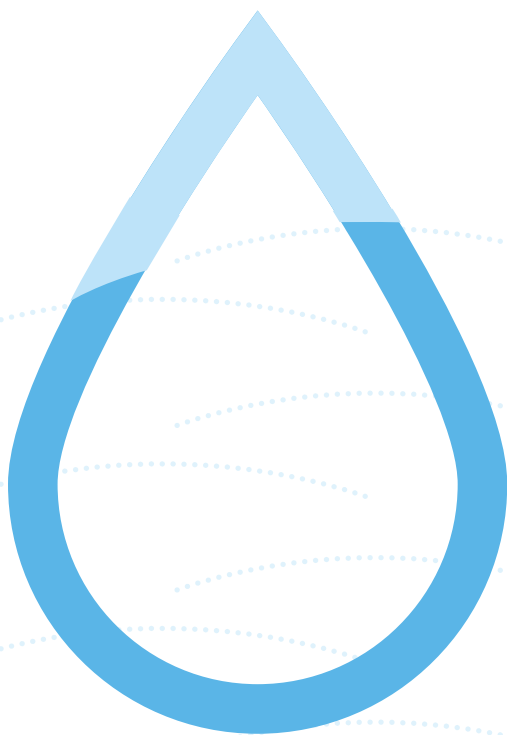


2021

The world-renowned  
water of Seoul

# Arisu



Arisu is the old name for the Han River and  
the current name of Seoul's brand of tap water.  
It is a combination of Ari, a Korean traditional word meaning  
'big' and Su, meaning 'water.'

# 01 OVERVIEW

Arisu is Seoul's tap water brand for its 10 million citizens. It continues to utilize data-based digital innovation and meticulous water control so anyone can enjoy high-quality tap water without inconvenience. Seoul's tap water, which boasts 110 years of history, is being recognized as high quality water not only in Korea, but also worldwide.



