Sustainable Management

미리내를 품다
Embracing ‘Mirinae’

Based on the traditional concept of ‘Mirinae’, which means everything in our galaxy, K-water sets forth to manage the entire hydrologic cycle by initiating its new ‘SMART Management’ practices. Through the creation of sustainable values and smart water management, we will achieve our vision of making a happier world with water.

Corporate Governance

K-water aims at productive management by reinforcing not only the executive directors', but also the non-executive directors' participation in management and by sharing their expertise.

Composition of investors

K-water's main tasks are to construct and maintain dams and to operate waterworks for the comprehensive use and management of national water resources, which have a significant impact on the quality of life and public welfare. Thus, the Korea Water Resources Corporation Act limits K-water's investors to the national government, local governments, and 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 (91.1%), KOFC (8.8%), and local governments (0.1%).

Board of Directors' composition and operation

K-water's Board of Directors(BoD), the 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 environment alterms. It also checks and supports the executives at the same time. K-water's Board of Directors is comprised of 15 directors: 7 Executive Directors and 8 Non-executive Directors, while a stakeholder who has direct interests with K-water cannot be appointed as a non-executive director. The position of chairperson is served by a senior non-executive director, thereby, contributing to checks and balances in the Board. In 2013, a total of 13 general meetings of the Board of Directors were held, in which 176 major management directions were reported. 64 management proposals that came up within the Board of Directors were reflected 100% and contributed to the improving of K-water's management.

Current status of the Board of Directors (As of March, 2015)

Position	Name	Title
Executive Director	Choi, Gye Woon	President
	Choi, Ho Sang	Auditor General
	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 Settlements Division
Non-executive Director	Kim, Kab Sung	Professor, Department of Urban Engineering, Yonsei Univ.
	Kim, Won Tae	Professor, Graduate School of Public Policy, Hanyang Univ.
	Park, Seung Ki	President, Hyundai SNC. Co., Ltd
	Lee, Won Suk	Committee Member at the Federation of Happy Smart Exercises
	Kim, Keun Sik	Advisor, Policy Advisory Committee, Yeouido Research Center of Saenuri Party
	Choi, Yun Ho	Secretary, ROTC Political Affairs Forum
	Cho, Young Jae	Chairperson, Saenuri Party Cities and Provinces Subcommittee
	Park, Woo Ho	Chief Executive, Seyoung Accounting Corporation

Board of Directors' remuneration policy

K-water's Board of Directors is objectively evaluated in various fields including management proposals, system operations, attendance rates, and remarks according to the government's management evaluation and K-water's internal evaluation guidelines every year. In addition, the outside (non-executive) directors and 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 with about KRW 230 million in 2013, three times more than the average employee compensation and seven times more than that of a new employee.

Non-executive Directors' roles and strengthened professionalism

K-water's Board of Directors has selected outside directors that have expertise to solve management issues such as improving financial soundness and developing waterfront areas. As a result, financial and urban experts make up 38% of the entire outside directors. More than half of the members of the Board, Executive Recommendation Committee, and the Audit Committee are the outside directors, thereby reinforcing their independence and the role of checks and balances. Also, K-water has enhanced the reporting to the BOD, focusing on current issues and major events; it strategically supports non-executive directors' activities by arranging their offices in business areas and matching each of their professional skills with an appropriate department. Such reinforced roles and responsibilities of the outside directors have led them to be more active in improving management and to contribute more to solving K-water's major issues such as overseas projects.

Internal & external audits

In order to supervise the appropriateness and impartiality of the works carried out, K-water operates an internal audit committee and an independent Audit & Inspection department, which inspects employees' disciplines, conducts regular audits, and performs comprehensive audits. Furthermore, K-water is being audited and supervised in the aspect of corporate integrity by external institutions such as the National Board of Audit & Inspection, Fair Trade Committee, Parliamentary Inspection, the Ministry of Land, Transport and Maritime Affairs, and the Prime Minister's Office.

Vision and Strategy

K-water's sustainable management aims to create a happier world with its smart water service; it aspires to create sustainable values with its management activities and to pursue a balance of environmental integrity and social responsibility based on economic efficiency.

Declaration of the new 'SMART Management' system

In order to secure new growth power for the future after the national project and to take full responsibility as a the nation's only water-expert public corporation which offers nation-wide water services, K-water declared the start of new 'SMART Management' system and established the new mid- and long-term (2014~2023) Strategic Management Plan in January 2014.
By making a new vision slogan, **SMART K-water START Together**, setting anew 3 management policies and 3 strategic goals as well as selecting 9 strategic tasks and 115 detailed tasks accordingly, and reorganizing its business directions, K-water clarified its determination to practice the new SMART Management.

Sustainable management strategy directions SMART K-water START Together

Through ICT (Information & Communication Technology)-based water management (Smart Water Grid, Integrated Water Resources Management), K-water will play a pivotal role in solving of domestic and overseas water problems. Implementing its roles, K-water aims at the realization of its vision, 'a world leader in water management services.'

Global water management (Smart Water)

Leader in the global water management market

Moving beyond 'a supply of clean and safe water' as we have been doing so far, K-water is pursuing 'a supply of Healthy Tap Water in which the mineral balance is preserved and beneficent for human body,' thereby, making a landmark in the water management paradigm. We will also realize the Integrated Water Resources Management from the source to the ocean by cooperating with stakeholders.

Safe water service (Smart Welfare)

Safe water service for all the citizens

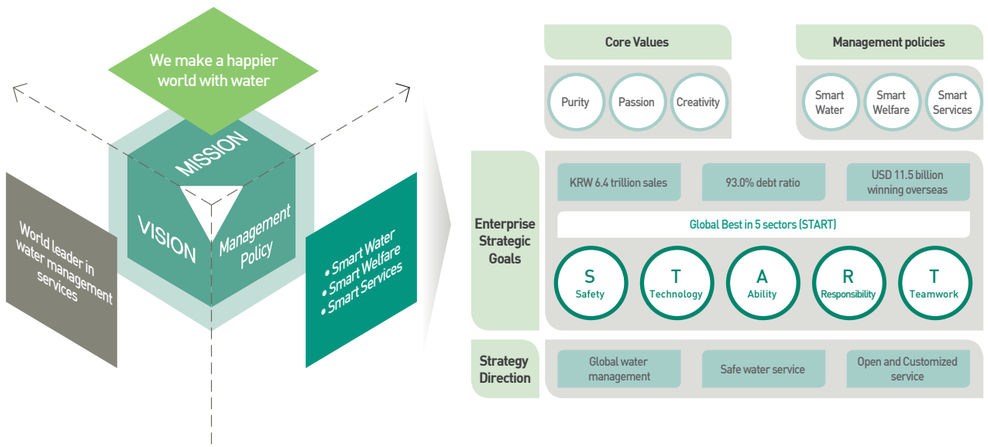
K-water will achieve 'Water Welfare' through expanding tap water service and developing water in-take facilities for water shortage areas such as isolated regions, islands, farm areas, etc. We will also realize a society safe from water-related disasters such as floods, drought, etc., by enhancing the risk management.

