity culture, with its anti-corruption infrastructure being expanded by an integrity incentive system and internal inspections. As a result, K-water has received public recognition of 'excellence' in the Anti-Corruption Policy Evaluation from the Anti-Corruption and Civil Rights Commission of Korea for 9 consecutive years, since 2006.

K-water's results on the 'external integrity index' and 'customer policy evaluation' increased from the previous year through customer-centered business method improvements, a company-wide integrity campaign, and other external integrity awareness efforts. However, the results on the 'internal integrity index' declined given a need for more ethical management promotion efforts. K-water will place more efforts to create an ethical organizational culture.

# Talent-based Management for Sustainable Growth

K-water's sustainable management starts with its people. With this belief, K-water places utmost efforts on securing, fostering and retaining the best talent for K-water's sustainable growth.

## Efficient Human Resource Management through Estimation of Necessary Manpower Integrated with Strategy and Open Recruitment

K-water's employment system is aimed at minimizing talent imbalances, recruiting high quality employees for project execution, and predicting requisite employee levels as sourced through various employment channels.

Prospects for Necessary Manpower	Mid-Long Term Employment Plan
<ul style="list-style-type: none"> <li>Prospect of necessary manpower in water resource, waterworks, overseas business for the next 5 years                             <ul style="list-style-type: none"> <li>(Water Source) New dam construction, disaster safety enhancement</li> <li>(Waterworks) New construction business prediction</li> <li>(Overseas) Indonesia, Georgia &amp; other new business</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>(Operation Direction) Strategy business response in suitable time, part time employment and social fairness considered recruitment with integration of government policy</li> <li>(Mid-long Term Plan) Global water management, 512 people will be recruited from 2015 to 2018 for water service equity and other task assignments conduct</li> </ul>

In particular, K-water has continuously employed new employees such as high school graduates for the organization's vitality and long-term growth prospects.



**245 people are newly employed for the last 3 years in average.**

### 【 New Employees Recruit 】

(Unit: People)



## Open Employment centered on Competency and Talent

K-water has one of the most open employment policies amongst Korean public companies. Candidates who hold official language results, can apply regardless of sex, age, educational background or certifications. Based on this, new recruit's competencies and personalities are evaluated through K-water's Task Ability and Competency Inspection for high school graduates, experience essays and interviews, and internships. K-water places utmost effort on recruiting the most suitable talents. In addition, K-water operates a specialised recruitment system to recruit experts who have the requisite competency for particular fields.

## Social Responsibility Fulfillment and Effort to Respect Diversity during Recruitment Process

As a public company, K-water provides a wide range of employment opportunities, including part-time employment and socially disadvantaged are considered for employment, as part of its social responsibility fulfillment. In relation to these efforts, in 2014 K-water exceeded its 3% for the disabled people employment obligation target, and received the Department of Veterans Affairs "Excellence" award in the national high school graduate employment essay contest held by the Ministry of Strategy and Finance.

## Talent-Based Management for Sustainable Growth

<ul style="list-style-type: none"> <li>Female recruitment goal</li> <li>Additional passes until it reaches 30% in Stages 1 &amp; 2 of the recruitment process recruitment</li> <li>Female interviewer mandatory attendance in open recruitment</li> </ul>		<ul style="list-style-type: none"> <li>Recruitment for Challenged Individuals was conducted twice in 2014 against 2013 (8 people)</li> <li>Operated different foreign language recruit requirement for hearing-impaired applicants in order to ensure balanced employment</li> </ul>
<ul style="list-style-type: none"> <li>Local talent recruitment goal (40%)</li> <li>Additional passes until it reaches 40% in 1, 2 stages of recruitment</li> <li>178 local talents were employed (11% increase compared to 2013)</li> </ul>		<ul style="list-style-type: none"> <li>58 war veteran were recruited</li> <li>Awarded excellent enterprise in war veteran recruitment by Korean Patriots and Veterans Administration Agency in 2014</li> <li>Total 448 people (largest among the nation's public companies, 8.7% of total employees)</li> </ul>
<ul style="list-style-type: none"> <li>Increased high school graduate employment due to the mid&amp;long term high school graduate employment plan (86 graduates, 21% increased compared with 2013)</li> <li>240 high school graduates were employed over the past 5 years</li> </ul>		<ul style="list-style-type: none"> <li>Socially disadvantaged individual consideration</li> <li>Job sharing in surrounding areas of dams (2,819 people)</li> <li>70 permanent employees (formal existing temporary employees)</li> </ul>

Also, K-water diversifies working conditions to provide more employment opportunities and also to proactively fulfill government guidelines. Flextime work positions were identified through internal and external environment analysis, and operation standards were established. Through these efforts, 12 new flextime jobs were created in 2014.

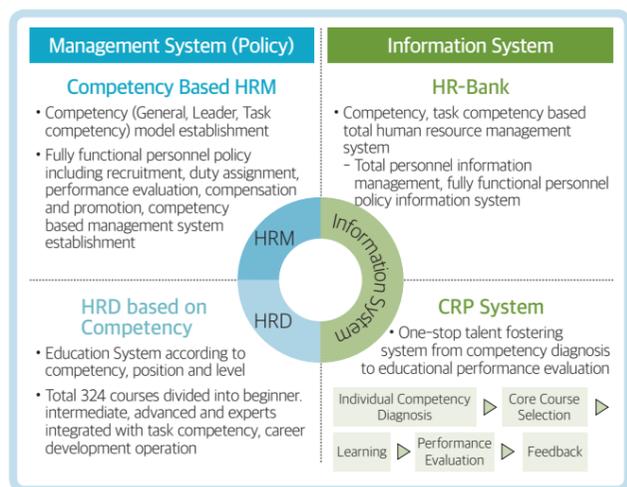
<b>K-water's Unique Task Planning</b>	<ul style="list-style-type: none"> <li>4 Fields: Water quality inspection, accounting, state-owned property management and discharged water treatment facility management.</li> </ul>
<b>Flextime Employee's Operation Standard Establishment</b>	<ul style="list-style-type: none"> <li>Same benefit in personnel evaluation treatment and welfare with regular workers (time scale are applied in payment, tenure of office)</li> </ul>

"12 New Flextime Employees (3.4% of New Employment) were hired to Proactively Fulfill Government Guidelines"

### Constant Capacity Development through Human Resource Management based on Competency

"Talent Fostering Index in 2013 40.5%  
↓  
41.3% in 2014 (Increase of 0.8%)"

K-water has created a competency model and systemically manages human resources based on competency K-water effectively operates and manages an information system "HR-BANK"\* designed for total management including personnel operation, payment, welfare, education



\* HR-BANK: K-water's information system for total human resource management and services

K-water places effort on fostering balanced career development for its employees which reflects both the individual's and the organization's needs. K-water defines excellent talent through analysis of special expertise, appropriate attitudes, and high performance, and matches these up with K-water's own competencies. In order to evaluate professional competencies for systematic management of excellent talent, K-water effectively supports its employees' competency development through its own competency development program named CRP(Competence Reinforcement Plan) and profile match-up.

**64 training hours per person**  
**Total 12,593 trainees**  
**Average education budget per person, KRW 1.736 million**

### 【 K-water Education System 】

Rank	Organizational Culture and Others	Leader Competency	Task Competency		Level
			Core Task Competency	Advance Task Competency	
Level 1	Core Value	Newly Appointed Director	Negotiation and conflict resolution	Domestic and international outsourced training	Advance
Level 2	Innovation	Newly Appointed General Manager	Documenting and reporting	K-water Expert Course	Intermediate
Level 3		Newly Appointed Manager		Group training by business unit	
Below Level 4	Customer Satisfaction	Newly Appointed Senior Assistant Manager	OS( Excel, Power Point) Languages	Understanding of task, Cyber onsite OJT	Beginner
	Integrity	Newly Appointed Junior Assistant Manager			

In 2014, this talent fostering system is designed to prepare K-water and its employees for changes in the future and enhance work-force education for improving on-site problem solving. The fields of education such as the Integrated Water Resource Management (detailed on page 31) were chosen to proactively respond to changes in the future and foster talents through specialist courses. K-water is also enhancing safety and efficient operation management of facility training for operators. K-water provides a customized education system (3 years) that is suitable for existing management positions; employee's other task knowledge and employee's career. Also, K-water continuously operates a customized leadership training course - "Leadership Academy" - to improve the problem solving skills of future leaders. In 2014, "Change Management Training" was introduced to create sympathy and awareness of a leader's role and management direction.

### 【 K-water Leadership Academy\* 】



\* Leader's Academy: A case study and problem solving centered training course, which applies the Development Center (DC) Teaching Methods K-water has developed and used customized study cases for its employees

\*\* Lack of Competency Development Training: Cyber training and books provided to improve areas of insufficient competency

## Talent-Based Management for Sustainable Growth

### Motivation of Performance Improvement through a Fair Compensation System

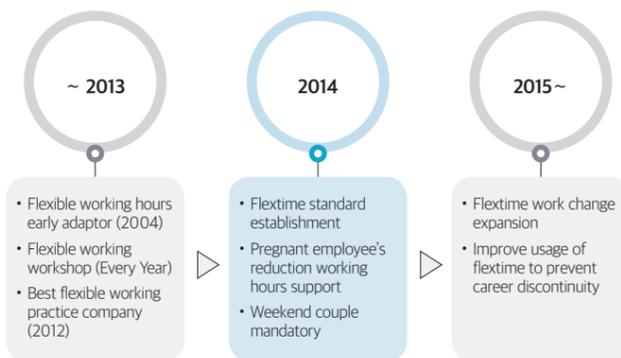
K-water has a competency, position and performance-based compensation system. All employees' payments are decided based on their annual performance evaluation. The board members sign a management contract with the CEO, and the rest of K-water's employees - including the Vice President - are compensated based on an internal business performance evaluation. Employees are evaluated in accordance with a Balanced Score Card, which includes evaluation indicators in relation to customers, finance, processes and learning and development.

K-water has improved the fairness and transparency in the way it deals with personnel by establishing clear performance evaluation guidelines. K-water places utmost effort on operating its human resource policy in an efficient manner through the "Tranceference Mileage Program". As a result of its efforts, K-water's Human Resource Satisfaction Index in 2014 was 72.3 points, a 10.6% increase from the previous year.

### K-water's Human Resource Management for the Work and Life Balance of its Employees

K-water's continuous effort to create a family-friendly organizational culture has included the introduction of various programs and policies, including a female worker friendly system, flexible working hours, curtailment of its long-hour working culture, and a customized welfare system.

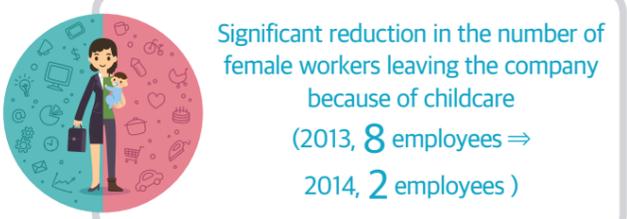
K-water was one of the first state-owned companies to introduce a flexible working hour system and is endeavoring to improve the system. In 2014, in order to expand its flexible working hour system, K-water improved its flexible working hour policy and conducted an analysis of the flexible working hour operation which showed that there was an increase from the previous year. Also, K-water endeavors to ensure career continuity by reducing unnecessary overtime working hours, creating an efficient organizational culture through task process improvements, and easing the burden of childcare via a female worker friendly program. In particular, K-water has introduced and is operating a customized parental leave system. In addition, K-water has improved its parental leave system by introducing a concurrent substitute worker arrangement. K-water also operates various other programs including infertility leave, infertility treatment leave, prenatal diagnosis and paid shortened working hours for health of pregnant women. Maternity leave (up to 90 days before/after birth) is guaranteed and childbirth assistance is provided. Employees give notice of maternity leave to



#### 【 Parental Leave Status 】

	Classification	2010	2011	2012	2013	2014
Total	Personnel applied for leave (number of people)	8	24	26	37	33
	Personnel on leave (number of people)	8	24	26	37	33
	Reinstatement Rate (%)	100	100	100	100	100
	Maintenance Rate (%)	87.5	78.8	80.8	97.3	100
Male	Personnel applied for leave (number of people)	2	3	6	6	1
	Personnel on leave (number of people)	2	3	6	6	1
	Reinstatement Rate (%)	100	100	100	100	100
	Maintenance Rate (%)	100	66.7	66.7	100	100
Female	Personnel applied for leave (number of people)	6	21	20	31	32
	Personnel on leave (Number of people)	6	21	20	31	32
	Reinstatement Rate (%)	100	100	100	100	100
	Maintenance Rate (%)	83.3	81	85	96.8	100

ensure a temporary replacement for their position can be arranged. K-water also considers the period of parental leave as employee's regular tenure of office for employees with more than 3 children and has introduced an in-house kindergarten. As a result, the number of female employees resigning for the purposes of childcare has been reduced significantly.