Population Served

**9.91** million

Water Supply Distribution Rate

**100**%

Water Production Capacity

**480** m<sup>3</sup>/day

Advanced water treatment:  
3,570,000 m<sup>3</sup>/day

Average Daily Production

**3,100,000** m<sup>3</sup>/day

Max. 3,450,000 m<sup>3</sup>/day

Avg. Daily Amount of  
Water Supply per Person

**300** ℓ

Max. 336 ℓ

Total Assets

KRW

**5,243.4** billion

Budget

KRW

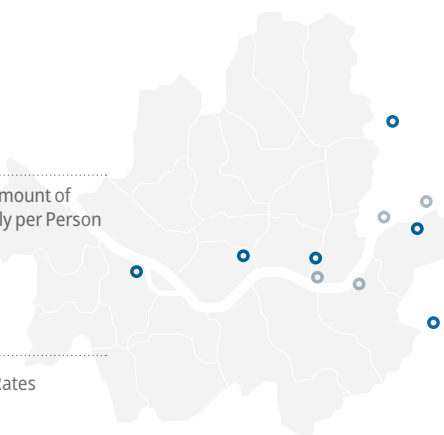
**738.1** billion

Tap Water Rates

KRW

**543** /m<sup>3</sup>

Cost: KRW 731/ m<sup>3</sup>



● Water purification plant  
● Water intake plant

**6** water purification plants  
2 plants with capacity of over  
1,000,000 tonnes

**4** water  
intake plants

Water Pipes  
**13,432** km

Revenue Water Ratio  
**95.5**%

Distributing Reservoir

**102** places

Capacity:  
2,450,000 m<sup>3</sup>/day

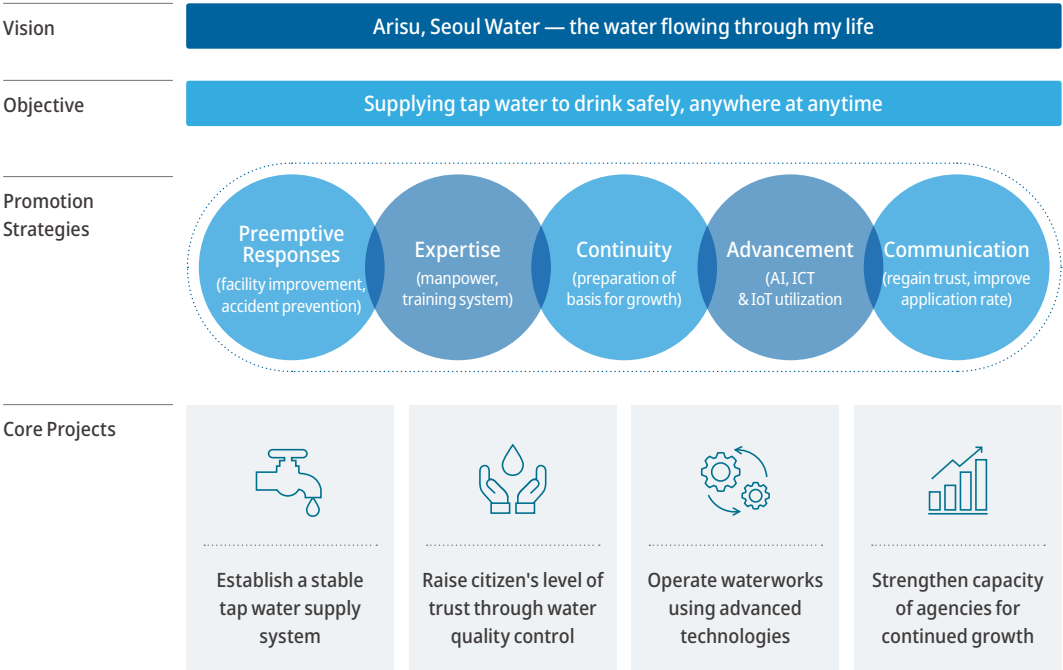
Arisu Pumping Station

**217** places

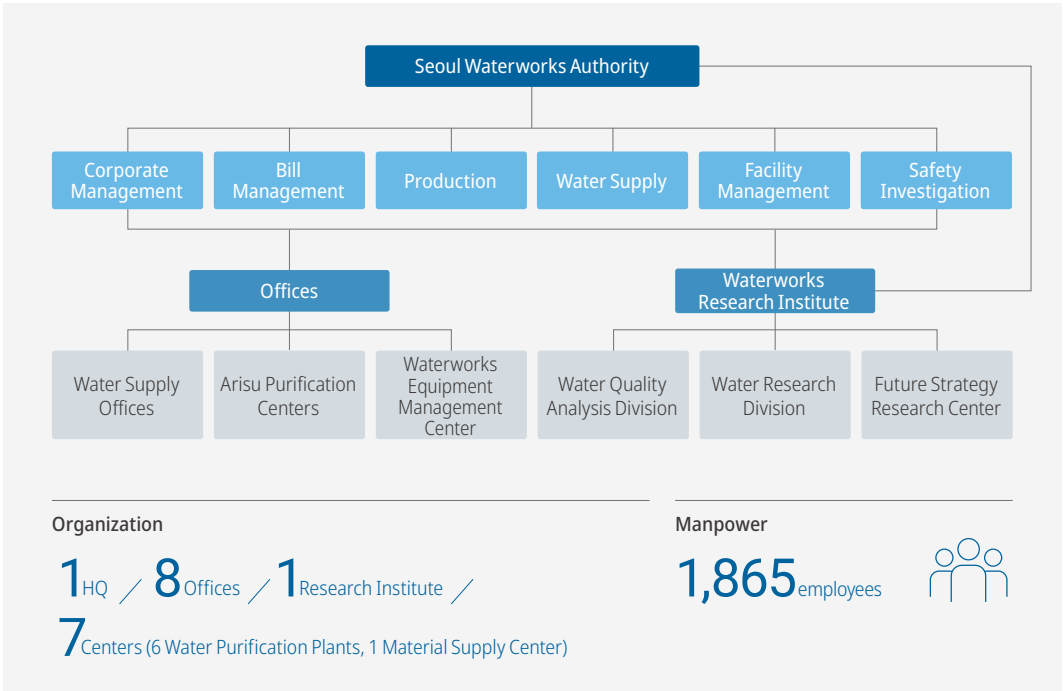
No. of Hydrants

**2,268,000**

Policy Direction



Organization



Arisu History

1906-  
1988

Waterworks Alongside Seoul's Development

- 1900s**     [Introduction of waterworks technology](#)
- 1908**     Seoul Waterworks supplied water for the first time to 125,000 people
- 1960s**     [Expansion of the waterworks facilities](#)
- Expanded facilities such as water purification plants due to increase in demands caused by rapid urbanization and population growth



1989-  
2008

Founded the Seoul Waterworks Authority

- 1980s**     [Stabilization of tap water supply](#)
- 1989**     Launched the Seoul Waterworks Authority
- 1991**     Achieved 100% in water supply rate
- 1996**     Performed research on advanced water treatment
- 2000s**     [High-quality tap water](#)
- 2001**     Manufactured Arisu as bottled water
- 2004**     Registered the "Arisu" trademark
- 2007**     Implemented Arisu Quality Verification System
- 2008**     Automatic water quality detection 24 hours a day



2009-  
2019

Top Class Waterworks

- 2010s**     [Strengthening international competitiveness](#)
- 2010**     Launched "Healthy and Good-tasting Water" Project
- Won the Global Project Innovation Award from the International Water Association (IWA)
- 2012**     Acquired the world's first-ever NSF Quality Certification for bottled tap water
- Won project for provision of consulting for infrastructure development in PMB Island, Brunei
- 2015**     Operated the Seoul Water-Now System
- Supplied 100% highly purified tap water
- 2016**     Acquired the international ISO 22000 certification
- 2018**     Completed the waterworks facility improvement project in Chanchamayo, Peru