Open and Customized service (Smart Services)

Management to meet customers' expectation level

K-water will sufficiently communicate with stakeholders through various communication channels such as SNS, etc., and form a friendly common ground with customers through social outreach activities and cooperation with a private sector. We will also establish a transparent and smart corporate culture while strengthening a debt management for the firm's financial stability.

SMART Management System



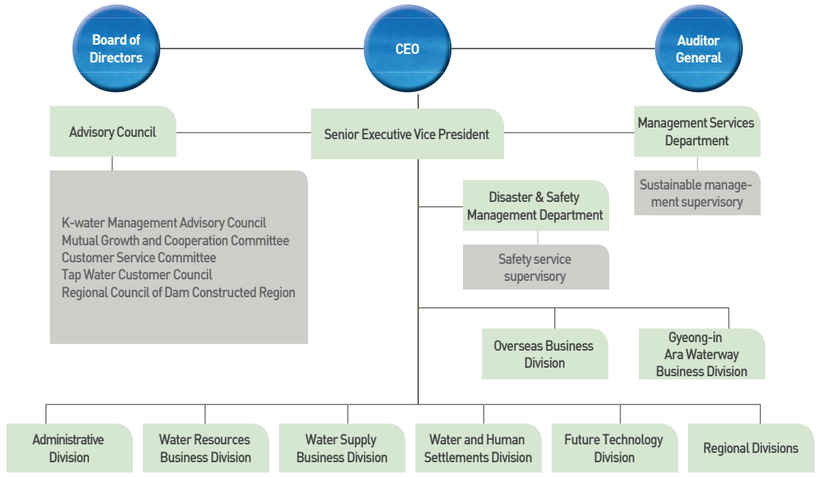
Sustainable Management System

K-water manages 23 Key Performance Indices (KPI) in order to systematically implement sustainable management; its excellence was proven by receiving the highest grade in the Korean Business Ethics IndeX-Sustainability Management evaluation (KoBEX-SM) by the government.

Sustainable management system organization

The Management Services Dept. under the Office of the Senior Executive Vice President is in charge of K-water's sustainable management, and has been annually publishing a sustainability report with third-party verification since 2005. In 2014~5, K-water reformed its organizational structure in accordance with the new SMART Managemen system. First, K-water established the Future Technology Division and the Disaster & Safety Management Dept. in order to enhance future technologies and safety services.

Second, K-water operates the Corporate Partnership & Diagnosis Team under the Water Supply Business Division to strategically promote shared growth with partnering companies within the enterprise supply chain. Third, K-water founded the Conflict Management Team under the Office of the Senior Executive Vice President in order to build a sustainable relationship based on mutual trust with its stakeholders. Lastly, K-water operates advisory committees and councils that encompass economic, environmental, and social matters in order to accompany the stakeholders' various opinions.



CEO

Lay a foundation for K-water's next 100 years and form internal and external consensus

- Concretize assignments for future development through communication, encouragement, and support
- Focus on solving current management issues through the enhancement of company-wide competencies
- Build an energetic and cooperative organizational culture based on trust

Business Executive Director

Secure the foundation for sustainable management by creating business performances

- A supervising leader in charge of divisional responsibility management
- Strategic approach with a strong determination to be responsible for K-water's future development
- Support employees to create performances by utilizing internal and external network

Regional Executive Director

Facilitate businesses by strengthening with regional community networking

- Solve current issues by thoroughly understanding all works of the regional division
- decision-making based on customers' standards
- Expand consensus of and promote assignments for K-water's future develpment

Director General

Priority placed on creating performances and ensuring customers' safety from disasters

- Build a safety-conscious organizational culture based on compliance of principles.
- Implement and feedback on CEO's management policies based on authenticity
- Improve organizational productivity through efficient and performance-oriented attitudes

Employees

Pursue higher efficiency and competency with creativity

- Carry out given tasks with trust and cooperation that overcome distrust and conflicts
- Innovate an organizational culture and ways of work with open-minds
- Focus on improving oneself and the organization's competitiveness with passion

Key performance indicator for K-water's mid- and long-term sustainable management

Strategy Direction	Key Performance Indicator (KPI)	2013 (Performance)	2014	2024	Note
Leader of global water management (8)	• Dam reservoir water supply (billion m³)	5,503	5,516	6,552	
	• Flood control capacity (billion m³)	49.3	49.5	54.6	
	• Industrial water sales (KRW billion)	198	243	2,230	
	• Urban waterfront & Industrial complex sales (KRW billion)	5,623	9,915	148,933	
	• Clean energy supply (GWh)	3,040	2,854	2,958	
	• Overseas sales (USD million)	986	5,801	11,500	
	• Talent fostering Index (%)	40.5	40	45	
	• Secured 'Star Brand Technology' (Key-technology) project (number of cases)	4	4	67	
Water welfare services with national safety (6)	• Water supply (billion m³)	3,709	3,772	4,628	
	• Global Water Quality Standard achievement rate (%)	99.99	99.98	100	
	• Retrofitted water pipes (㎞)	32.7	35.5	60	
	• Flow rate in pipelines of local waterworks (%)	81.4	80.0	83.1	
	• Level of risk management effort (points)	93.5	95 or above	below 95	
	• Rate of accident prevention efforts (%)	0.52	0.46	0.38	
Open and customized service, empathizing with customers (9)	• Level of corporate integrity (grade)	Unsatisfactory	Outstanding	Outstanding	
	• Debt ratio (%)	120.6	121.6	93.0	
	• Sales increase rate (%)	19.7	6.7	7.0	Except construction profit of private investment businesses
	• Profit rate (%)	22.5	12.5	13.3	Except construction profit of private investment businesses
	• Trust management index (points)	66	69	over 84	
	• Environmental Performance Evaluation index (points)	151	150 or above	150	
	• Social contribution activity index (points)	89.6	90 or above	93.0	
	• Customer satisfaction level (grade)	Excellent	Excellent	Excellent	90 points or above
	• Level of creativity and innovation (σ)	2.96	3.10	6.00	

Highest Grade for 3 consecutive years in Sustainable Management Evaluation (KoBEX-SM index)

K-water received the highest grade (AAA) for 3 consecutive years (2011~2013) on the Korean Business Ethics indeX-Sustainability Management Evaluation (KoBEX-SM), an investigation on the level of corporate sustainable management of public institutions by the Ministry of Trade, Industry & Energy. K-water endeavors to practice sustainable management.