### Strong Female Presence in Management

K-water is endeavoring to break the 'glass-ceiling' via core task positioning for female talent. In particular, K-water has introduced a "Female Recruitment Goal", set at 30% of the total number of new recruits, and has achieved this target for the past 5 years. Furthermore, female employees are now well represented in the various core functions of the business including planning, financing, auditing, and personnel. As a result, in 2014 there was 22% increase in female managers compared with the previous year. As a result of its efforts, K-water was commended in 2014 for "Best practice in female talent management" by the Ministry of Gender Equality and Family. Salaries for females are basically the same as that for males, on the basis of position and year of entry into the company.

### Employee's Needs Met through Various Welfare System Operations

K-water's business sites are spread across Korea, requiring some employees to work on a rotating basis. In order to solve employees' housing issues, K-water provides company housing for single employees. K-water also endeavors to support employee's welfare with a strong belief that 'healthy employees will supply healthy water'. In this regard, K-water operates various health management programs including a smoking clinic, an obesity clinic and an online mental health checkup system which was introduced in 2014. K-water also provides annual health checkups to its all employees. The percentage of employees with medical issues in 2014 was 37.3%, similar to that of the previous year. K-water also provides various support programs including asset management, real-estate management and business establishment assistance for retiring employees to ensure they can prepare for the next chapter in their lives. K-water also operates various welfare programs to take into account various other needs of its employees, so that they know they are in great work place. All employees receive the same benefits.

#### 【 Employee's Needs Reflected Welfare System 】

Classification	Operation System	Contents
Health	Medical Checkup	<ul style="list-style-type: none"> <li>Operating customized medical checkup system</li> <li>Provide discounts through arrangement with dentists and ophthalmologists near the office</li> </ul>
	Group Insurance	<ul style="list-style-type: none"> <li>Cover fatal accident or death compensation, hospitalization, medical expense, cancer diagnosis expense, etc.</li> </ul>
Leisure	Recreational Facilities	<ul style="list-style-type: none"> <li>Operate two recreational centers</li> <li>Use recreational facilities at a discounted price by corporate membership</li> </ul>
	Leisure Club	<ul style="list-style-type: none"> <li>Initiate voluntary club activities and leisure activities of employee</li> </ul>
Stable Residence and Living	Housing Support	<ul style="list-style-type: none"> <li>Operating boarding houses for single employees</li> <li>Operating housing support for employees with families</li> </ul>
	Housing/Living Expense	<ul style="list-style-type: none"> <li>Lend housing loan expense to support residence of employees</li> <li>Lend 'Living Stabilization Expense' in emergencies that need money</li> </ul>
	Education for Children	<ul style="list-style-type: none"> <li>Operate a day care center in the workplace</li> <li>Tuition support for high school children</li> </ul>
	Expenditure for Congratulations and Condolences	<ul style="list-style-type: none"> <li>Support expense for congratulations and condolences (fund), childbirth grant, support expense for disabled children, etc.</li> <li>Support expense for flood and fire damage, etc.</li> </ul>

# Shared Growth

K-water endeavors to grow and develop with partner companies within its supply chain.



Presidential Commendation of Public Procurement (Oct. 2014)  
Prime Minister Citation of Best Shared Growth Company (Nov. 2014)

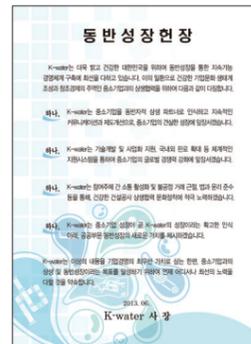
### 【 Shared Growth Rating 】



\* 59 state owned companies evaluated: "Rating System Excellent-Satisfactory-Average-Improvement"

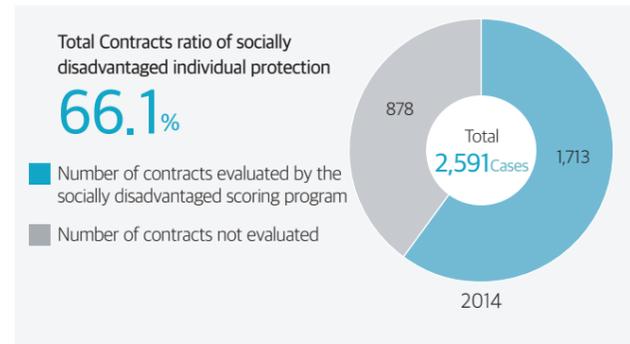
### Shared Growth System

K-water continuously endeavors to grow with small-to-medium sized companies. K-water's partner companies can be separated by way of raw material companies, and facilities inspection and maintenance companies.



K-water has introduced a merit system to ensure support for socially disadvantaged companies (e.g. SMEs (Small and Medium Enterprises), companies owned by females, social-oriented companies) when outsourcing. K-water expanded its joint venture contract amount from KRW 8.7 billion to 26.2 billion in 2014. Regional contracts stood at KRW 90.99 billion, 8.8% of total contacts (KRW 833 billion).

### 【 Socially Disadvantaged Individual Protection and Preference Performance 】



### Creation of Shared Growth through Improvements in Fair Trading Practices

K-water conducts various shared-growth activities such as developing its departmental growth plans in conjunction with an annual onsite meeting of the "Construction Companies Shared Committee" which comprises 69 construction companies and subcontractor companies. K-water has also introduced a "System Improvement Team", including an external specialist, which identifies areas for improved fair trading practices. In 2014, 31 items in regards to fair trading practices were improved.

K-water has also established an "Unfair Trading Subcontract Conflict Resolution Center" to ensure 100% use of standard subcontractor contracts (with a total 81 projects and 329 cases being dealt with in 2014). To prevent payment delays to subcontractors, K-water was one of the first state owned companies to introduce a monitoring system in conjunction with various financial institutions (involving 9 Construction Projects worth a total of KRW 67.9 billion).

### Environmental Management System Creation Support for Partnering Companies

K-water's environmental responsibility expands from its own responsibility to its entire supply chain. In this regard, K-water supports small-to-medium sized partner companies to pursue environmentally friendly practices. K-water's support includes environmental management training, an environmental technology support service, certification evaluation, certification fee support, and post management fee support to create eco-friendly partnerships.

Through these customized environmental management systems, K-water's partner companies can improve their business performance through compliance processes, risk management and response competencies, environment management infrastructure, and eco-friendly products and services. Environmental management gains are also expected to accrue in such areas as productivity, sales and costs. K-water has supported 17 partner companies in regards to environmental management system certification, and will continue to enhance the environmental soundness of its entire business via an eco-friendly supply chain.

### K-water's Unique Shared Growth Model: A One Stop Support System

K-water has created and is operating a unique shared growth model; a "One Stop Support System" in accordance with K-water's mid-to-long term strategies to foster small-to-medium sized companies in the water industry. The One Stop Support System is designed to provide support from technology, to marketing, and financial support. K-water was the first Korean company to announce a list of suitable technologies to develop small and medium businesses (ranging across 13 technologies, and with associated financing of KRW 1.8 billion) and including a "Technology Development Notice System". Notably, with a dedicated assignment manager, and some KRW 2.9 billion in technology development support, there was an 11% increase in customized technology development and technology transfer in 2014 versus that of the previous year.

### 【 Cooperation to Improve Fair Trading Practices 】

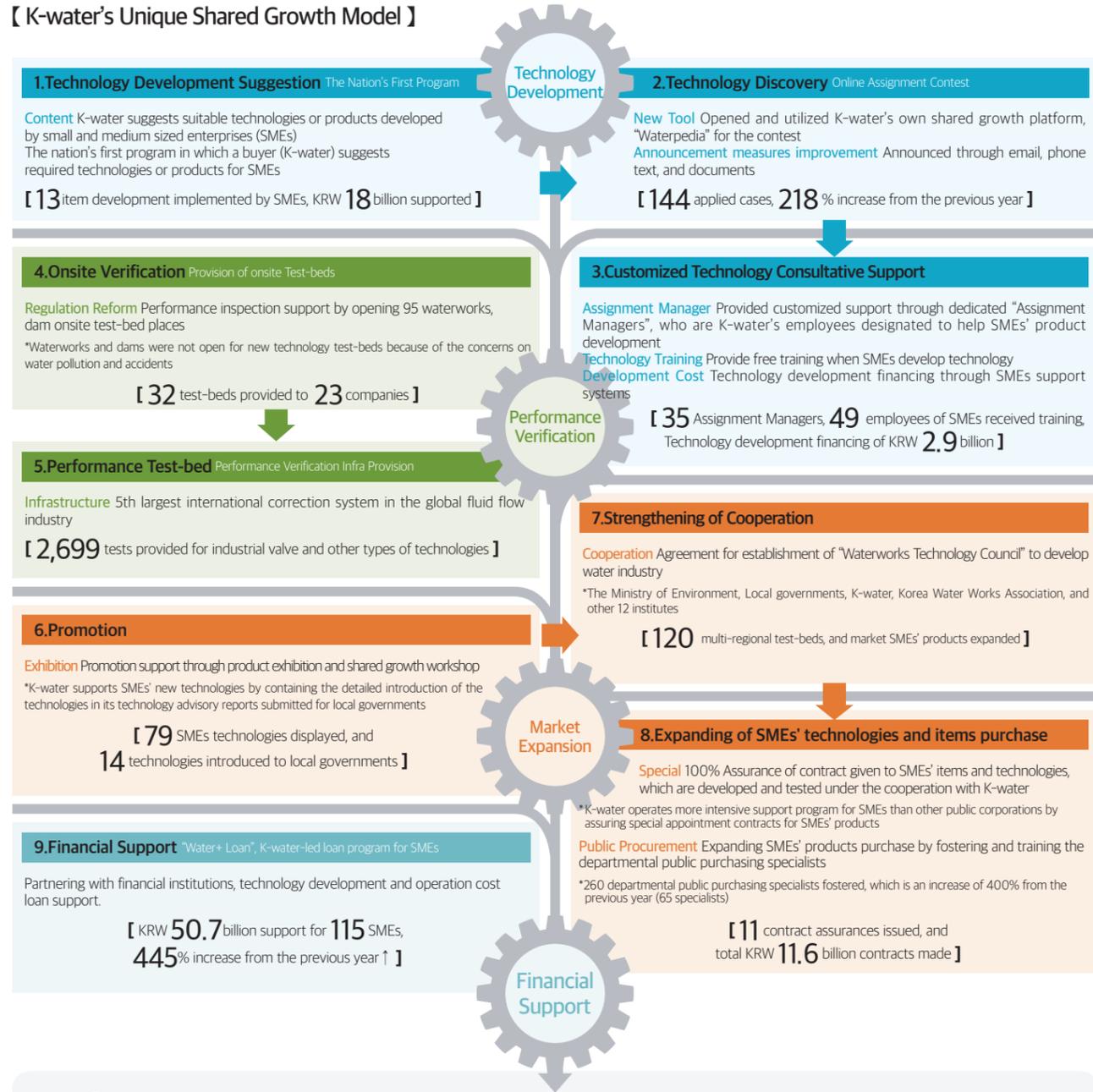
- The Construction Companies Shared Committee**
  - K-water, 69 construction companies and subcontract companies
  - Including onsite departmental annual shared growth plan, shared growth activities
- System Improvement Team**
  - K-water department in charge (15 people), external advisory (5 people)
  - Unfair trading practice improvement assignment identification, improvement and feedback
- Construction Site Meeting**
  - K-water, 16 construction companies
  - Construction System Improvement Sharing and on site meeting