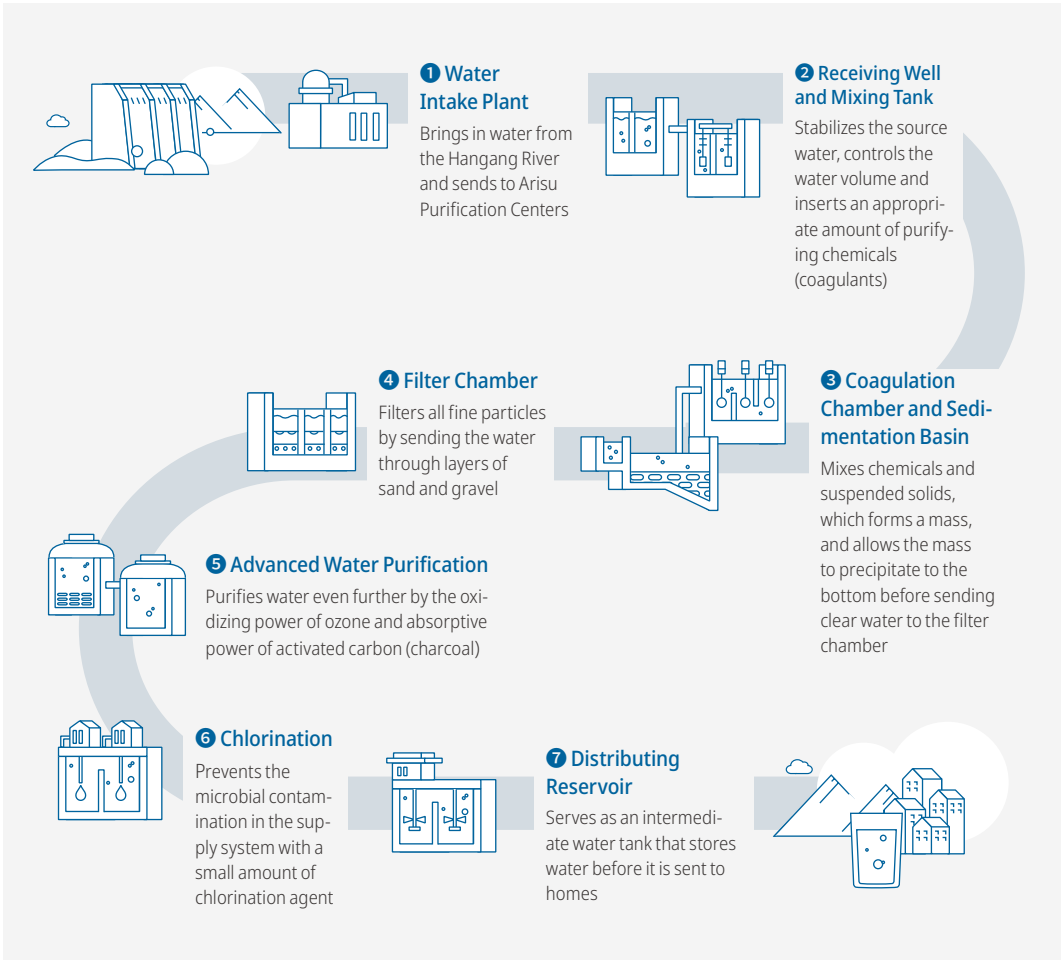
2020-

Sustainable Future

- 2020s**     [Digital innovation and globalization of tap water technology](#)
- 2020**     Seoul Water Smart Situation Room
- 2023**     Waterworks facility improvement project to be carried out in Tanzania



## Arisu Production Process



## Internationally Recognized Arisu

**2000** — • Acquired ISO 14001 (Environmental Management) certification — the eco-friendly management certification for minimization of environmental pollution

**2009** — • Received the UN Public Service Award — Automatic water quality monitoring system (Seoul Water-Now System) & Arisu Quality Verification System

**2010** — • Received the IWA Global Water Industry Innovation Award  
• Received the International Business Award (hosted by Stevie Awards, Inc.) — Improving the quality of public service through knowledge management

**2012** — • Acquired the quality certification by the National Sanitation Foundation (NSF)  
• Received the Global Excellence Award at the Global Water Industry Innovation Awards

**2015** — • Selected in the Best Packaging category at the Berkeley Springs International Water Tasting

**2016** — • Acquired ISO 22000 (food safety management) certification — Effective management of hazardous elements in the entire process of production and supply

# 02

## Safe and Tasty Water, Excellent Technology and Policy of Arisu

Seoul Waterworks Authority boasts strict water quality management and thorough risk management system from water supply sources to water taps. We successfully implemented an innovative water quality management and operation system through digital technology and open innovation and are supplying healthy and tasty water to Seoul citizens through continuous maintenance of the water supply facilities.



### Smart Waterworks for Innovative Water Management

#### Expansion of Online Remote Measurement

Seoul Waterworks Authority is currently expanding the use of online remote measurement through installation of digital meters and remote water reading devices. Water bills are calculated based on the transferred data, eliminating on-site visits by metermen.



#### Establishment of the AI Civil Counseling Robot

We have implemented AI technology to improve the level of expertise and the quality of counseling service. We established a 24×7 civil complaint response system in order to resolve inconvenience for citizens and alleviate the workload on the counseling staff.

Counseling chat-bot	>	Provides the best answer for each question / FAQs in a drop-down menu
Counseling secretary-bot	>	Assists civil counseling work by providing recommended responses, related policies, contact information, etc. to the counseling staff
AI civil complaint analysis	>	Responds preemptively through comprehensive statical analysis and visualization of civil complaints

Introduction of Open Innovation System

We are actively solving pending issues in the waterworks by implementing Open Innovation that actively utilizes ideas suggested by the private sector and external resources.

1 Introduction of the Crowdsourcing Technique

Crowdsourcing is a compound word made of “crowd” and “outsourcing.” It uses external resources for pending issues to reduce the risk of failure, cost, and time drastically.

Global Waterworks Solution

Application of innovative technology to pending issues through technology contests both home and abroad

Provision of a Testbed for Waterworks Technology\*

Opening up a testbed for products and patents that need performance verification or technology application to provide an environment where efficacy can be tested

\*Quaternary sector technology: Injection of AI coagulant, support of AR remote assistance, IoT power facility, AI water supply pump, smart remote measurement / Public-private cooperation: Water quality analysis technology, processing technology, materials, AI automation technology, energy sector

2 Active Discovery of Excellent Private Technology

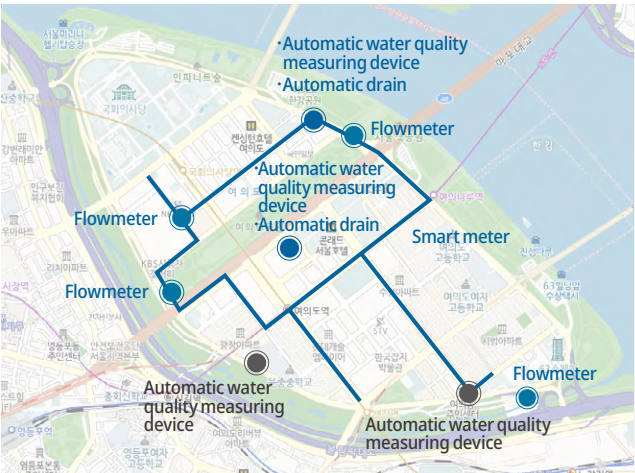
Hosting contests for excellent waterworks technology in areas such as water quality management, watering apparatus, measuring device, etc. to discover excellent technologies developed by the private sector and select excellent items and businesses to support commercialization of the technologies in actual waterworks systems.