Highest grade in the level of sustainable management

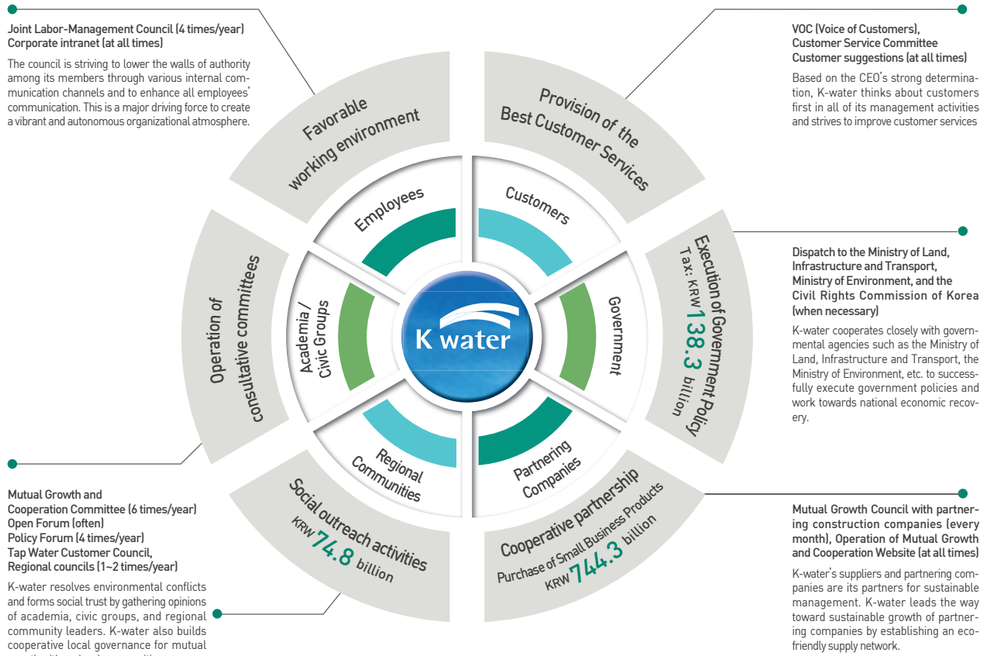
Developing Together with Our Stakeholders

K-water has been securing transparency and credibility while preventing conflicts that might occur during project implementation through stakeholders' participation in decision-making and projects.

Stakeholders' communication and participation

K-water's stakeholders are the customers who receive K-water's services, and include indirectly: local communities affected by K-water's projects; academia, civic groups, and the government who influence K-water's businesses; partnering companies participating in K-water's projects; and all employees carrying out the projects. K-water defines stakeholders from the aspects of 5 strategic businesses: water resources, waterworks, urban waterfront, renewable energy, and overseas and North Korea. It also operates various communication windows per stakeholder groups such as advisory councils, customer service committees, regional councils, etc. so that all stakeholders can directly and indirectly participate in all process of K-water's management. In particular, K-water has been running the Mutual Growth and Cooperation Committee for true communication that accommodates critical opinions of stakeholders since 2014. It also operates the Voice of Customer bulletin board and customer suggestion system on K-water's official website, through which customers and stakeholders' diverse interests and opinions are continuously collected and actively reflected on K-water's management. Anyone can suggest, and outstanding suggestions can lead to rewards of up to KRW 5 million. (G4-25)

K-water stakeholder groups (G4-24, 26)



Transparent information disclosure to stakeholders

K-water expands the public announcement of management and strengthens the disclosure of information that influences people's lives in order to practice open and transparent management. By analyzing public needs for information disclosure in 2013, we opened in advance the information about how we handle the algal bloom in reservoirs on our official website, as they were regarded as being in high demand of customers. On top of this, K-water posts information on source water quality and tap water quality on its website on a real-time, and offers an electronic display panel of water quality for apartments residents that take tap water. Furthermore, K-water has simplified its information announcement website to be more image-based and mobile compatible so that customers can access and find information more easily.

Open disclosure of company's rules and an enhanced communication system with stakeholders

We institutionalized the prior notification of enactments or legislation of company's regulations, so that we can more fully reflect various public opinions regarding the company's rules in civil service. As of June, 2014, you can access the firm's 94 regulations on K-water's website. In 2013, we heeded diverse opinions on the amendment of "Lots Sale and Rent Regulation" through a prior notification. Moreover, in order to improve the fairness and transparency of K-water's civil service by considering people's opinions or experiences regarding corruption, we operate "Integrity Happy Call" and "Integrity Postcard" around the clock. Through these programs, we can effectively communicate with the stakeholders. These programs also enable us to better understand and solve whatever discontent that the stakeholders may have throughout the work process of K-water.

Cooperative governance among stakeholders

The business of K-water impacts directly and indirectly on its stakeholders and in turn, the stakeholders exercise large influence on K-water's businesses. Therefore, K-water pursues the shared growth between the firm and the stakeholders' trying to detect and respond to potential risk factors in advance. It highly values communication with stakeholders, and considers such communication to be indispesnable for K-water's sustainable growth. K-water also supports cooperative governance with local communities, NGOs (Non-Governmental Organizations), academia, local governments, the central government, and individual water management organizations. Through this cooperative governance, K-water aims to realize IWRM (Integrated Water Resources Management) centering on regions and basins through the participation of local community, NGO, academic circles, local government, central government and individual water management organizations. For this purpose, it is important to construct sustainable relationships with the stakeholders on the basis of trust; in this context, K-water is developing its efforts for the construction of long-term trust with stakeholders by assigning the Conflict Management Team under the Office of the Senior Executive Vice President an exclusive charge of trust building with stakeholders.

Cooperative governance for IWRM

Selecting K-water's Material Issues

Through a 'Materiality Test', an investigation on stakeholers' interests based on the GRI G4 framework, K-water selected the material issues that its stakeholders are interested in and tried to provide sufficient information about them in this, the 2014 Sustainability Report.