**31 Items of Unfair Trading Practice Improved**

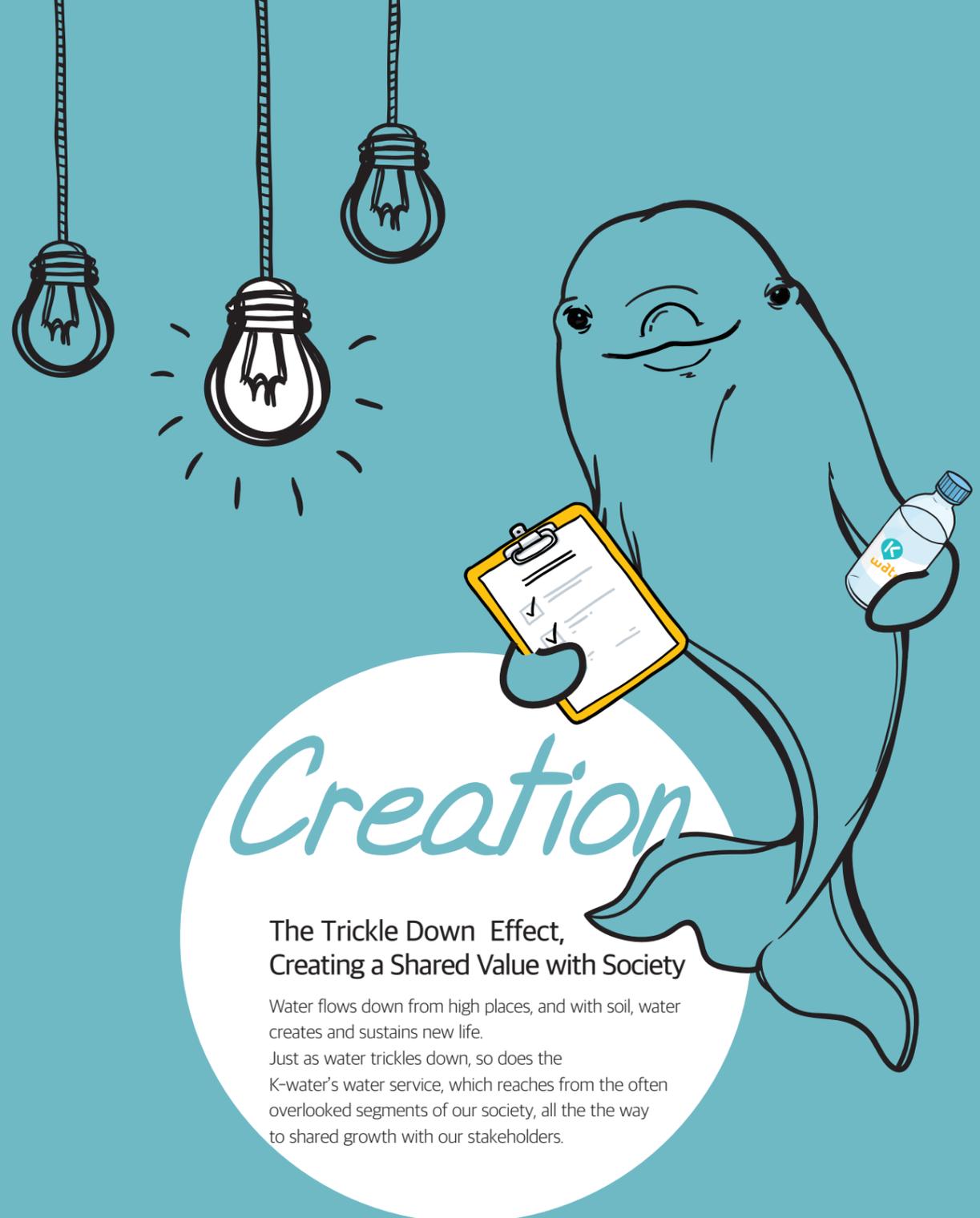
- Task practice 6 cases
- System improvement 13 cases
  - Construction fee improvement 3 cases
- Subcontract management improvement 9 cases

# Shared Growth

## 【 K-water's Unique Shared Growth Model 】



-  **(Technology Development)** The nation's first program, which a buyer (K-water) suggests SMEs develop technologies or products customized for its needs →13 items developed and KRW 1.8 billion support
-  **(Regulation Reformation)** 32 test-beds opened for SMEs, using K-water's waterworks and dams, by reforming the security management regulation on dams and waterworks  
\* K-water's waterworks and dams were not open for security before the regulation reformation
-  **(Market Expansion)** 11 contract assurances issued and KRW 11.6 billion contracts made 352% increase from the previous year)
-  **(Financial Support)** 115 SMEs supported, which amounts to KRW 50.7 billion through "Water+ Loan" (445% increased from the previous year)



# Creation

## The Trickle Down Effect, Creating a Shared Value with Society

Water flows down from high places, and with soil, water creates and sustains new life.  
 Just as water trickles down, so does the K-water's water service, which reaches from the often overlooked segments of our society, all the way to shared growth with our stakeholders.

## SHARED SUSTAINABLE VALUE

### Appendix

- 68\_2014 Economic, Environment, and Social Performance Summary
- 79\_Third Party Assurance
- 82\_GRI G4 INDEX
- 85\_ISO 26000
- 86\_Code of Ethics, Green Management Policy, Customer Charter Statement, and Innovation Vision Statement
- 88\_UN Global Compact's 10 Principles Support

# Economic Performance

## Financial Performance

### 【 Statement of Financial Position 】

(Unit: KRW in millions)

Category	2010	2011	2012	2013	2014	
Asset	Current assets	3,431,065	4,352,289	5,213,014	5,785,518	5,631,464
	Non-current assets	15,211,945	19,073,626	19,803,369	19,818,389	19,807,635
	Total	18,643,010	23,425,915	25,016,383	25,603,907	25,439,099
Liabilities	Current liabilities	1,085,573	1,351,280	2,722,666	3,358,548	2,161,443
	Current liabilities	6,999,797	11,229,656	11,055,255	10,639,904	11,299,992
	Total	8,085,370	12,580,936	13,777,921	13,998,452	13,461,435
Equity	Capital stock	6,672,837	6,694,987	6,815,621	6,898,731	7,016,965
	others	3,875,964	4,140,105	4,411,461	4,697,176	4,945,222
	Equity attributable to owners of the Company	10,548,801	10,835,092	11,227,082	11,595,907	11,962,187
	Non-controlling interest	8,839	9,887	11,380	9,548	15,477
	Total	10,557,640	10,844,979	11,238,462	11,605,455	11,977,664

\* Consolidated statement as per application of Korea-International Financial Reporting Standards (K-IFRS) since 2011

### 【 Condensed Income Statement 】

(Unit: KRW in millions)

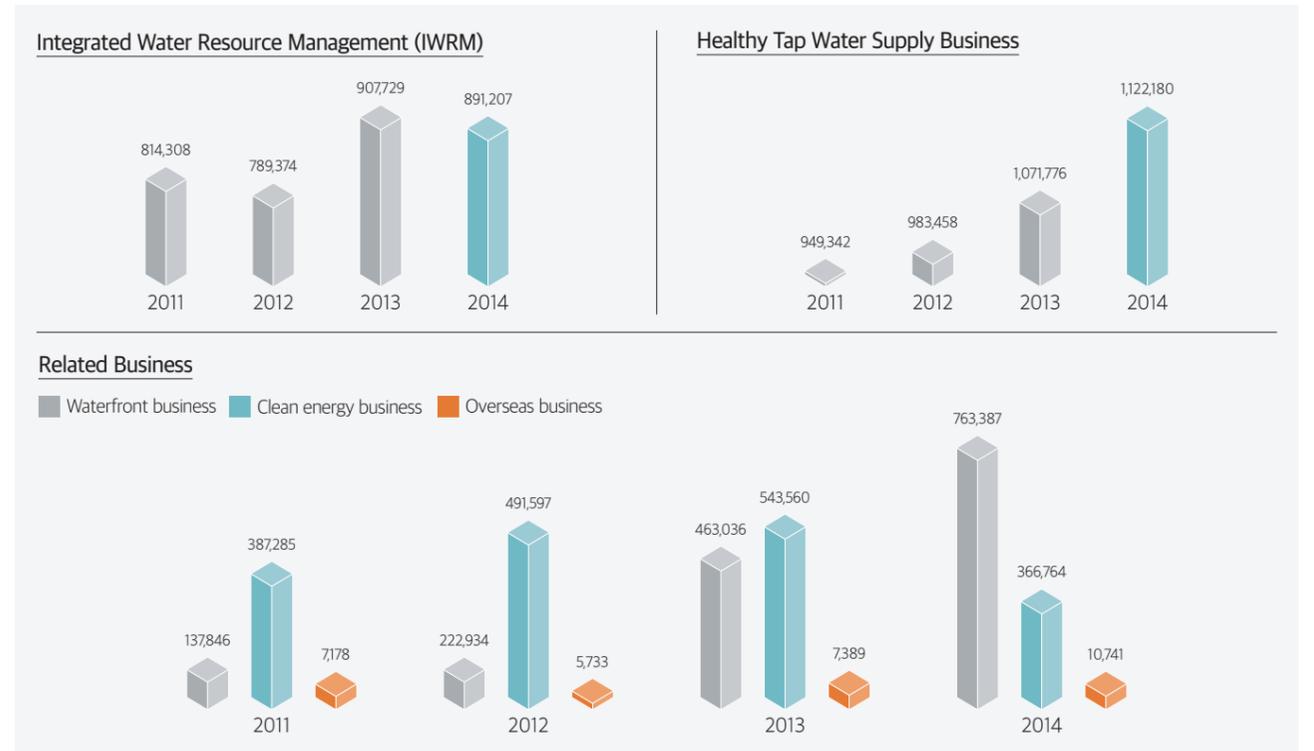
Category	2010	2011	2012	2013	2014
Revenue (Sales)	6,399,217	6,325,786	3,668,445	3,645,387	3,698,372
Cost of sales	6,059,690	5,843,977	3,117,070	2,989,350	3,178,494
Selling, general and administrative expenses	94,638	115,403	117,048	123,920	129,419
Gross profit	244,889	366,406	434,327	532,117	390,459
Other income	26,685	242,315	296,308	315,516	323,280
Other expenses	6,221	8,881	3,856	43,087	6,826
Other gain	-947	-2,557	-5,296	2,078	-13,221
Financial income	136,673	87,393	195,182	97,870	91,264
Financial costs	213,929	317,628	515,371	449,185	400,656
Share of profit of equity accounted investees	-2,451	219	395	1,565	33,248
Profit before income tax	184,699	367,267	401,689	456,874	417,548
Income tax expense	36,551	74,000	93,394	108,756	118,222
Net profit	148,148	293,267	308,295	348,118	299,326
Other comprehensive income	-103,968	-7,251	13,386	-9,901	18,874
Total comprehensive income	44,180	286,016	321,681	338,217	318,200
Profit attributable to owner of the company	148,148	293,333	308,247	346,443	298,554
Profit attributable to non-controlling interest	-	-66	48	1,675	772