Water pipe cleaning technology contest

Realization of Cutting-Edge Waterworks Demonstration Model

We have designated Yeouido, Seoul, as an Arisu Innovation District by applying a range of advanced quaternary sector technology, and efficiently manage the water quantity and quality of the water supply process in real time.



Yeouido has an isolated pipe network, which makes measuring inflow and outflow possible.

Optimal for accumulation of waterworks operation data and construction of an analysis system

We construct real-time water quality management systems such as an online water meter reading system and automatic water quality measurement.

World-Class Water Quality Management

The current water quality test on Seoul Arisu includes 336 items, which is far more than what is recommended by the World Health Organization (WHO). To supply safe and healthy water, we conduct direct water quality inspections on 200,000 to 300,000 locations for five categories: residual chlorine, turbidity, hydrogen ion concentration, iron, and copper.

Water Quality Test Items by Country

Category	WHO	Seoul	Singapore	Tokyo	LA
Test items	166	336	126	220	220

- Conducting water quality tests above the WHO recommended level

Water Quality Management of Water Supply Source and Water Intake Source

Management points

21 offices

(16 offices for water sources and 5 offices for water intake sources)



Management items

178 items

(29 items for water sources, and 149 items for water intake sources)



Management Method

- Inspection cycle: Once a month for water supply sources, and daily, monthly, quarterly and yearly tests for water intake sources
- Real-time automatic water quality monitoring for water intake sources: 8 items including phenol
- Multi-layered real-time monitoring of pollutants using a living organism alert system (water flea and closterium)
- Strengthening monitoring of contaminants of emerging concern (CECs) such as radon, lithium, etc.: 160 items (2020) → 165 items (2021)



Water Purification and Management of Water Quality

Operation of real-time automatic water quality monitoring system (Seoul Water-Now System) by water purification process

6 items



Water quality analysis

336 items





Water Supply System and Tap Water Quality Management



Water Quality Management According to ISO 22000 (Food Safety Management System)

Compliance of international food hygiene and safety management for the entire process from source water (Hangang River) to faucet