This, the K-water 2014 Sustainability Report addresses important issues that are selected based on internal and external stakeholders' interests. The issues were drawn through a 3-step process: collecting pertinent information, investigating interests of both the people in and out of the industry, and selecting material issues. The report was written in accordance with '4 Reporting Principles for Defining Content' in the GRI Sustainability Reporting Guidelines: Sustainability context, Materiality, Completeness, and Stakeholder inclusiveness. [G4-18]

Step 1: Collecting issues that stakeholders concern

We examined the K-water 2013 Sustainablity Report, firm's policies, KPI (Key Performance Indicator), and legislation. We, thereby, garnered 42 relevant issues from benchmarkings of advanced companies within the same field, media reports, and surveys targeting both people in and out of water resource industry.

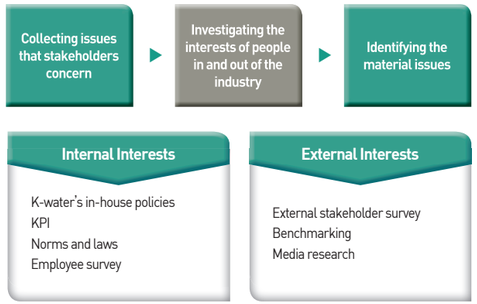
Step 2: Investigating the interests of both the people in and out of the industry

K-water implemented 'Materiality Test*' in order to grasp the level of internal/external concerns targeting the selected 42 issues. The materiality test reflected 6-step test results: in-house policy, KPI, norms and laws, survey on stakeholders, benchmarking and media analysis. K-water grasped the level of internal concern by combining the test results with K-water's in-house policies, KPI, and review of related norms and laws, while grasping the level of external concern by combining the survey result on external stakeholders and benchmarking the business circles in the same industry and media search results.

Step 3: Identifying the material issues

Integrating both external and internal concerns in relation to the selected 42 issues, we were able to analyze and prioritize the issues. We categorized 20 high-ranked issues, which are placed above the threshold**, into '4 Focus Issues,' and made efforts to make a concrete reporting of them in this report.

Process of identifying material issues



Method to identify material issues per each stakeholder group

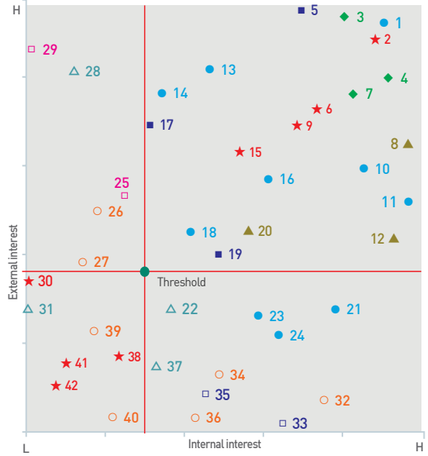
Stakeholder	Approach
Customer, Local community	Press reports, homepage VOC, Customer Service Committee, etc.
Academia, NGO	Analysis on the minutes of 2013 Management Advisory Council and Policy Forums, Surveys, etc.
Government	Analysis on 2013 Government Evaluation Report about K-water's performances
Employee	K-water's in-house policies, KPI, Surveys
Partnering Company	Analysis on the minutes of 2013 Mutual Growth and Cooperation-Committee, Surveys, etc.

* IPS Materiality Test Model : Developed by The Institute for Industrial Policy Studies (IPS) in 2006 to develop sustainable management strategies and sustainability report, it consists of 6-step test model to draw out materiality issues of a corporation based on the corporate characteristics and its current status.

** Threshold: The GRI G4 guideline directs a company to set a threshold for the determination of material issues in connection with a corporate sustainable management based on the result of IPS Materiality Test, and to report the material issues which locate above the threshold.

Number	Issue	Issue boundary
1	Awareness of sustainable management (initiative)	In-organization, partnering companies, customers, local communities, NGOs
2	Mutual growth and cooperation	In-organization, partnering companies
3	New market and new business	In-organization
4	Financial performance	In-organization
5	Response to climate change	In-organization, partnering companies
6	Contribution to local communities	In-organization, partnering companies, customers, local communities, NGOs
7	Financial soundness	In-organization
8	Fairness of HRM (Human Resources Management) policy	In-organization
9	Social contribution activities	In-organization, partnering companies , customers, local communities, NGOs
10	Ethical management	In-organization, partnering companies
11	Corporate governance	In-organization
12	Employee benefits (work-life balance)	In-organization
13	Sustainable management system	In-organization, partnering companies
14	Environmental management system	In-organization, partnering companies
15	Inpartiality in subcontractor selection and dealings	In-organization, partnering companies
16	Risk management	In-organization
17	Improving recognition on tap-water quality	In-organization, partnering companies , customers, local communities, NGOs
18	Stakeholders' participation (communication)	In-organization
19	Energy efficiency and resource saving & recycling	In-organization, partnering companies
20	World class HR (Human Resources) cultivation	In-organization

Materiality test result



- ▫ As we proceed
- ● Sustainable Management
- ◆ Focus issue 1 Creative Management
- ■ Focus issue 2 Smart Water Services
- ★ Focus issue 3 Society Prospering Together
- ▲ Focus issue 4 Creating a Happy Workplace
- △ Environmental Performance
- ○ Social Performance
- ▫ Economic Performance

Number	Issue	Number	Issue	Number	Issue
21	Complying with government policies	29	Brand value	37	Preserving biodiversity
22	Disposing industrial and waste water	30	Partnering company satisfaction	38	Social contribution implementation system
23	Preventing bribery and corruption	31	Green purchase	39	Customer communication
24	Accounting transparency	32	Labor-management relationship	40	Female leadership
25	CEO leadership	33	Innovative management (organization & system)	41	Spread and support of sustainable management in supply chain
26	Workplace safety and health	34	Customer satisfaction	42	Subcontractor communication
27	Service improvement and responsibility	35	New technology R&D (Research & Development)		
28	Waste discharge and recycling	36	Childcare and women's health support		

4 Focus Issues

K-water identified 4 major issues integrating the stakeholders' interests investigated in the materiality test, and defined the pertinent Aspect and Aspect boundary of these 4 Focus Issues based on the GRI G4 Guideline. (G4-19, 20, 21, 27)

Rank	Issues	GRI G4 Aspect	Aspect boundary	Approach
1	Financial performance New market and new business Financial soundness	Economic Performances, Indirect Economic Impacts	In-organization	Focus Issue 1 Creative Management (p.34~38)
2	Fair HRM (Human Resources Management) policy Employee benefits (work-life balance) World class HR (Human Resources) cultivation	Employment, Training and Education, Equal Remuneration for Women and Men, Labor Practices Grievenss Mechanism	In-organization	Focus Issue 4 Creating a Happy Workplace (p.58~63)
3	Mutual growth and cooperation Contribution to local communities Social contribution activities Impartiality in subcontractor selection and dealings	Prodrurement Practices, Local Communities	In-organization, Partnering companies, Customers, Local communities, NGOs	Focus Issue 3 Society Prospering Together (p.52~57)
4	Response to climate change Energy efficiency and resource saving&recycling Improving recognition on tap-water quality	Energy, Water, Emissions, Customer Health and Safety, Product and Service Labeling	In-organization, Partnering companies, Customers, Local communities, NGOs	Focus Issue 2 Smart Water Services (p.39~51)

Ethical Management

A corporation where personal ethics and business ethics stand upright is what K-water pursues.