\* Consolidated statement as per application of Korea-International Financial Reporting Standards (K-IFRS) since 2011

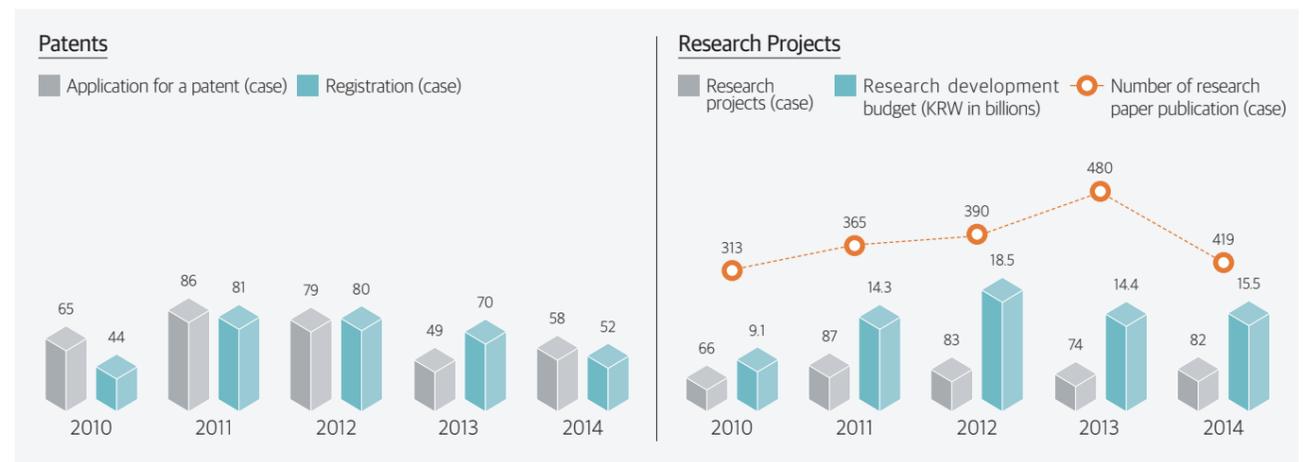
## Sustainable Growth through Innovation

### 【 Business Revenues 】

(Unit: KRW in millions)



### 【 Patent and Research Projects Achievement 】

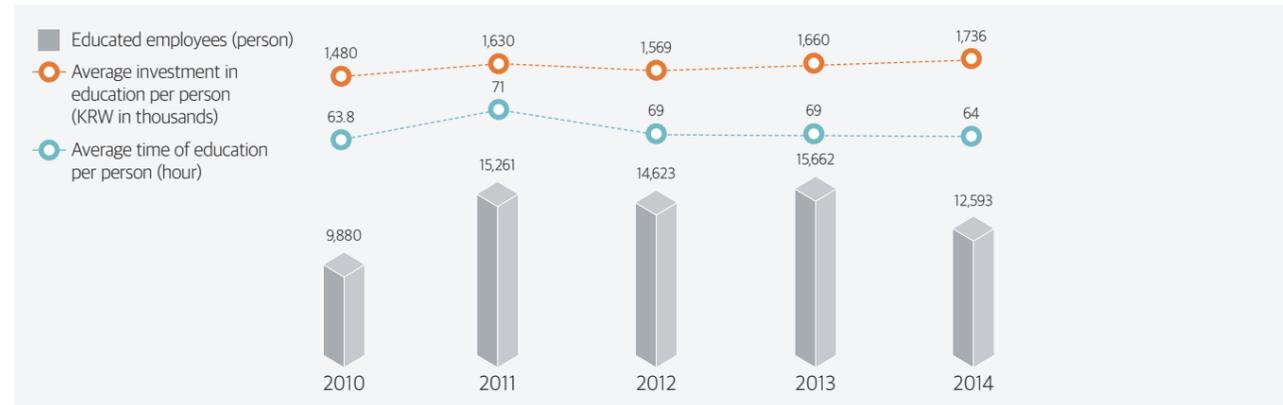


# 2014 Economic, Environment, and Social Performance Summary

## Economic Performance

### Sustainable Growth through Innovation

#### 【 Employee Education Status 】

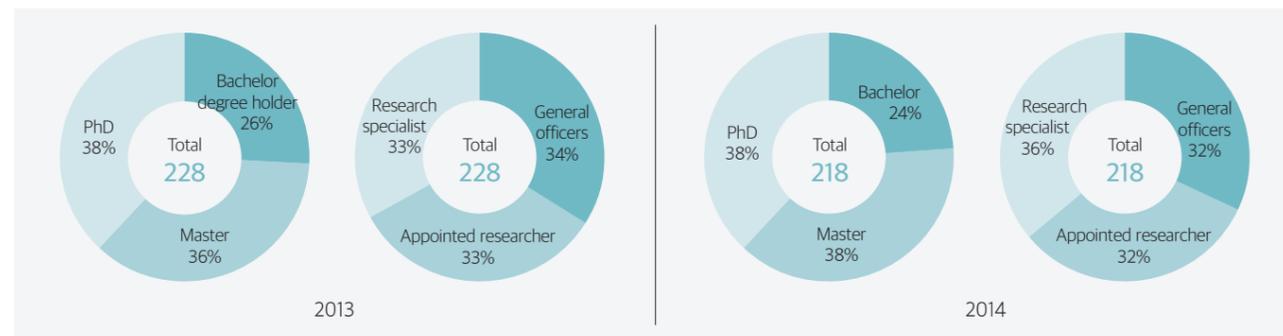


#### 【 Average Time of Education per Employee 】

(Unit: hour)



#### 【 R&D Specialist Management 】

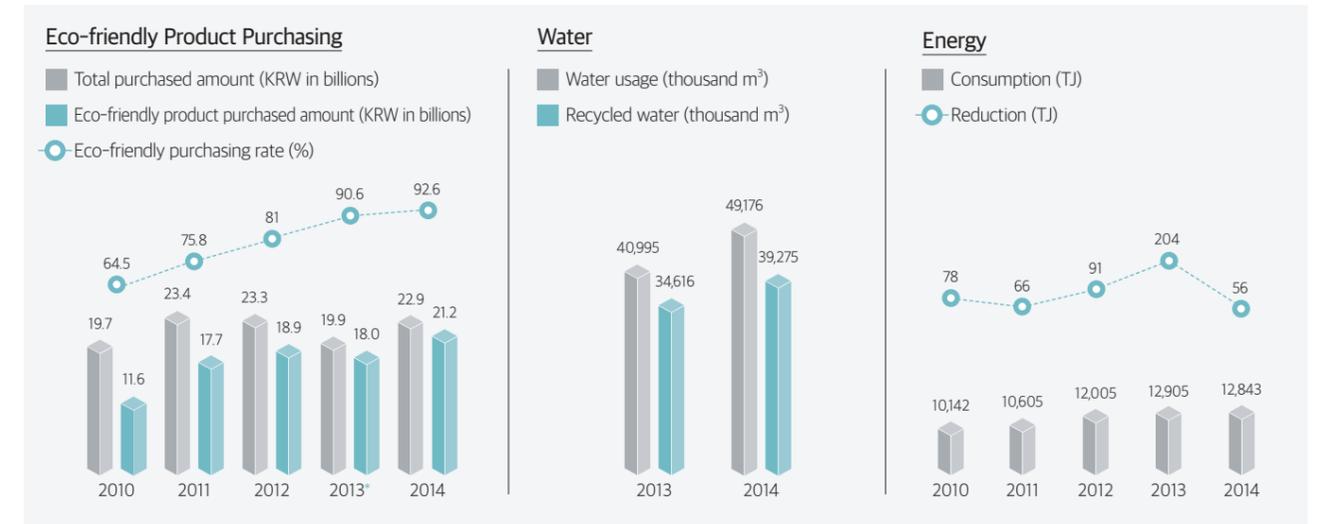


# 2014 Economic, Environment, and Social Performance Summary

## Environmental Performance

### Enhanced Environmental Management over the Entire Corporate Supply Chain

#### 【 Input 】



\* Energy reduction performances made over 2013~14 were counted in the performance of 2013

#### 【 Output 】

Category	2010	2011	2012	2013	2014	Discharge standard*	
Drinking waterworks	BOD(mg/l)	1.8	2.1	2.1	2.0	1.7	10 and less
	COD(mg/l)	3.8	4.1	4.1	3.3	3.4	20 and less
	SS(mg/l)	3.1	3.2	3.2	2.4	1.6	10 and less
Sewage treatment plant	BOD(mg/l)	1.9	2.6	1.9	1.5	1.8	5 and less
	COD(mg/l)	3.8	7.7	6.9	6.8	6.6	20 and less
	SS(mg/l)	2.1	2.8	2.6	3.0	2.5	10 and less
Waste water processing facility	BOD(mg/l)	6.8	6.5	7.0	6.0	6.3	20 and less
	SS(mg/l)	6.9	6.5	6.8	5.4	6.0	20 and less

\* Applied highest requirement standard in "Water Quality And Aquatic Ecosystem Conservation Act" and "Sewerage Act"

Category	2010	2011	2012	2013	2014	
Greenhouse gas	Emissions (ton CO <sub>2</sub> )	527,666	549,711	583,655	631,431	624,660
	Reduction (ton CO <sub>2</sub> )*	-	-	69,154	79,702	60,551
Air pollution substance	PM-10(kg)	224	218	244	226	220
	SOx(kg)	1,527	1,495	1,678	1,628	1,443
	CO(kg)	4,019	3,446	3,533	4,568	4,223
	HC(kg)	1,042	883	896	1,197	1,106
	NOx(kg)	10,280	8,924	9,235	11,566	10,892

\* Introduced greenhouse gas emission reduction target since 2012

# 2014 Economic, Environment, and Social Performance Summary

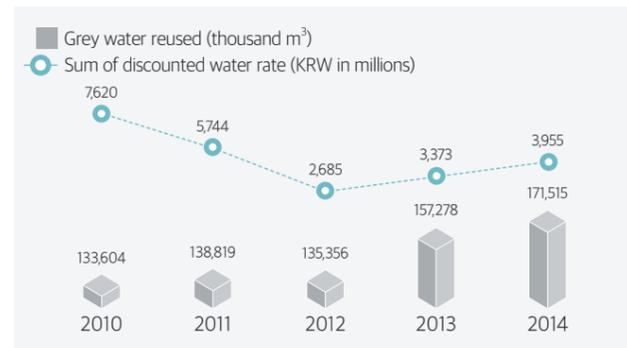
## Environmental Performance

Category	2010	2011	2012	2013	2014
Generated amount (ton)	104,976	131,615	111,414	110,027	110,397
Amount of sludge generated per 1m <sup>3</sup> water processed (g/m <sup>3</sup> )	61.9	73.1	59.5	54.2	55.3
Drinking waterworks sludge					
Recycling rate (%)	100	100	100	100	100
recycled to Cement raw materials (%)	56.4	76.7	77.5	83.8	40.0
recycled to Cover soil, fill materials (%)	28.2	2.5	3.6	12.4	57.0
recycled to Green soil, Pebble and etc. (%)	15.4	20.8	18.9	3.8	3.0
Sewage sludge					
Generated amount (ton)	36,347	44,288	42,876	39,565	42,083
Recycling rate (%)**	36	40	46	49	59
Waste					
Generated amount (ton)	371,194	583,519	471,366	496,260	520,149
Waste concrete generated (ton)	225,726	312,996	272,580	255,578	258,881
Waste asphalt generated (ton)	97,469	187,295	114,453	121,827	218,061
Wood waste generated (ton)	12,345	20,315	50,649	69,669	1,646
Synthetic resin generated (ton)	1,169	10,166	2,709	1,314	183
Construction waste					
Mixed waste generated (ton)	34,485	52,747	30,975	47,873	41,377
Recycling rate (%)**	95.8	93.8	94.8	96.8	98.9
Waste concrete recycled (%)	99.5	100.0	97.7	98.9	99.5
Waste asphalt recycled (%)	100.0	100.0	99.0	99.2	99.7
Wood waste recycled (%)	79.2	98.4	100.0	100.0	100.0
Synthetic resin recycled (%)	16.6	0.8	0.0	14.1	100.0
Mixed waste recycled (%)	68.1	51.6	53.1	76.7	91.5