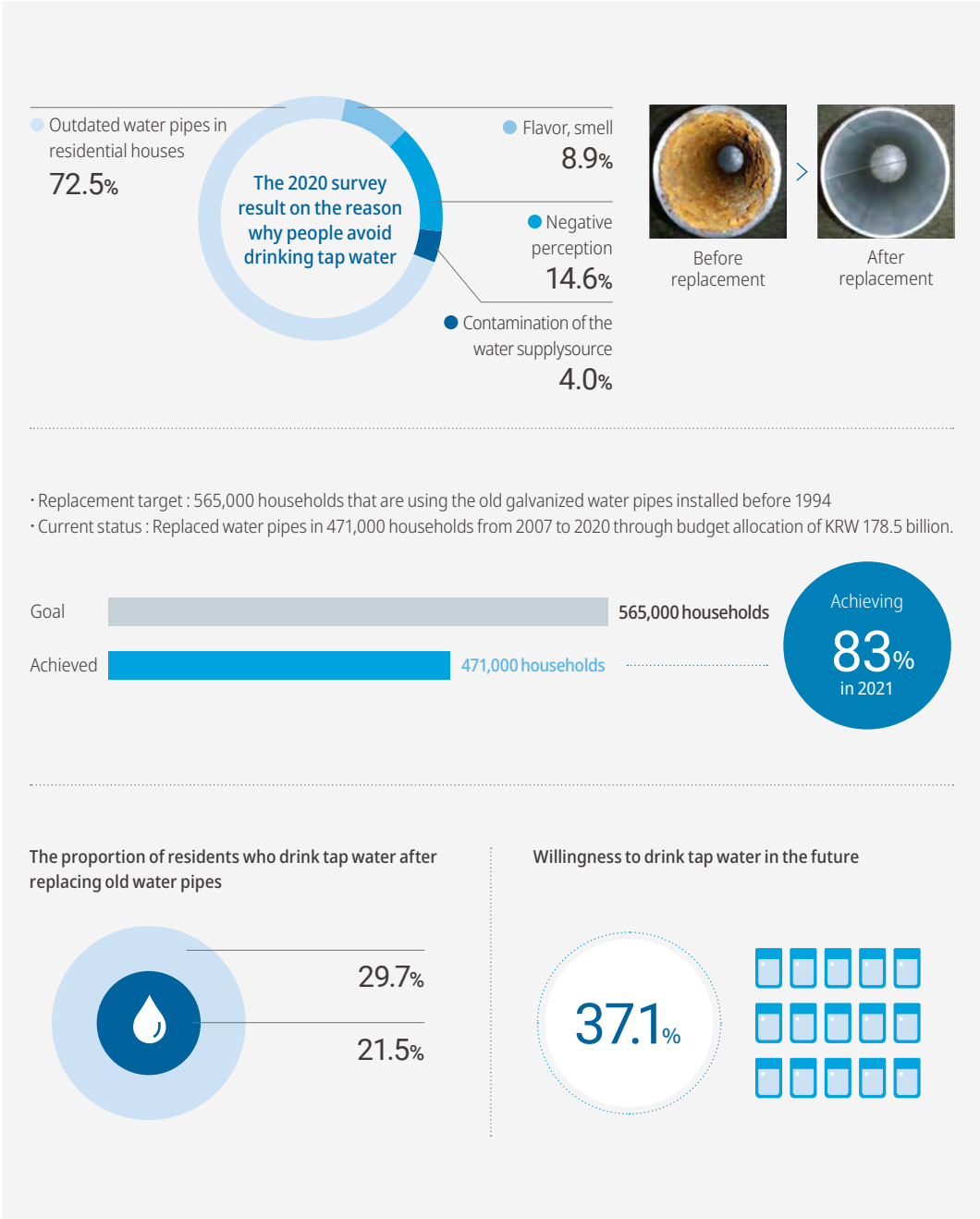
Healthy and Tasty Water Guideline

Item	Unit	Legal standard	Guideline	Setting background
Minerals (Ca, Mg, Na, K)	mg/L	-	20~100	Essential elements that the human body needs
Disinfection by-products (THMs)	mg/L	0.1	Below 0.04	Reinforcing the removal of disinfection by-products
Turbidity	NTU	0.5	Below 0.3	Reinforcing the removal of fine particles
Residual chlorine	mg/L	4	0.1~0.3	Maintaining a level of disinfection that cannot be tasted when drinking the water
2-MIB	ng/L	20 (monitoring item)	Below 8.0	Removal of substances that cause moldy smell
Geosmin	ng/L	20 (monitoring item)	Below 8.0	Removal of substances that cause earthy smell
Copper	mg/L	1	Below 0.05	Removal of substances that cause blue water
Iron	mg/L	0.3	Below 0.05	Causing rusty water, removing the smell of rust
pH	-	5.8~8.5	6.5~8.5	Substances that cause pipe corrosion and aesthetic harms
Manganese	mg/L	0.05	Below 0.02	Removal of substances that affect the taste of water, and cause black water

Supply of Healthy Water Through Preemptive Maintenance of the Water Supply Facilities

Replacement of Outdated Water Pipes

In a Seoul Waterworks Authority survey on the reasons why people avoid drinking tap water, 70% of the respondents cited outdated pipes in residential houses. Based on this, we are currently working on pipe replacement projects for 565,000 households who use old water pipes.



Rearrangement of the Purification Center Cycle

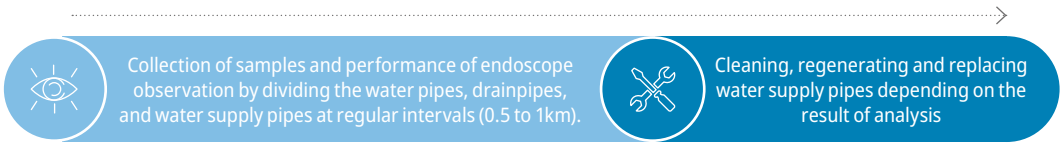
We are working on the rearrangement of cycle by distributing and allocating purification centers across the water supply zones to establish a stable tap water production system. Through this, we will be able to maintain premium water quality and respond quickly to potential water quality accidents.

Distributed allocation of water supply zones	>	Securing a suitable site in the western part of Seoul, and constructing a purification center for cycle maintenance, which will replace a certain part of Amsa.
Rearrangement of cycle due to aging and deterioration	>	<ul style="list-style-type: none"><li>• Amsa#1, Gwangam, Guui#1, Yeongdeungpo#1</li><li>• Preemptive maintenance due to rapid deterioration caused by over 30 years' of use</li></ul>

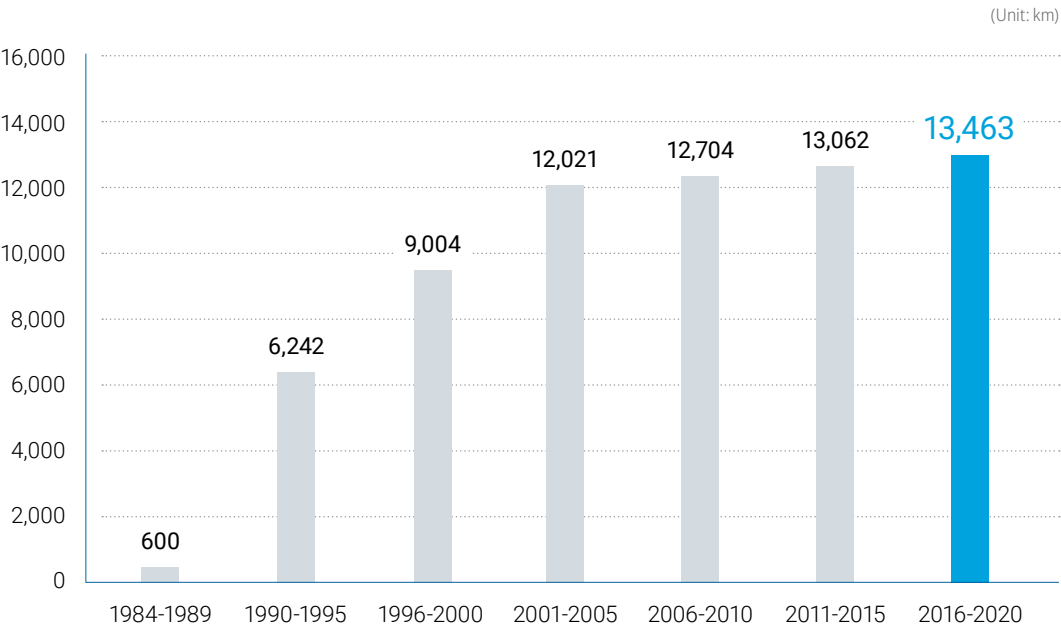
Maintenance of Water Pipes Used for a Long Period

Seoul Waterworks Authority continuously maintains and repairs old water pipes and establishes a regular monitoring system to preemptively solve the problem of ductile cast iron pipes that have been used for a long period of time as they are at high risk of developing impurities such as disintegrating coating materials.