A clean corporation that produces clean tap water

"We emphasize the fact that an organizational climate with transparency and integrity is more important than anything else." (CEO inauguration speech, November 2013)

K-water is aggressively pursuing ethical management in accordance with its creed that ethical management is the fundamental to achieve stronger corporate competency. In 2009, with a strong determination to pursue honesty and to practice public welfare through water services, K-water included "Purity" in one of its three core values. K-water prioritized creating a transparent organizational climate in its mid- and long-term Strategic Management Plans, and emphasizing clean and ethical management. In order to internalize the ethical enterprise culture, we have enhanced our ethical management system centering on ethical norms, implementing organization, employees' consensus, monitoring, and so on.

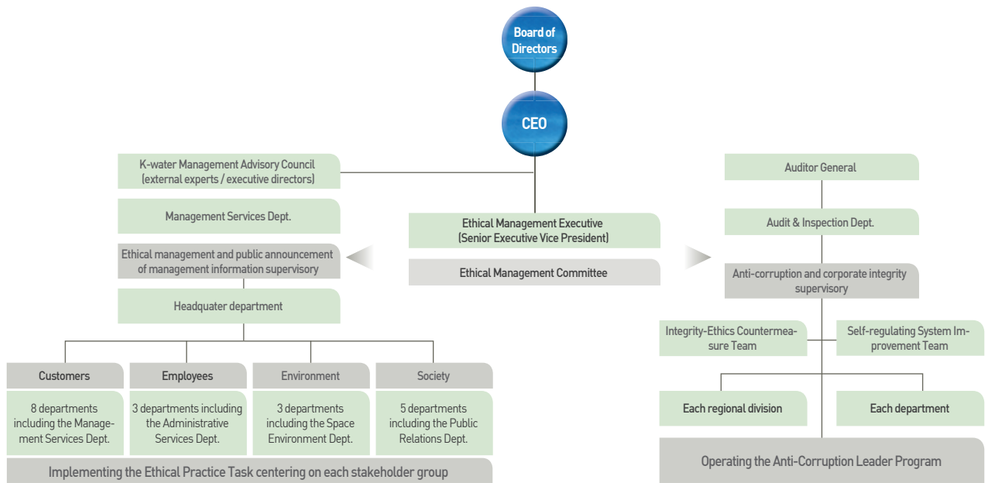
Ethical norms

K-water's ethical norms consist of Code of Ethics, Employees' Code of Behaviors, and Regulation of Occupational Integrity Pact. In 2013, K-water extended the application of the Code of Ethics to temporary workers in addition to regular workers and declared "establishing of a fair cooperative relationship with subcontractors" as a mandatory duty in its Employees' Code of Behaviors, thereby strengthening its responsibility for joint-growth.

Vision	Sustainable corporation through transparent and ethical management		
Strategy direction	A transparent public corporation that empathizes with customers		
Strategies	Build a corporate culture based on honesty and integrity	Remove any of barriers for communication and cooperation	Resolve public concerns about financial unsoundness and moral laxity
Goals	Enhance an implementing platform of ethical management	Improve corporate culture toward trust and communication	Prevent laxity in management

Implementing organization

In order to implement ethical management, K-water operates the Ethical Management Committee, which is the highest decision-making body supervised by the CEO. Under the control of the Ethical Management Committee, K-water practices the ethical management; it operates supervising bodies: Management Services Dept. and Audit & Inspection Dept., and practicing bodies: Ethical Practice Task Manager (who leads each department's implementing of the 'Ethical Practice Task,' which is a key task for the ethical management) and 'Anti-corruption Leader' (who leads each department's anti-corruption activities).



Formation of employee consensus for ethical management

Item	Content
Leadership of integrity	Anti-corruption education through innovation workshop for executives and special training for directors
Customized anti-corruption education	•Make customized, regular clean education compulsory for new employees, promoted employees, and the management group •Clean communication and community workshop between departments
Ethical Practice Manual	Provide information on the importance of clean ethics, Q&A, violation cases, related regulation, etc. to be used easily
Lead the self-directed practice of ethical management	•Employee's pledge for ethical management practice •Operate the 'Corruption Report Center' and 'Voluntary Returning Job-related Gifts Window' •Raise funds by collecting and selling all employees' wreaths for congratulating promotion or transference, and use the funds toward social contribution activities (2007~)

Ethics and integrity monitoring

Ethical management practiced in K-water's overall businesses is monitored through 'K-water Ethics indeX (KEX),' which is evaluation indices developed based on K-water's business features and surveys on employees' ethical awareness on ethical management. The results of monitoring feedback into each department's management and into the future K-water Ethical Management Implementation Plans. K-water has advanced its own intelligent monitoring system, WARN (Wide Audit & Risk Network), which utilizes the Computer Assisted Audit Techniques (CAATs); 93 risks in 43 management systems are monitored on daily basis and are fed back for corruption prevention (real-time remedial actions for 200 abnormal conditions in 2013). Furthermore, K-water has operated 'Corruptibliity Assessment' program for identifying and removing any corruptibilities embedded in the internal regulations, thereby, heightening accountability and transparency in its management activities.

Efforts to discover and to remove corruption inducing factors

By improving corruption-vulnerable factors in the management system and implementing the 'Self-regulating System Improvement Assignments,' K-water heightened its work transparency and strengthened the internal control for anti-corruption. In 2013, K-water carried out a total of 39 Self-regulating System Improvement Assignments including instituting the establishment of the 'Promotion Screening Committee' to ensure the fairness in the promotion. K-water especially has focused on identifying customary and structural corruptions in advance and eradicating them.

In addition, the company runs a confidential in-house reporting system called 'Integrity Help-line' to encourage the reporting of corruption cases; it also has responded strictly to corruptions by strengthening standards and adhered to zero tolerance policy. Along with this, K-water has put tighten work discipline continuously: operating the 'Joint Inspection Team' to monitor work discipline of each department; strengthening a close monitoring at corruption-vulnerable period; executing a monthly self-inspection by a director of each department; inspecting to identify unreasonable practices prevailed in its management system; and implementing the 'Prior Notice of Audit', etc.