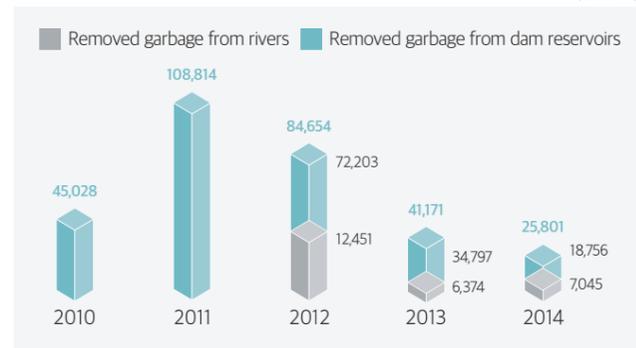
\*\* Ratio of waste processed by an authorized waste treatment company in accordance with the "Wastes Control Act"

### Effort to Improve & Protect Local Environment

#### 【 Water rate discount for customers who induce grey water reuse system 】



#### 【 Floating garbage removal in dam reservoirs and rivers 】

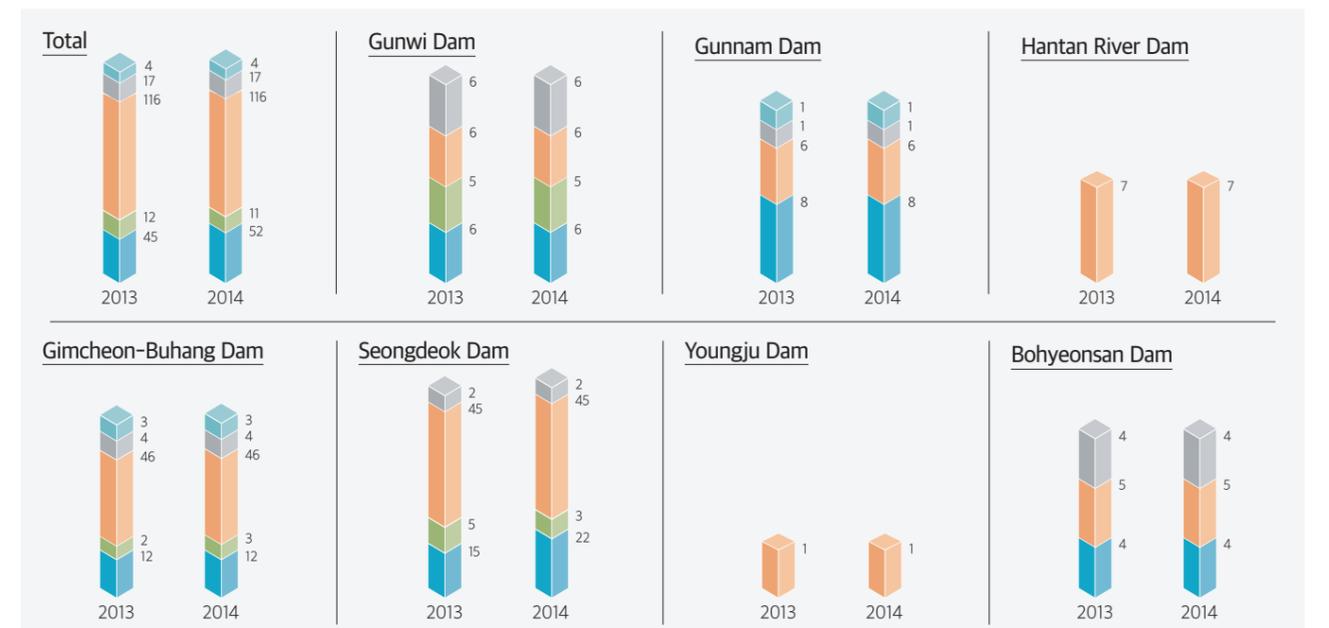


### 【 Post Environmental Impact Study on Construction Sites 】

Category	Category	Hantan River Dam	Gimcheon-Buhang Dam	Seongdeok Dam	Youngju Dam	Boheonsan Dam	Environmental standard*
		BOD (mg/L)	1.2	1.2	2.2	1.5	1.5
Water quality	COD (mg/L)	2.2	2.9	3.6	2.3	2.9	5 and less
	Category <th>Hantan River Dam</th> <th>Gimcheon-Buhang Dam</th> <th>Seongdeok Dam</th> <th>Youngju Dam</th> <th>Boheonsan Dam</th> <th>Environmental standard*</th>	Hantan River Dam	Gimcheon-Buhang Dam	Seongdeok Dam	Youngju Dam	Boheonsan Dam	Environmental standard*
Atmospheric environment	PM-10 (μg)	51	44	44	53	36	100 and less
	NO <sub>2</sub> (ppb)	12	13	14	18	7	60 and less
Noise / Vibration	Category <th>Hantan River Dam</th> <th>Gimcheon-Buhang Dam</th> <th>Seongdeok Dam</th> <th>Youngju Dam</th> <th>Boheonsan Dam</th> <th>Environmental standard*</th>	Hantan River Dam	Gimcheon-Buhang Dam	Seongdeok Dam	Youngju Dam	Boheonsan Dam	Environmental standard*
	Noise (dBA)	48	44	49	45	51	65
	Vibration (dBV)	19	13	24	25	27	65
Animals and plants	Category	Hantan River Dam	Gimcheon-Buhang Dam	Seongdeok Dam	Youngju Dam	Boheonsan Dam	
Mammal	Total (species)	16	11	15	14	12	
	Legally protected species	1	2	2	2	2	
Fish	Total (species)	40	14	19	23	17	
	Legally protected species	5	0	0	1	0	
Reptiles	Total (species)	26	10	12	13	13	
	Legally protected species	3	0	0	0	0	
Birds	Total (species)	71	57	43	68	45	
	Legally protected species	7	6	1	7	2	

### Ecological Restoration Measures Taken

■ Fishway (site) ■ Artificial marsh (site) ■ Wildlife passage (site) ■ Fish spawning ground (site) ■ Alternative habitat (site)



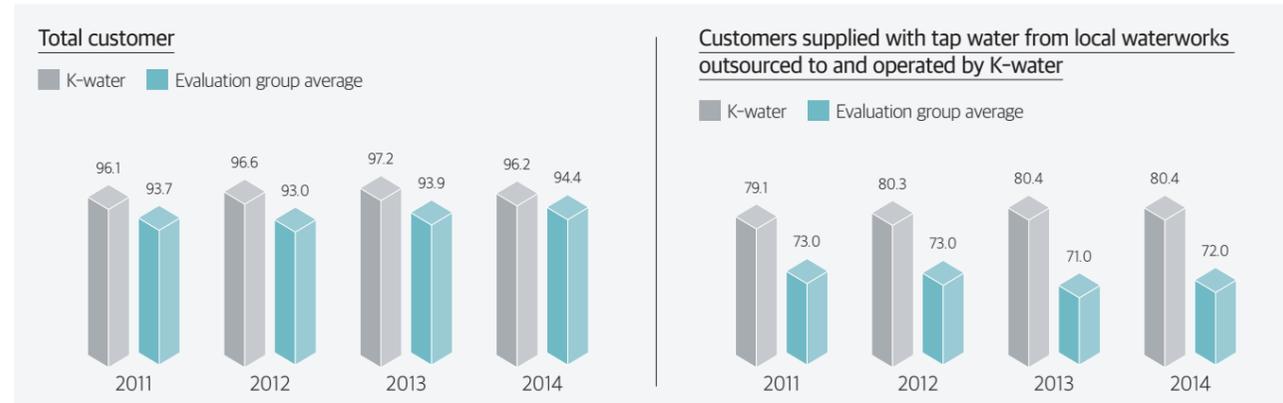
# 2014 Economic, Environment, and Social Performance Summary

## Social Performance

### Beyond Customer Satisfaction

#### 【 Customer Satisfaction 】

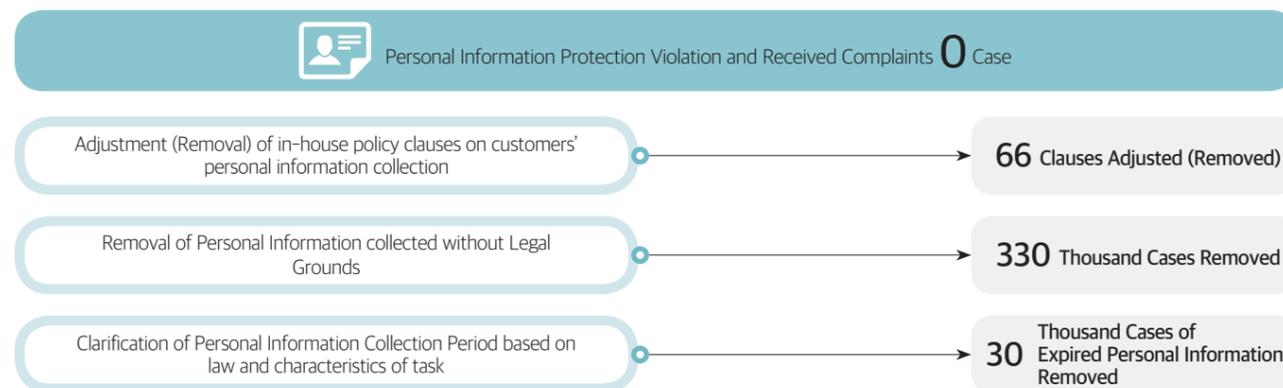
(Unit: point)