Water supply network monitoring system (2021–2025)



Outdated water supply pipe maintenance performance (cumulative)



# 03

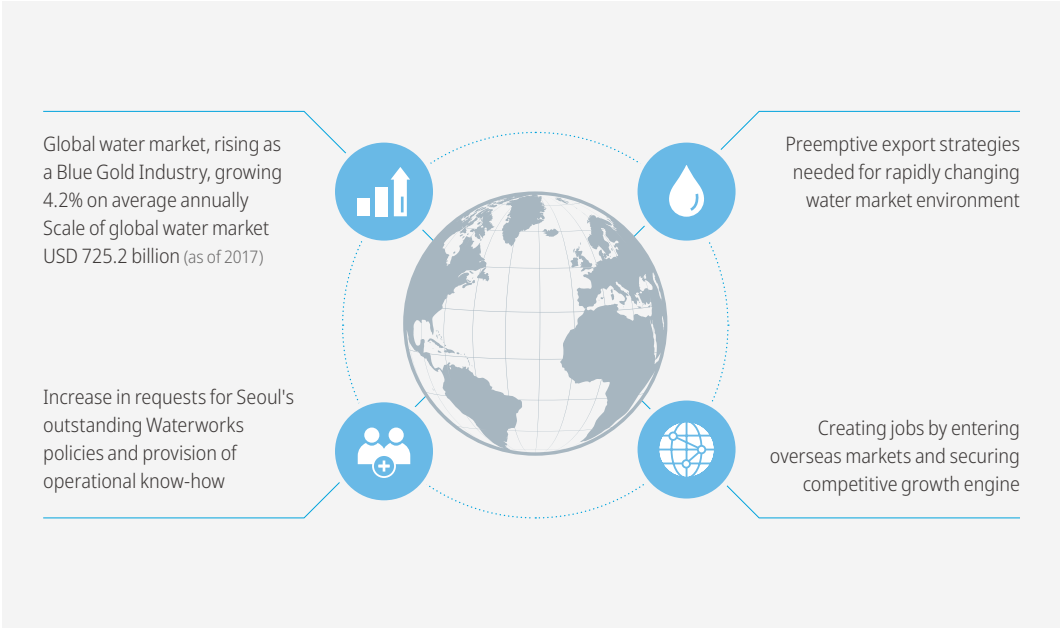
## Cooperation and Coexistence, Arisu Making Waves Worldwide

The Seoul Waterworks Authority has established a department exclusively in charge of international projects, the first of its kind by a local government in the nation, to actively pursue advancement overseas. Based on the excellent technology and know-how accumulated thus far, the department improves waterworks facilities in developing countries, supports Korean businesses' advancement in water industries overseas, and hosts policy training for waterworks officials from cities around the globe, raising the international status of Seoul's waterworks and contributing to the prosperity of all mankind.



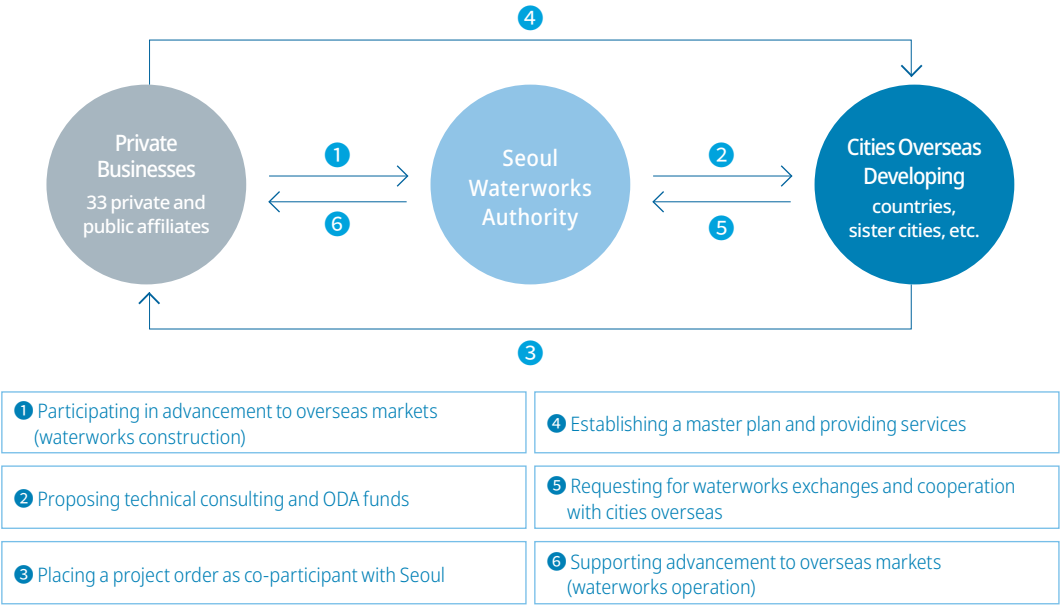
### Direction of Seoul Waterworks Authority's Overseas Advancement

#### Background



Seoul Model

Based on the Seoul Model for overseas advancement of waterworks, which represents the roles and mutual relations of “Seoul Waterworks Authority,” “Private businesses,” and “Cities overseas,” exchanges and cooperation tailored to target cities are implemented and sustainable overseas projects are developed.