Business ethics that put emphasis on the stakeholders

K-water fully understands that ethical management is essential to earn the trust of its stakeholders: employees, customers, and business partners, etc. With this understanding, K-water carries out programs to enhance cooperation and communication with its stakeholders.

First, K-water improved its electronic procurement system to preclude illegal bidding and to enhance transparency in bidding process, and simplified requirements for bidding documents to protect customers' privacy and mitigate their inconveniences. Second, we pursue a win-win relationship with our partnering corporations. K-water expands a sustainable partnership with its small and medium-sized partnering enterprises through 'Green Partnership Program,' which supports financially its partnering enterprises' achievement of ISO 14001 (Environmental Management System) certification. Third, K-water carries out an equitable HR management, systematic accident prevention programs in its workplace, thereby ensuring that K-water's ethical management steps are leading to high quality water service. In addition, K-water makes its best to implement low-carbon management, to expand renewable energy business, and to fulfill CSR (Corporate Social Responsibility) through its community services at both home and abroad.

Excellent organization in anti-corruption efforts for 8 consecutive years & Highest-rated organization in work ethics and discipline

Under the CEO's strong initiative for ethical management, all the employees of K-water have participated in anti-corruption programs actively.

K-water's anti-corruption efforts earned "Excellent" grade in the evaluation by the Anti-Corruption and Civil Rights Commission of Korea, which evaluated anti-corruption efforts and transparency of 225 public institutions nationwide. K-water is one of the four organizations in the nation to be rated as excellent for eight years in a row. In addition, K-water's strong work ethics and discipline made K-water the highest-rated public corporation for 2 consecutive years in MOLIT(the Ministry of Land, Infrastructure, and Transport)'s evaluation on work ethics and discipline among 14 MOLIT-affiliated public corporations.

Although K-water received positive reviews on its anti-corruption efforts, its corporate integrity was rated as "Unsatisfactory" in 2013. We humbly listen to this critical opinion and admit that our work ethics might not sufficiently reflect the customer perspective. Through seamless self-scrunity, K-water will **make more efforts to put customer-oriented corporate ethics into practice.**

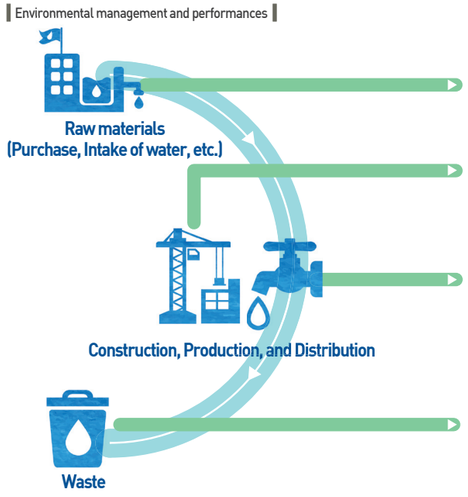
Environmental Management

K-water reinforces environmental management in all of its business processes, building an eco-friendly supply chain with its partners and suppliers.

Strengthening environment management in all K-water's management activities

Environmental pollution influences not only polluters but also all members of a society. K-water has enhanced environmental management in its entire process of production ranging from raw materials to waste disposal, and been pushing its direction toward increasing the environmental integrity of the entire corporate supply network. K-water's push towards environmental integrity includes the investment to environmental management of small & medium businesses which are raw materials or equipment makers, the strengthened oversight on on-site environmental management of construction companies, and supports to eco-friendly agriculture, thereby building an environmental business system. Through promoting the purchase of green products, applying the resource recycling and saving technologies, and maximizing the reuse and recycle of water and wastes, K-water will increase environmental integrity of its business.

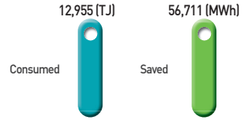
Environmental management and performances



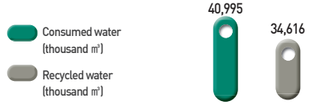
	Environmental Management	Environmental Performances
Input	• Green product purchase • Source water quality management	• Promotion of recycled products use • Improvement of source water quality
	• Eco-friendly planning and construction • Environmental management education to construction companies	• Preservation and improvement of the environment of project areas (p72~76)
	• Minimize energy, resources, and labor force allocation through the improvement of facilities and techniques • Manage discharge water quality • Low-carbon green production of tap water through light weight packaging, etc. • Invest the production of 'Healthy Tap Water' containing balanced minerals	• Enhancement of profitability by saving resources • Reduction of greenhouse gas • Mitigation of environmentally harmful effects
Output	• Minimize waste through the improvement of facilities and techniqies • Recycle waterworks sludge into green soil and cover-soil materials	• Enhancement of profitability by saving resources • Reduction of environmentally harmful effects

Green purchase in 2013

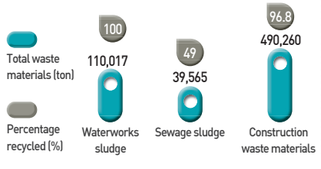
Energy consumption in 2013



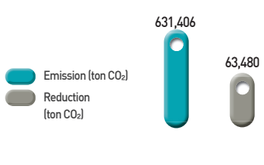
Water use in 2013



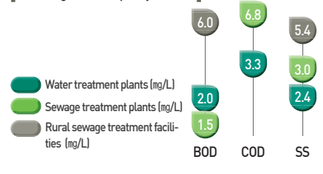
Waste materials in 2013



Greenhouse gas emission in 2013



Discharged water quality in 2013



ISO 9001/14001 & KSI 7001 Certifications

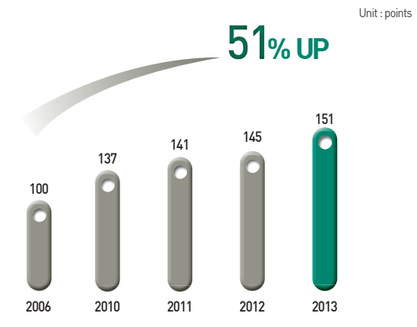
K-water is heightening its quality and environmental management systems through maintaining ISO 9001/14001 & KSI 7001 Certifications. In particular, in accordance with ISO 14001 (Environmental Management System) and KSI 7001 (Green Management System), K-water has put efforts to establish an eco-friendly way of working. K-water has introduced the cyclic process of the Plan-Do-Check-Action (P-D-C-A) to its all departments, and implemented internal management system audits and external audits by an external accreditation body (every year). In order to instill the environmental management practice into the employees, K-water has fostered certified auditors among its employees on a regular basis for the past 7 years (2007-2013), and the number of the certified auditors reached 134 in 2013. Their inspecting for improving the quality of each department's management facilitates the internalization of K-water's quality and environmental management.