#### 【 Customer Communication 】



#### 【 Customer Informaiton Protection 】

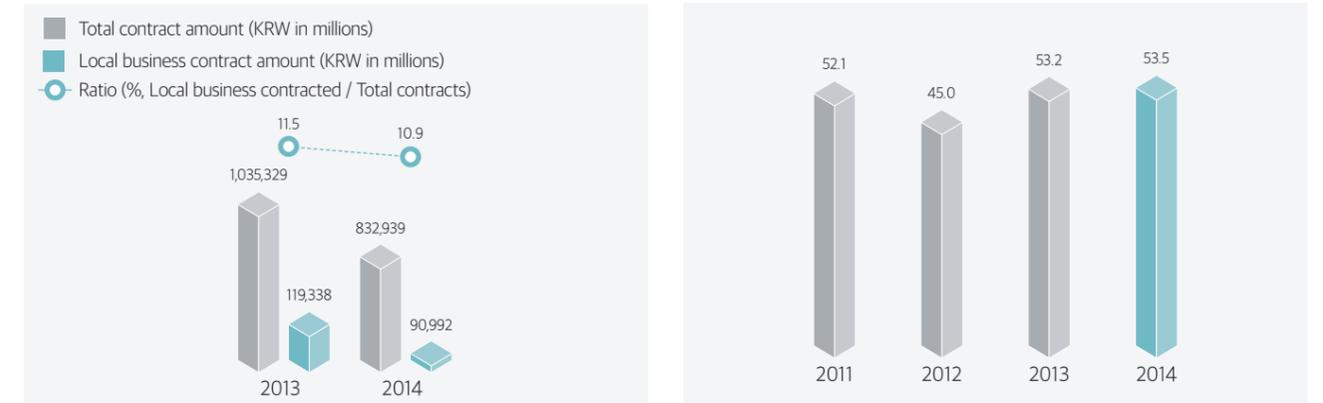


### Horizontal Cooperation, Vertical Growth

#### 【 Local Business, Contract Amount 】

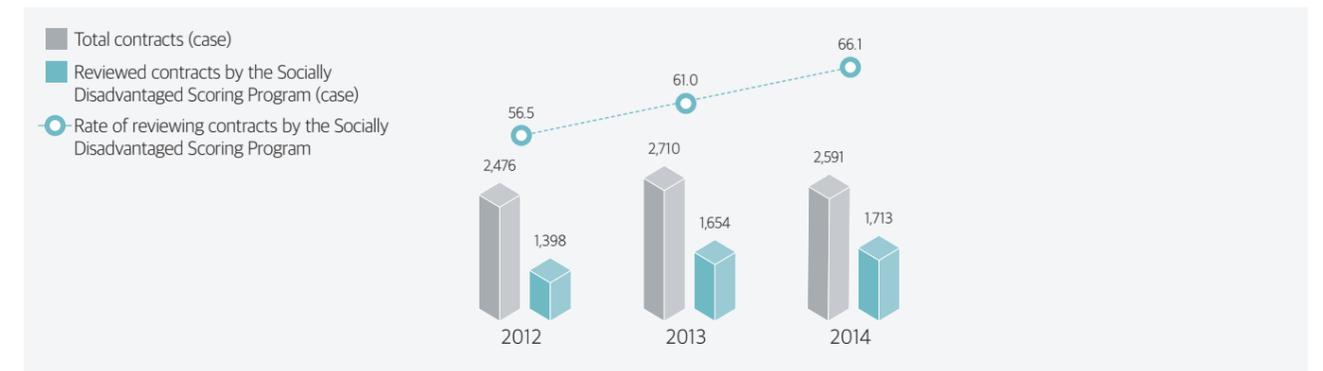
#### 【 Ratio of SME Product Purchasing 】

(Unit: %)

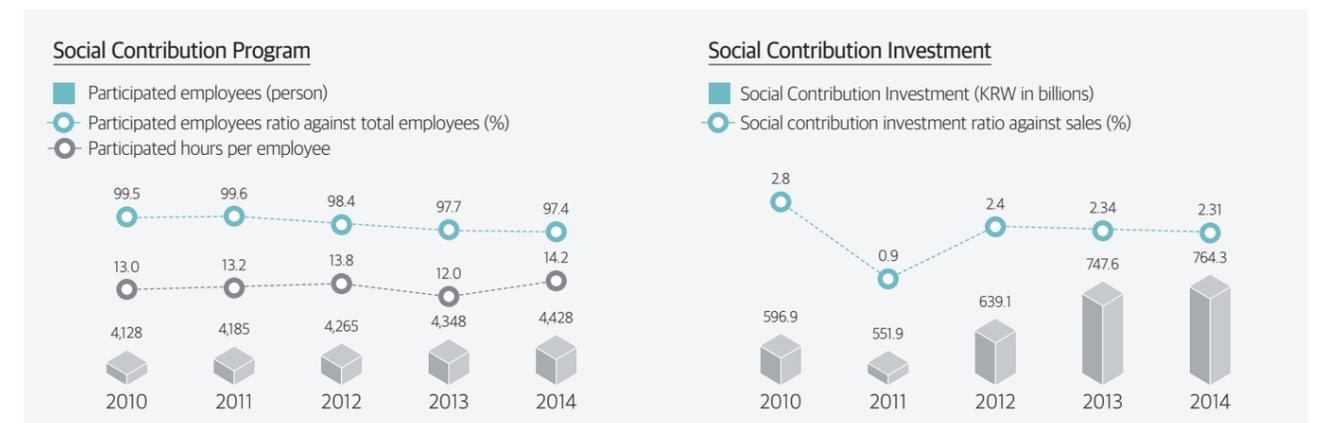


\*\* SME: Small and Medium Enterprises

#### 【 Socially Disadvantaged Scoring Program Operation Result 】



### Cooperation with Local Communities

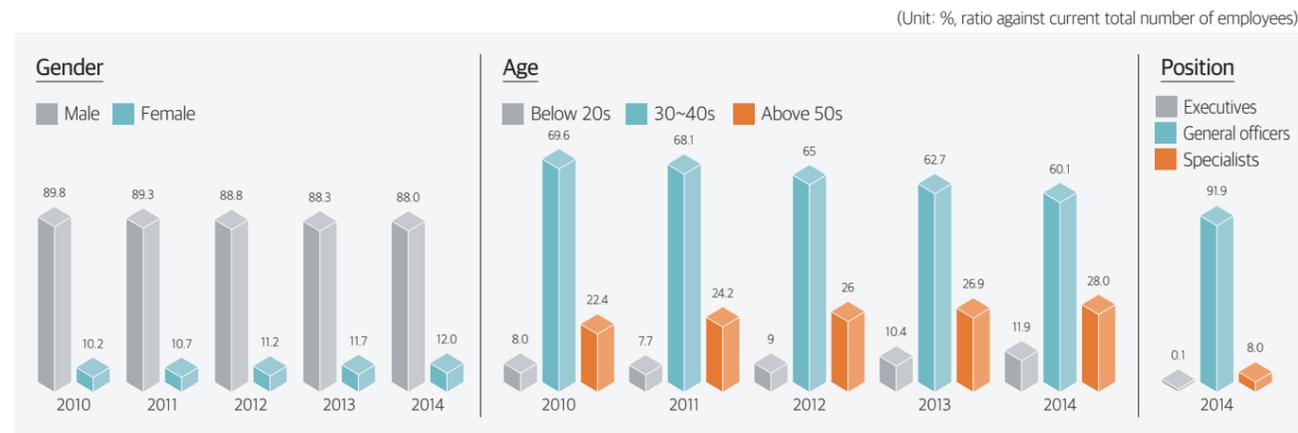
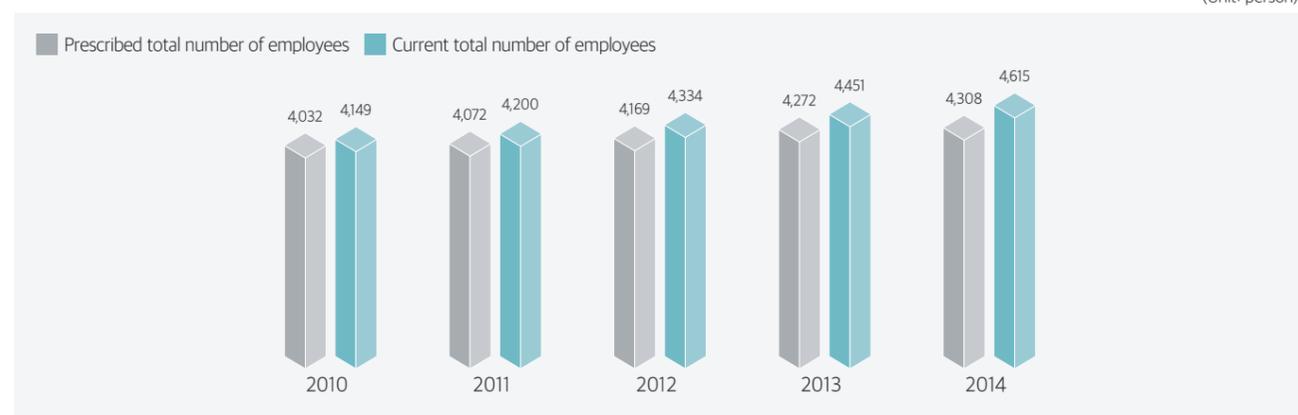


# 2014 Economic, Environment, and Social Performance Summary

## Social Performance

### Fair and Diversified Workplace

#### 【 Employee Composition Ratio 】



#### 【 Employee Composition Ratio according to Employment Type 】



\* Ratio based on current number of employees belonged to each employment type (%)

#### 【 Minority Employment 】

(Unit: person)

Category	2010		2011		2012		2013		2014	
	Number of people	Ratio* (%)								
Total new recruits	212	5.1	173	4.1	222	5.1	252	5.7	261	5.7
Minority groups										
Female	36	0.9	32	0.8	40	0.9	47	1.1	42.25	0.9
Physically challenged person	2	0.1	19	0.5	2	0.1	4	0.1	7.5	0.2
Engineer	164	3.95	128	3.1	136	3.1	134	3.0	146	3.2
Regional talent	104	2.51	107	2.6	128	3.0	161	3.6	175.5	3.8
High school graduate	19	0.46	13	0.3	51	1.2	71	1.6	86	1.9

\* Ratio based on current total number of employees (%)

#### 【 Non-Regular Employment 】

(Unit: person)

Category	2010		2011		2012		2013		2014	
	Number of people	Ratio* (%)								
Total non-regular employees	342	7.5	426	9.3	364	7.8	414	8.5	403	8.1
Employment Type										
Fixed-term employees	342	7.5	355	7.8	293	6.3	340	7.0	322	6.5
Short-period employees	-	-	71	1.6	71	1.5	74	1.5	66	1.3
Other type employees	-	-	-	-	-	-	-	-	15	0.3

\* Ratio(%)=Non-regular employee # / (non-regular employee # + non-fixed-term contracted employee # + regular employee #)

#### 【 Turnover 】



\* Ratio based on current total number of employees (%)

## 2014 Economic, Environment, and Social Performance Summary

### Social Performance

#### Happy Workplace where Work and Family are Harmonized

##### 【 Creating Corporate Culture to Harmonize Work and Family 】

<b>Flexible Working Hours</b>	- Expand "Smart Work Centers" (work centers equipped with telework systems) and telecommuting working out of home on alternating workdays - Operate various types of flexible working hours and part-time works
<b>Work Practice Improvement</b>	- Run "Family Day" (On every Wed., all employees are encouraged to leave work at the regular time and have time with family members) - Conduct shut-down and PCs-off program on weekdays after 9PM, PCs-off on weekend - Increase task efficiency through improving work practices - Meeting Practice Improvement
<b>Respond to Childbirth Policy</b>	- Parental leave notice system - Operate a daycare center in the work place (reintroduce empty office space to daycare center, increasing the capacity of children caring)
<b>Balance of Work and Family</b>	- Couple coaching, "Father School" (Coaching program for fathers) and other family related education - Support for access to cultural performance and recreational facilities

##### 【 Workplace Safety 】

(Unit: ratio based on current total number of employees, %)

Category	2010	2011	2012	2013	2014
Injury	0.31	0.14	0.23	0.22	0.16
Occupational Disease	0.00	0.00	0.00	0.00	0.00
Industrial Accident	0.25	0.12	0.22	0.08	0.06
Prevalence	6.4	9.2	7.1	7.0	6.7

##### 【 Flexible Working 】

(Unit: person)

Category	2010	2011	2012	2013	2014	
Part-time Working	New (recruits)	0	235	551	620	465
	Changed from full-time	0	0	9	9	28
	Staggered office hours	0	360	525	662	858
Flexible Working	Flexible work schedule	0	0	0	0	0
	Compressed work schedule	0	0	3	3	3
	Discretionary work schedule	0	0	0	0	0
Telecommuting	Work from home	0	4	0	0	0
	Smart work center	0	1	0	7	0

##### 【 Labor and Management Relationship 】



##### 【 Labor Practices Grievance Resolving Performance 】

Category	2010	2011	2012	2013	2014
Total cases	78	73	78	63	56
Resolved cases	56	52	56	53	50
Cases submitted in the previous year but resolved in the following year	-	-	-	13	10
Resolving rate (%)	71.8	71.2	71.8	84.1	89.3

## Third Party Assurance

### Independent Assurance Statement for "K-water 2015 Sustainability Report"

#### To K-water's stakeholders

K-water commissioned the Korea Productivity Center (the "Assurer") to provide an independent assurance of its 2015 Sustainability Report (the "Report").