Waterworks Projects’ Overseas Advancement Promotion Process

Phases	Description
<div>Phase 1</div> <div></div>	<ul style="list-style-type: none"><li>• Waterworks officials from target cities overseas to participate in Seoul's waterworks policy training</li><li>- Introducing outstanding policies of Seoul waterworks and dispatch of professional waterworks personnel</li><li>- Introducing how to apply for Economic Development Cooperation Fund (EDCF), World Bank and KOICA project</li></ul>
<div>Phase 2</div> <div></div>	<ul style="list-style-type: none"><li>• Sending professional waterworks personnel to overseas cities that request for technical exchange (diagnosis)</li></ul>
<div>Phase 3</div> <div></div>	<ul style="list-style-type: none"><li>• Conducting private and public joint consulting for facility improvement in cities where professional personnel is dispatched</li><li>- Providing services together with local private companies and establishing a master plan for improvement of waterworks facilities</li></ul>
<div>Phase 4</div> <div></div>	<ul style="list-style-type: none"><li>• Applying for international assistance funding projects run by relevant agencies such as KOICA or International Contractors Association of Korea as joint private and public institutions</li><li>• Participating in overseas projects by utilizing loans from Economic Development Cooperation Fund (EDCF) or World Bank</li><li>• Utilizing Seoul's Development Cooperation Fund for overseas advancement through establishment of basic infrastructure for water welfare aid</li></ul>
<div>Phase 5</div> <div></div>	<ul style="list-style-type: none"><li>• Signing MOU with private businesses for execution and launching of the projects</li></ul>

Examples of Seoul Waterworks Authority's Excellent Overseas Advancement

Drinking water facility improvement project in Huế Province, Vietnam

As the raw water in Vietnam usually contains heavy metal substances such as iron and manganese, Seoul Waterworks Authority shared the method for removing heavy metal substances. Also, an online automated and continuous multi-item water quality measurement system was installed, showing the excellence of Korean equipment.

**Progress**

Vietnamese waterworks officials' participation in policy training

Signed MOU on exchanges and cooperation with the Waterworks Bureau of Huế Province, Vietnam

Requested for assistance in waterworks facility improvement project

Conducted waterworks facility improvement project

2014


2015

2015


2016

**Project Overview**

Expenditure	KRW 100 million
Details	Produce, purchase, and install an online automated and continuous multi-item water quality measurement system
Period	January–December 2016



Drinking water facility improvement project in Huế Province, Vietnam



**Achievements** — Set up a base for overseas advancement through installation of Korean equipment in Vietnam  
Increased opportunities to participate in overseas projects by accumulating experiences and results of overseas advancement by domestic businesses.


Infrastructure development consulting project in PMB Island, Brunei

In order to support domestic companies' advancement in overseas markets, the construction achievements of a private company and operational achievements of Seoul Waterworks Authority were combined into a consortium for joint participation in the Brunei project. This project is the first-ever case of a local government's participation in a waterworks project overseas in collaboration with a private company.

**Project Overview**

Details	Consulting for the development of infrastructure such as bridges, access roads, water, communication, and electricity in PMB Island located 1.5 km away from the mainland
Client	Brunei Economic Development Board
Area of work	Construction and operation supervision
Period	April 2016–April 2020

Dispatched 1 Seoul Waterworks Authority technician to Brunei for supervision



Construction of a bridge in PMB Island, Brunei



**Achievements** — The first-ever case of local government's participation in waterworks project overseas in collaboration with a private company. In the KRW 230 billion project, the Seoul consortium won a KRW 13.5 billion contract.

Water supply facility improvement project (ODA) in Chanchamayo, Peru

In 2012, a technical staff from Seoul Waterworks Authority conducted a preliminary survey in the city and successfully completed the water supply facility improvement project in three areas through three phases that started in 2013. As a result, clean tap water was supplied to the citizens of Chanchamayo, allowing them to drink tap water straight from their faucets.

Project Overview

Details	Water supply facility improvement in San Ramon, La Merced, and Pichanaki
Period	2013–2018 (conducted in 3 phases)
<div>- Phase 1 (2013–2015): Construction of intake and water purification stations in San Ramon, repair of waterworks pipelines, etc.</div> <div>- Phase 2 (2016–2017): Improvement of intake and water purification stations in La Merced, repair of waterworks pipelines, etc.</div> <div>- Phase 3 (2018): Relocation of the intake station and improvement of the water purification station in Pichanaki, repair of waterworks pipelines, etc.</div>	
Procedure	PMC services (open competition, entire project was implemented under the responsibility of contractors)
Budget	About KRW 2.5 billion



- Waterworks service is provided for about 10% of the entire population, the rest of which uses water from valleys, rivers, etc.
- Existing waterworks facilities are severely outdated at about 30 to 40 years old.
- Budget shortage (USD 600,000/year) prevents not only distribution of waterworks and sewage system but also improvement of facilities.



Achievements — Raising international status of Seoul, the capital of Korea, by establishing water welfare through aid

- Low-cost improvement of water supply facilities → Supply of clean water (ability to supply water to all citizens of Chanchamayo: 20,000 → 145,000 people)



- The first-ever international aid project by a local government utilizing Seoul's Development Cooperation Fund
- Benchmarked by other local governments such as Gyeonggi-do Province and the city of Busan
- Contributed to creation of jobs overseas by promoting PMC services of domestic private businesses (four years, eight businesses)
- Shared Seoul's outstanding technology in waterworks to South America by using Korean-made equipment and tools

Thanks to the six years of aid by the Seoul Metropolitan Government, the once tough reality of being unable to access everyday drinking water has been solved, allowing anyone to drink clean water as much as he/she wants at a reasonable cost.

A letter of gratitude from the Mayor of Chanchamayo, Peru to the mayor of Seoul



Grand prize at the Local Internationalization Best Practices Contest


The Seoul Metropolitan Government participated in “2019 Local Internationalization Best Practices Contest,” hosted by the Governors Association of Korea, for all 243 local governments nationwide, and won the grand prize of the Minister of the Interior and Safety Award. The city received praise for its continued efforts to not only pass down up-to-date waterworks technologies and operational know-how in other nations with out-dated waterworks facilities but also assist private businesses with their overseas advancement.



**Tanzania water supply facility improvement project selected as a KOICA ODA project (tentative project)**

Upon receiving a request for technical consulting from the city of Dodoma, Tanzania, waterworks professionals and technicians from the Seoul Waterworks Authority visited the country to complete an on-site survey in 2019. In 2020, Seoul proposed the Tanzania water supply facility improvement project as a KOICA government proposal project and, as a result, it was ultimately selected as a target project. Through this project, which is Seoul's second-ever ODA project following Peru, Seoul plans to supply clean water to cities and farming regions of Tanzania and, at the same time, assist Korean private businesses with their overseas advancement.