Cultivation of certified ISO 9001/14001 auditors (2007~): 134 people

Environmental Performance Evaluation (EPE)

Since 2003, K-water has been implementing the ISO 14030s-based Environmental Performance Evaluation (EPE) program. The EPE program is to induce continuous improvement by regular measuring and diagnosing of the corporate environmental management performances. In 2007, K-water obtained a patent for an EPE computerized system for the first time in Korea, and has been managing its environmental performances utilizing this system. The EPE index represents a relative improvement level of environmental performances compared to that of the base year (2006), and is managed as K-water's KPI. In 2013, the EPE index was 151 points, showing that the environmental performances improved by 51% compared to that of the base year (2006).

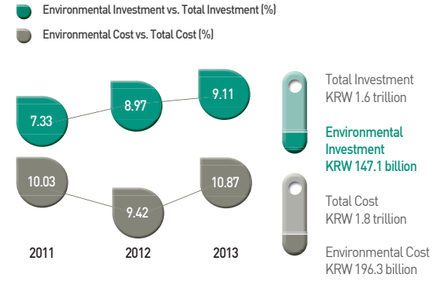
Status of EPE



Environmental Accounting

K-water has adopted and run environmental accounting to enhance environmental investment efficiencies and environmental performances. K-water established the concepts and standards of environmental cost and investment on its own, and has been calculating environmental cost and investment annually since 2000. The calculated environmental cost and investment help K-water consider environmental impacts by its business in major decision-making process. In 2013, the total environmental cost was KRW 196.3 billion, while the total environmental investment was KRW 147.1 billion. They are used toward operating environmental pollution prevention facilities and activities as well as ecological recovery to enhance our society's environmental soundness.

Environmental Investment and Cost



Risk Management

Based on its own unique risk management system, KRM, K-water predicts in advance and responds on real-time to potential dangers in its businesses and services.

Risk Management System

K-water responds to risks through its own, distinct risk management system called KRM (KRM; K-water Risk Management). K-water's risk management system is divided into preventive activities and risk response activities, managing four areas of risks: financial risks, conflicts, disasters, and publicity. The preventive activities involve to prevent risks (dangers) from realzing, and the risk response activities handle the risks actually occurred with prompt recovery activities.

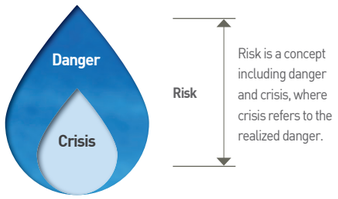
When a risk is realized, K-water takes immedient recovery steps that include deciding of a risk alert level and setting up of 'Emergency Response Head Office' in accordance with its risk response manual for each area of risks.

K-water's response to a risk differs depending on the alert level of each risk: Moderate, Substantial, Severe, and Critical, thereby, facilitating a prompt and efficient response; in case of a risk occurrence that needs a company-wide response, K-water calls the Emergency Response Head Office with the Senior Executive Vice President as the Chief Risk Officer (CRO) which oversees the entire recovery processes. The Disaster & Safety Management Department is supervisory of K-water's risk management; establishing risk management strategies, organizing risk management systems, and governing on-site departments to respond to risks promptly and efficiently according to risk types and alert levels.

Risk type

Category	Danger	Crisis
Financial risks	Currency rate, Interest rate, Credit, Corruption, etc.	Currency rate fluctuations, Strikes, etc.
Conflicts	Conflicts	Lawsuits, civil complaints filing
Disasters	Storm and Floods, Draughts, Accidents, etc.	Pipeline break, Tunnel collapse, Interruptions in source water-intake, Inundation, etc.
Publicity	Press reports	Negative reports

Risk concept outline



Risk management from company-wide perspective

Audit Risk Management through K-water Risk-based Internal Audit

Through its own risk management method called KRA (K-water Risk-based Internal Audit), K-water manages and mitigates audit risks in advance by investgating audit opinions by the internal audit. Audit risks are defined as 'inherent risk' and 'control risk'; audit risks are evaluated as high/medium/low, depending on the impact and potential of reoccurrence for the inherent risks and on the inadequacy of the internal control system for the control risks, respectively. For 'high' inherent risks, on-site audits and prevention activities are conducted, and for 'high' control risks, efforts to lower the degree of danger through system improvement are made. In 2013, the audit risks were assessed in the perspectives of: strengthening of management support, quality assurance and safety prevention, and the prevention of lax management, while 19 cases of audits were conducted in order to mitigate the risks in advance.

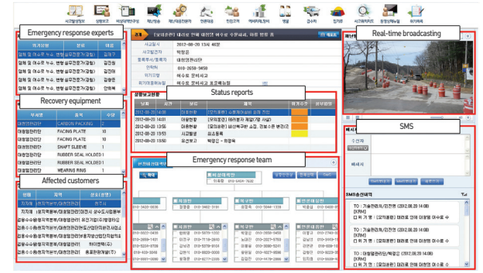
Real-time Response to Emergency

K-water has established risk management processes in stages to prevent risks from spreading, reflecting the public service risk management standards of the government. Employees utilize the risk response hands-on manuals in regards to 297 cases in 4 areas of risks (financial risks, conflicts, disasters, publicity) on-site. Moreover, K-water developed a model of real-time Emergency Management Center (EMC) based on in-depth interviews of the employees who experienced water-shortage crises, which facilitates a prompt recovery. This real-time EMC model installed on KRM helps to report and respond to emergencies more promptly, and organizes and summons an emergency response team more easily. It also facilitates real-time broadcasing on emergency sites with mobile broadcasting equipment and real-time commanding without spatial constraints as well as integrating the information of: emergency response experts, recovery equipment, emergency response team, and status reports.