#### Responsibility and Integrity

K-water is responsible for the reliability and accuracy of all information and opinions presented in this "Report". The Assurer holds the responsibility that lies solely in providing third party verification of the content in the "Report". As an independent assurance agency, the Assurer was neither involved in the process of preparing this "Report" with K-water nor in any conflicts of interest that may undermine our independence.

#### Assurance Standards

The independent verification process was planned and performed in accordance with the AA1000AS (2008) Assurance Standard to provide Type 2 moderate level of assurance. This is achieved through the evaluation of the organization's adherence to the AA1000APS Accountability Principles (2008) of Inclusivity, Materiality, and Responsiveness. Additionally, the assurance was performed to ascertain the organization's adherence to the Global Reporting Initiative (GRI) G4 Guidelines.

\* AA1000AS (2008): Enacted by Accountability, the AA1000 Assurance Standard (2008) is a global standard for verification and provides methods for reporting issues on sustainable management by assessing the operation of organization for management performance, compliance with principles, and credibility of information on performance

\*\* AA1000APS (2008): Enacted by Accountability, the AA1000 Accountability Principles Standard (2008) is a global standard for verification and provides the principles for the foundation of the AA1000 standard.

#### Assurance Limitations

Based on the aforementioned assurance standards, the Assurer performed verification of the organization's sustainability performance and credibility during 2014. As for some environmental data such as greenhouse gas emissions and amount of water usage, we deliberated on materials which were submitted to the Independent Assurance agency. As for economic data such as financial data, financial statements, which was audited by auditing institutions, the data on ALIO were checked. In terms of social data, we checked the moderate level of the verification by using Type 2 and sampling. Site inspection was performed at the head office in Daejeon. Therefore, the Assurer clearly states that any additional verification conducted in the future may issue varied results.

#### Assurance Methodology

The assurance was undertaken by following the methodology specified below.

1. Verified compliance with the requirements for Core Options in the GRI G4 Guidelines.
2. Verified consistency with the principles dictating the content and quality of sustainability reports based on the GRI G4 Guidelines.
3. Verified the appropriateness of identifying key issues and the responsiveness to the content presented in the Report by the various analysis methodology.
4. Verified the appropriateness of the report content with other sources and searched for incorrect information through comparative analysis.
5. Onsite verification at the head office and plant has been conducted to confirm evidence for key data and information as well as internal processes.

# Third Party Assurance

## Findings and Conclusions

It is the Assurer's opinion that the Report fairly and accurately presents the sustainability efforts and performance of K-water. It is also verified that the Report complies with the requirements for Core Options in the GRI G4 Guidelines. In terms of General Standard Disclosures, the Report is found to comply with the requirements for Core Options. For Specific Standard Disclosures, Disclosure on Management Approach (DMA) and indicators for material issues drawn by the decision process, the items for the Report are as follows.

Contents	Material Aspect	DMA & Indicators
Water Management's New Paradigm, Smart Water Management	· Customer Health and Safety	DMA, PR1, PR2
	· Product and Service Labeling	DMA, PR3, PR4, PR5
Strategic Plan to Achieve 100 Years of Sustainable Growth	· Economic Performance	DMA, EC1, EC2, EC4
	· Indirect Economic Impacts	DMA, EC7, EC8
Responding to Climate Change and Ensuring Environmental Protection	· Energy	DMA, EN3, EN6, EN7
	· Water	DMA, EN8, EN9, EN10
	· Biodiversity	DMA, EN13
	· Emissions	DMA, EN15, EN16, EN19, EN20, EN21
	· Effluents and Waste	DMA, EN22, EN23, EN24
	· Anti-corruption	DMA, SO4, SO5
Transparency and Fairness Based on Improved Stakeholders' Trust	· Employment	DMA, LA1, LA2, LA3
	· Occupational Health and Safety	DMA, LA6
	· Training and Education	DMA, LA9, LA10, LA11
	· Diversity and Equal Opportunity	DMA, LA12
	· Equal Remuneration for Women and Men	DMA, LA13
	· Procurement Practices	DMA, EC9

### 1. Inclusivity: Stakeholder Engagement

The principle of inclusivity articulates that organizations should include stakeholders in developing and achieving an accountable and strategic response to sustainability. K-water divides its stakeholders into six groups: employees, customers, government, local communities, NGOs & academia, and partnering companies to ensure full compliance with its diversity rules. Through its communication channels for each group, K-water introduces its commitment to actively respond to any issues brought to its attention. As part of its efforts to discuss the matters that require its immediate attention, K-water has operated the Shared Growth and Cooperation Committee to listen to its stakeholders' opinions on its water service, and this is considered as one of its best practices.

### 2. Materiality: Selecting and Reporting Major Issues

The principle of materiality articulates that organizations should focus on issues relevant and material to both the organization and its major stakeholders. In addition to its internal activities and sustainable management performance, K-water uses external environmental analysis to introduce the importance of key issues. The importance evaluation starts based on the premise that issues with a large gap between the levels of concern and performance from both internal and external perspectives are important. This is a new approach to identifying key issues that are formed based on the DMA, such as their selection background, internal approach and key performance. It is, however, advised that plans for the future are included as a way to evaluate the approach to key issues.

### 3. Responsiveness: Responding to Issues by the Organization

The principle of responsiveness articulates that organizations should be responsive to issues that may have impacts on stakeholders' performance. K-water prepares its report under four different themes: environmental analysis, response process, strategy, and performance. As a result, the company is demonstrating its commitment to each subject in a transparent manner. When introducing its objectives, K-water stresses the importance of water, encouraging stakeholders to take a more in-depth approach to issues related to water.

## Recommendations

The Assurer commends K-water for carrying out a variety of efforts to improve sustainability and resulting performances, and presents the following recommendations to enhance future sustainability reports and sustainable management.

1. K-water uses various communication channels in the process of identifying its issues while actively undertaking its response activities. It is essential to manage its stakeholders' interests and expectations more efficiently by further developing these systems. It is advised to establish a reporting system and process to incorporate various issues and disclose the result of communications with stakeholders instead of relying on surveys.
2. To make sure that stakeholders truly understand K-water's internal activities for sustainable management, it is necessary to disclose more information about its future plans and goals. To do this, K-water needs to build an official process for collecting and managing data as part of its on-going performance management system. If performance is reviewed continuously under this process, K-water will be able to present its future plans and goals in its next reports.



July 2015

Chairman Korea Productivity Center **Hong Sun-jik**




Kim Dong-su,  
Director of Sustainability  
Management Center



Park Tae-ho,  
Team Leader



Park Ju-mi,  
Expert advisor



Lee Chang-hyun,  
Researcher

The Sustainability Management Center of the Korea Productivity Center is an assurance agency officially certified by Accountability, which established AA1000, the international standards for Stakeholder engagement and verification, and has qualifications to perform independent assurance engagements. Our Assurance Committee is also comprised of competent experts who have in-depth experience in sustainability management consulting and assurance and completed the relevant professional training.

General Standard Disclosures

Aspect	Reference	Contents of Index	Page	Note	External Verification
Strategy and Analysis	G4-1	A statement from the most senior decision-maker of the organization about the relevance of sustainability to the organization and the organization's strategy for addressing sustainability	4~5		√
	G4-2	A description of key impacts, risks, and opportunities	12~13		√
Organizational Profile	G4-3	The name of the organization	8		√
	G4-4	The primary brands, products, and services	9		√
	G4-5	The location of the organization's headquarters	8		√
	G4-6	The number of countries where the organization operates, and names of countries where either the organization has significant operations or that are specifically relevant to the sustainability topics covered in the report.	8		√
	G4-7	The nature of ownership and legal form	8, 19		√
	G4-8	The markets served including geographic breakdown, sectors served, and types of customers and beneficiaries	8		√
	G4-9	The scale of the organization	8		√
	G4-10	Report on the total number of employees	59~60, 76~77		√
	G4-11	The percentage of total employees covered by the collective bargaining agreement	78		√
	G4-12	The organization's supply chain	27		√
	G4-13	Any significant changes during the reporting period regarding the organization's size, structure, ownership, or its supply chain	2		√
	G4-14	Whether and how the precautionary approach or principle is addressed by the organization	20~21		√
	G4-15	List externally developed economic, environmental and social charters, principles, or other initiatives to which the organization subscribes or which it endorses	88		√
	G4-16	List memberships of associations and national or international advocacy organizations in which the organization	3		√
	Identified Material Aspects and Boundaries	G4-17	List of all entities included in the organization's consolidated financial statements or equivalent documents	2	
G4-18		The process for defining the report content and the Aspect Boundaries, and how the organization has implemented the Reporting Principles for Defining Report Content	24~25		√
G4-19		List all the material Aspects identified in the process for defining report content	25		√
G4-20		For each material Aspect, report the Aspect Boundary within the organization	25		√
G4-21		For each material Aspect, report the Aspect Boundary outside the organization	25		√
G4-22		The effect of any restatements of information provided in previous reports, and the reasons for such restatements	2		√
G4-23		Significant changes from previous reporting periods in the Scope and Aspect Boundaries	2		√
G4-24		A list of stakeholder groups engaged by the organization	22		√
Stakeholder Engagement	G4-25	The basis for identification and selection of stakeholders with whom to engage	22		√
	G4-26	The organization's approach to stakeholder engagement	22~23		√
Report Profile	G4-27	Key topics and concerns that have been raised through stakeholder engagement, how the organization has responded to those key topics and concerns, including through its reporting, and report on the stakeholder groups that raised each of the key topics and concerns	26~27		√
	G4-28	Reporting period for information provided	2		√
	G4-29	Date of most recent previous report	-	2014. 7	√
	G4-30	Reporting cycle	2		√
	G4-31	The contact point for questions regarding the report or its contents	89		√
	G4-32	Report the 'in accordance' option the organization has chosen	2		√
	G4-33	The organization's policy and current practice with regard to seeking external assurance for the report	2		√
Governance	G4-34	The governance structure of the organization, including committees of the highest governance body, and any committees responsible for decision-making on economic, environmental and social impacts	19		√
	G4-38	Report the composition of the highest governance body and its committees	19		√
	G4-39	Report whether the Chair of the highest governance body is also an executive officer	19		√
	G4-40	Report the nomination and selection processes for the highest governance body and its committees, and the criteria used for nominating and selecting highest governance body member	19		√
	G4-54	Report the ratio of the annual total compensation for the organization's highest-paid individual in each country of significant operations to the median annual total compensation for all employees	19		√
	G4-56	The organization's values, principles, standards and norms of behavior such as codes of conduct and codes of ethics	55~58		√
Ethics and Integrity	G4-57	Report the internal and external mechanisms for seeking advice on ethical and lawful behavior, and matters related to organizational integrity, such as helplines or advice lines	55~58		√
	G4-58	Report the internal and external mechanisms for reporting concerns about unethical or unlawful behavior, and matters related to organizational integrity, such as escalation through line management, whistleblowing mechanisms or hotlines	55~58		√