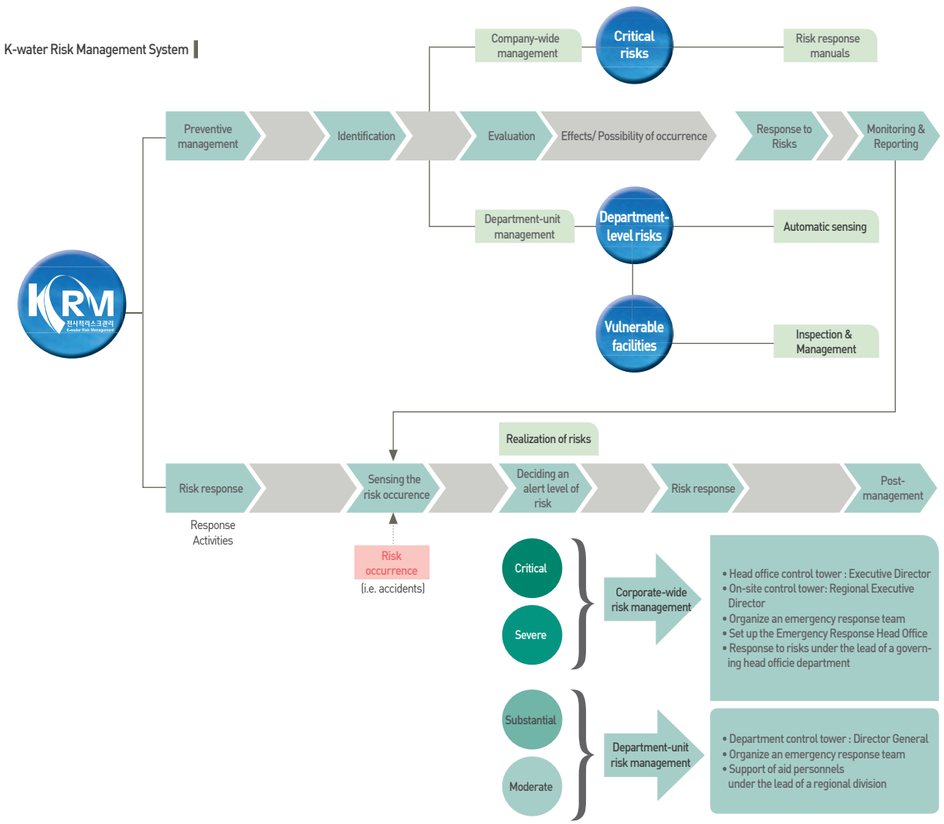
In addition, K-water operates the 'IT (Information Technology) Emergency Reponse Center' in the office of its Chungcheong Regional Division in case its major computer centers' functions break down by disasters such as a fire or an earthquake. K-water also conducts a recovery simulation exercise once a year to activate facilities of the IT Emergency Reponse Center within four hours after a disaster occurs.

These efforts in risk management led to K-water being selected as the most outstanding institution for 2 consecutive years (2012~3) in the 'Safety Korea Exercise (SKX)' held by the National Emergency Management Agency.

Real-time Emergency Management Center (EMC)



K-water Risk Management System



Prompt recovery of water supply after the helicopter crash in the Imha Dam

On May 9th of 2013, a helicopter operated by Korea Forest Service crashed into Imha Dam. The fuel tank of the helicopter was filled with approximately 5,000 liters of aviation gasoline. If the fuel was leaked into the Imha Dam Reservoir, which supplies source water for tap water to Pohang city and other downstream regions, it could have caused a long-term suspension of the water supply. However, a prompt and efficient response by K-water Andong Office minimized interruptions in the water service to the downstream regions by the accident. As soon as being informed of the accident, the Andong Office promptly sent aid workers for search of missing people, and immediately ceased the hydropower generation in Yeongcheon Waterway, which is connected to Pohang region, in order to prevent water released through the hydropower turbins from contaminating Pohang and downstream regions. At the same time, the office promptly notified the Pohang Office of the accident and requested to take source water from the Yeongcheon Dam Reservoir instead of the Imha Dam Reservoir. In addition, it installed 2 or 3 layers of oil fences around the accdent site, removed the leaked oil with absorbent papers, and monitored the water quality to prevent the fuel from spreading on the surface of the reservoir. K-water provided 150 aid workers for the recovery activities during four days after the accident, removing approximately 700 liters of the leaked gasoline with 2,000 meter long oil fence and 200kg of absorbent papers. Soon after its throughout water quality examinations confirmed that water in the Imha Dam Reservoir was safe to use for source water, K-water resumed the water supply from the Imha Dam Reservoir to the downstream regions on the morning of May 15th.

| Helicopter crash |

| Salvage of the wrecked helicopter |

K-water's risk response system achieved ISO 22301 Certification for the first time across the world in the field of water resource business

K-water is the world-first corporation in the water resource industry that achieved ISO 22301 Certification (certified by Norway DNV in 2013). Adopting the concept of BCM (Business Continuity Management), K-water has advanced its risk response system, applying its risk response skills and know-how to emergency situations. The risk response system thereby earned the world recognition for K-water's ability of risk response. K-water will continue to strengthen its risk response system, securing a ceaseless water service against any of accidents, natural disasters, and terrors.


DNV BUSINESS ASSURANCE
MANAGEMENT SYSTEM CERTIFICATE
K-water
ISO 22301:2012

Material issues per each stakeholder group

According to the survey result on K-water's sustainable management (April~May, 2014), top 5 material issues selected by each stakeholder group were significantly different, while five (customers, local communities, NGOs, partnering companies, and academia) out of six stakeholder groups showed interests in improving the recognition on tap water quality in common. Those who are supportive of K-water's business, such as its employees, answered that 'fair HRM (Human Resources Management) policy' is the most significant issue for K-water's sustainable management. On the other hand, those who are critical such as customers, local communities, and NGOs responded that 'contribution to local communities' is the most pivotal. The government, partnering companies and academia, who are neutral, prioritized 'financial soundness', 'improving recognition on tap water quality', and 'contribution to local communities', respectively.

Group	Stakeholder	1	2	3	4	5
Supportive Group	Employees	Fair HRM policy	Employee benefits (work-life balance)	World class HR cultivation	Labor-management relationship	Workplace safety and health
Critical Group	Customers / Local Communities	Contribution to local communities	Social contribution activities	Improving recognition on tap-water quality	Customer Satisfaction	Service improvement and responsibility
	NGOs	Contribution to local communities	Social contribution activities	Improving recognition on tap-water quality	Preserving biodiversity	Social contribution implementation system
Neutral Group	Government	Financial soundness	Financial performance	Complying with government policies	Preventing bribery and corruption	New market and new business
	Partnering Companies	Improving recognition on tap-water quality	Mutual growth and cooperation	Partnering company satisfaction	subcontractor communication	Impartiality in subcontractor selection and dealings
	Academia	Contribution to local communities	Social contribution activities	Improving recognition on tap-water quality	Preserving biodiversity	Social contribution implementation system