Specific Standard Disclosures

Aspect	Reference	Contents of Index	Page	Note	External Verification
<b>Category: Economy</b>					
Economic Performance	G4-DMA	Generic DMA	40		√
	G4-EC1	Direct economic value generated and distributed	41		√
	G4-EC2	Financial implications and other risks and opportunities for the organization's activities due to climate change	12~13		√
	G4-EC4	Financial assistance received from government	41		√
Indirect Economic Impacts	G4-DMA	Generic DMA	40		√
	G4-EC7	Development and impact of infrastructure investments and services supported	41, 75		√
Procurement Practices	G4-EC8	Significant indirect economic impacts including the extent of impacts	41, 75		√
	G4-DMA	Generic DMA	54		√
G4-EC9	Proportion of spending on local suppliers at significant locations of operation	75		√	
<b>Category: Environment</b>					
Energy	G4-DMA	Generic DMA	47		√
	G4-EN3	Energy consumption within the organization	49, 71		√
	G4-EN6	Reductions in energy requirements of products and services	39, 49, 71		√
	G4-EN7	Reductions in energy requirements of products and services	39, 49		√
Water	G4-DMA	Generic DMA	47		√
	G4-EN8	Total water withdrawal by source	71		√
	G4-EN9	Water sources significantly affected by withdrawal of water	-	None of the water sources were significantly affected by withdrawal of water in domestic operation	√
	G4-EN10	Percentage and total volume of water recycled and reused	71		√
Biodiversity	G4-DMA	Generic DMA	47		√
	G4-EN13	Habitats protected or restored	52~53, 73		√
Emissions	G4-DMA	Generic DMA	47		√
	G4-EN15	Direct greenhouse gas(GHG) emissions (Scope1)	50, 71		√
	G4-EN16	Energy indirect greenhouse gas(GHG) emissions (scope 2)	50, 71		√
	G4-EN19	Reduction of greenhouse gas(GHG) emission	50, 71		√
	G4-EN20	Emissions of Ozone-depleting substances	-	No emissions of Ozone-depleting substances	√
	G4-EN21	NOX, SOX, and other significant air emissions	71		√
Effluents and Waste	G4-DMA	Generic DMA	47		√
	G4-EN22	Total wastewater discharge by quality and destination	49, 71		√
	G4-EN23	Total weight of waste by type and disposal method	72		√
	G4-EN24	Total number and volume of significant spills	-	No significant spills	√

Specific Standard Disclosures

Aspect	Reference	Contents of Index	Page	Note	External Verification
<b>Category: Labor Practices and Decent Work</b>					
Employment	G4-DMA	Generic DMA	54		√
	G4-LA1	Total number and rates of new employee hires and employee turnover by age group, gender and region	59, 76~77		√
	G4-LA2	Benefits provided to full time employees that are not provided to temporary or part-time employees, by significant locations of operation	62~63		√
	G4-LA3	Return to work and retention rates after parental leave by gender	62~63		√
Occupational Health and Safety	G4-DMA	Generic DMA	54		
	G4-LA6	Type of injury and rates of injury, occupational diseases, lost days, absenteeism, and total number of work-related fatalities, by region and by gender	78		√
Training and Education	G4-DMA	Generic DMA	54		√
	G4-LA9	Average hours of training per year per employee by gender, and by employee category	61, 70		√
	G4-LA10	Program's for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings	60~61		√
Diversity and Equal Opportunity	G4-LA11	Percentage of employees receiving regular performance and career development reviews, by gender and by employee category	60~61		√
	G4-DMA	Generic DMA	54		√
Equal Remuneration for Women and Men	G4-LA12	Composition of governance bodies and breakdown of employees per employee category according to gender, age, group, minority group membership, and other indicators of diversity	63, 76~77		√
	G4-DMA	Generic DMA	54		√
Labor Practices Grievance Mechanism	G4-LA13	Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operation	63		√
	G4-LA16	Number of grievance about labor practices filed, addressed, and resolved through formal grievance mechanisms	78		√
<b>Category: Human Rights</b>					
Investment	G4-HR2	Total hours of Employee Training on human rights policies or procedures concerning aspects of human rights	57		√
<b>Category: Society</b>					
Anti-corruption	G4-DMA	Generic DMA	54		√
	G4-SO4	Communication and training on anti-corruption policies and procedures	55~58		√
	G4-SO5	Confirmed incidents of corruption and actions taken	57~58		√
Compliance	G4-SO8	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations	-	None	√
<b>Category: Product Responsibility</b>					
Customer Health and Safety	G4-DMA	Generic DMA	30		√
	G4-PR1	Percentage of significant product and service categories for which health and safety impacts are assessed for improvement	31~35		√
	G4-PR2	Total number of incidents of non-compliance with regulations and voluntary codes concerning the health and safety impacts of products and services during their life cycle, by type of outcomes	-	None	√
Product and Service Labeling	G4-DMA	Generic DMA	30		√
	G4-PR3	Type of product and service information required by the organization's Procedures for product and service information and labeling, and percentage of significant product and service categories subject to such information requirements	31~35		√
	G4-PR4	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes	-	None	√
	G4-PR5	Results of surveys measuring customer satisfaction	35, 74		√
Customer Privacy	G4-PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data	74		√
Compliance	G4-PR9	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services	-	None	√

ISO 26000 is an international standard which provides guidance on how companies practice corporate social responsibility. It covers seven core subjects which compose the corporate social responsibility. Readers can identify how K-water implements the corporate social responsibility on seven core subjects from the pages of this K-water 2015 Sustainability Report below.

Core Subject	Issues	Page
Governance	Decision-making processes and structures	19
	Due diligence	58, 63, 88
	Human rights risk situations	20~21, 88
Human Rights	Avoidance of complicity	63~65, 88
	Resolving grievances	78, 88
	Discrimination and vulnerable groups	75, 77, 88
	Civil and political rights	88
	Economic, social, and cultural rights	88
Labor practice	Fundamental principles and rights at work	59~63, 88
	Employment and employment relationships	59~60, 77, 88
	Conditions of work and social protection	59~63, 78
	Social dialogue	59~63, 86~88
The Environment	Health and safety at work	78
	Human development and training in the workplace	60~61, 70
	Prevention of pollution	47~53, 71~73, 88
	Sustainable resource use	47~51, 71~72, 88
	Climate change mitigation and adaptation	47~51, 71~73, 88
	Protection of the environment, bio-diversity and restoration of national habitats	52~53, 73, 88
	Anti-corruption	55~58, 86
Fair Operating Practices	Responsible political involvement	88
	Fair competition	64~66, 86
	Promoting social responsibility in the value chain	64~66
Consumer Issues	Respect for property rights	86
	Fair marketing, factual and unbiased information and fair contractual practices	87
	Protecting consumers' health and safety	33~35, 87
	Sustainable consumption	31~35
	Customer service, support, complaint and dispute resolution	74, 87
Community Involvement and Development	Customer data protection and privacy	74
	Access to essential services	31~39
	Education and awareness	33~35
	Community involvement	75, 87
	Education and culture	60~61, 70, 87
	Employment creation and skill development	60~61, 77, 87
	Technology development and access	65~66, 69, 87
Social investment	Wealth and income creation	41~46, 68~69, 87
	Health	63, 87
	Health	63, 87

# Code of Ethics, Green Management Policy, Customer Charter Statement, and Innovation Vision Statement



## Code of Ethics

K-water is a business of the people that contributes to the quality of life of all citizens and the development of the country by developing, managing, and preserving Korea's water resources to be sustainable in environmental, economic, and social aspects and by providing the best products and services. Based on our experience, know how, and advanced technology, we promise the following to become a global professional water business.

We accomplish our missions through creative thinking and challenges and make efforts to actualize transparent management by processing tasks with an honest and fair attitude.

We recognize that the Earth is a precious heritage for our offspring and is a healthy and clean shelter of and as such, we are obligated to practice eco-friendly management.

We provide the best products and services to customers and actualizes consumer-oriented policy through customer satisfaction and management of new value creation.

As a part of the local community, we respect the tradition and the culture of the community and enriches the lives of local residents by contributing to the development of the local community.

We comply with ethical/legal values, respect market order of free competition, and seek realization of fair competition.

We respect the unique personalities of all people without discrimination, and respect characters and creativity.

We develop partnership of labor and management based on mutual trust and harmony, promoting our mutual prosperity.

\* Please refer to Ethics Management section on K-water's official website for details about our principles of ethics and principles of employee behavior.



## Green Management Policy

We deeply recognize that this is a time that needs the best effort to make sustainable development that harmonizes with environment in order to create a clean and livable environment. Our company, which handles water, the source of life, declares the policy of green management with the participation of all employees in order to become an eco-friendly business that receives the trust and love of citizens by developing and managing water resource in eco-friendly ways.

We proactively involve ourselves in protecting clean water, air and the protection of the environment.

We take the responsibilities and duties of preventing natural pollution, promptly addressing natural pollution that occur from business activities, while always keeping in mind that these kinds of practices are the foundations of our business ethics.

We secure a healthy consumption culture of saving and reusing resources and energy, and seriously consider them at all times so that we will not destroy the environment through inattention.

We reflect the opinions of the citizens as best we can in making plans that relate to the environment, and we disclose information and materials so that we will increase the trust on the organization as well as the transparency of the task.

We fully take responsibility of our obligations to prevent environmental damages. If and when environmental damage occurs, we place utmost effort to resolve the damage.

We provide continuous environmental education, so that our activities reflect our code of ethics and we make our best efforts for research development of conserving and improving the environment.

All employees of K-water practice this declaration so that future generations will enjoy prosperity in a clean environment.



## Customer Charter Statement

K-water will make best efforts to practice customer-oriented management by approaching its customers based on the management philosophy 'The values of customers are our values.'

We will provide water and waterfront lots of best quality that customers can trust in a stable manner.

We will provide information and services for the safety and ownership protection of customers even before customers request them.

We will always be open to the advice and suggestions of customers, regularly accept opinions, and use them for the improvement of customer services.

We will perform our tasks without any discrimination to any customers and will secure the profit of customers to the maximum by seeking the most efficient management.

We promise that we will set the best service performance standards that K-water can provide and practice them in order to realize ideal goals on the side of customers.



## Innovation Vision Statement

We declare the following in order to provide clean and safe water to citizens, protect the lives and properties of citizens from water-related disasters, and to become the best water service organization through continuous changes and innovations.

We place customer-satisfaction management first in everything we do, we ensure customer-oriented values are embedded in our values, our code of conduct, and systems.

In order to become a trusted public enterprise, we process tasks in an honest and fair manner without violating conscience, common sense, or the law, and actively participate in social contribution activities in order to be together with the local community.

With confidence and passion that do not fear change, we will secure global-level competency to accomplish the vision and establish a continuous and stable foundation for growth.

We recognize the importance of nature for health, life, and sustainable growth of future generations and make efforts in order to preserve them.

By putting this declaration into action, we focus all of our capabilities to make K-water a business that does its job well, a business that has competitiveness, and a business that is loved by the citizens.

# UN Global Compact's 10 Principles Support

The UN Global Compact's Ten Principles are derived from the following international agreements.



- The Universal Declaration of Human Rights
- The International Labor Organization's Declaration on Fundamental Principles and Rights at Work
- The Rio Declaration on Environment and Development
- The United Nations Convention Against Corruption

The UN Global Compact asks companies to embrace, support and enact, within their sphere of influence, a set of core values in the areas of human rights, labor, the environment and anti-corruption.



## Human Rights

- Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights; and  
Principle 2: make sure that they are not complicit in human rights abuses.



## Labor

- Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;  
Principle 4: the elimination of all forms of forced and compulsory labor;  
Principle 5: the effective abolition of child labor; and  
Principle 6: the elimination of discrimination in respect of employment and occupation



## Environment

- Principle 7: Businesses should support a precautionary approach to environmental challenges;  
Principle 8: undertake initiatives to promote greater environmental responsibility; and  
Principle 9: encourage the development and diffusion of environmentally friendly technologies.



## Anti-Corruption

- Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.

K-water practices and complies to the ten principles of UN Global Compact.

Choi, Gye Woon  
K-water CEO

최계운

You can download this report in PDF format from K-water's website.

Please contact us with the following contact information if you want more detailed information about sustainable management activities of K-water. Thank you for your support on our sustainable business practices.

### Contact Information

Management Services Innovation Team, K-water  
Shintanjin-Ro 200, Daedeok-Gu, Daejeon 34350, Republic of Korea  
TEL. 82-42-629-2356~8 / Fax. 82-42-629-2399  
E-mail: sustainability@kwater.or.kr  
Web-site: english.kwater.or.kr