Project Overview	
Details	Establishment of supply and operation model in cities and farming regions, preservation and management of water intake sources, establishment of a management model for sustainable facility operation, and assistance in waterworks facility operation
	<b>City of Dodoma</b> <ul style="list-style-type: none"><li>• Replacement and maintenance of outdated equipment and facilities such as flowmeters and disinfection facilities in existing waterworks facilities</li><li>• Establishment of waterworks facility operation plan and consulting on management efficiency in urban areas</li></ul>
	<b>Mareu, Arusha Region</b> <ul style="list-style-type: none"><li>• Establishment and demonstration of a waterworks supply model in rural areas</li><li>• Preservation of water intake sources (surface water, groundwater, etc.) in rural areas and consulting on management measures</li></ul>
Period	2023~2027
Finances(Client)	KOICA
Expenditure	About KRW 4 billion (USD 3.36 million)



**Technical Exchange and Cooperation in Waterworks with Cities Overseas**

**Professional technical diagnosis and consulting for cities overseas**

After reviewing the feasibility of overseas advancement in potential requesters through consulting, technical experts in different fields (civil engineering, water quality, mechanical, electrical, etc.) are dispatched to conduct diagnoses and consulting on water supply facilities.

Papua New Guinea	Port Moresby	2012	Performing overall diagnoses on water supply facilities including intake and purification processes, supply management, and water flow rate control, and seeking projects that can potentially result in advancement
		2014	Discussing MOA for a water supply project with EDA-RANU of Papua New Guinea Conducting waterworks facility diagnosis and technical consulting
Vietnam	Huế	2016	Executing diagnoses and technical consulting on waterworks facilities such as intake and purification stations, and discussing the means of mutual cooperation
Vietnam	Ninh Bình and Hải Dương	2016	Executing diagnoses and technical consulting on waterworks facilities such as intake and purification stations, and holding discussions with Seoul Metropolitan Government and KOICA ODA
Brazil	São Paulo and Curitiba	2017	Supporting private businesses to advance to Brazil by promoting Seoul's outstanding waterworks policies
Cambodia	Kampong Thom and Kampong Chhnang	2019	Supporting private businesses to advance to Cambodia by promoting Seoul's excellent waterworks policies, conducting technical consulting, and discussing ODA projects with KOICA and Seoul Metropolitan Government
Tanzania	Dodoma and Arusha	2019	Supporting private businesses to advance to Tanzania by promoting Seoul's excellent waterworks policies, conducting technical consulting, and discussing an ODA project with KOICA and the Seoul Metropolitan Government



### Continued Exchange for Dispatch of Professionals

As international movements have been restricted due to COVID-19, dispatches to cities around the world are currently on hold. However, with the help of video conferences, discussions on future exchanges including contactless technical exchange and cooperation can continue through meetings with ambassadors in Korea.

Argentina	Partner	Argentine Water and Sanitation (Agua y Saneamientos Argentinos)
	Background	AySA seeking active exchanges through the embassy of Argentina in Korea
	Area of exchange	Water purification facility
	Description	<ul style="list-style-type: none"> <li>- Preparation to dispatch technical professionals as a response to AySA's invitation of Seoul Waterworks Authority (Feb. 2020)</li> <li>→ International business trips for government affairs restricted due to COVID-19</li> <li>- Four agencies - Seoul Waterworks Authority, AySA, the Embassy of Argentina in Korea, and the Embassy of the Republic of Korea in Argentina - held a video conference (Oct. 2020) to discuss ways to exchange and cooperate on waterworks technology. Also, the Ambassador of Argentina to the Republic of Korea visited Seoul Waterworks Authority (Nov. 2020).</li> </ul>
Myanmar	Partner	National Water Resources Committee of Myanmar
	Background	VIPs including the Vice President of Myanmar visited Seoul's waterworks facility (Feb. 2020) As a follow-up , Myanmar requested for Seoul's technical consulting on waterworks
	Area of exchange	Improvement of outdated waterworks facilities
	Description	Dispatch of technical professionals to the country was put on hold due to COVID-19. Instead, ways for continuous exchanges and cooperation were discussed through a meeting with the Ambassador of Myanmar to the Republic of Korea (Dec. 2020).

### MOU with Cooperating Cities Worldwide

By signing MOUs on mutual cooperation in the area of waterworks with cities around the world, an international network is built, and sustainable exchanges and cooperation in waterworks are promoted.

May 29, 2012	Signed an MOU on exchange and cooperation in waterworks with the Metropolitan Waterworks Authority of Thailand
Jun. 21, 2012	Signed an MOU on exchange and cooperation in waterworks with the city of Ribeirão Preto, Brazil
Jun. 22 2012	Signed an MOU on exchange and cooperation in waterworks with the city of Moji-Mirim, Brazil
Jun. 26, 2012	Signed an MOU on exchange and cooperation in waterworks with the city of Pícsi, Peru
Jun. 28, 2012	Signed an MOU on exchange and cooperation in waterworks with the city of Chanchamayo, Peru
Jul. 23, 2012	Signed an MOU on exchange and cooperation in waterworks with EDA-RANU of Papua New Guinea
Mar. 6, 2015	Signed an MOU on exchange and cooperation in waterworks with the Waterworks Bureau for Huế Province, Vietnam
Apr. 20, 2015	Signed an MOU on exchange and cooperation in waterworks with El Servicio de Agua Potable y Alcantarillado de Junín, Peru
Oct. 25, 2016	Signed an MOU on exchange and cooperation in waterworks with the Waterworks Bureau for Ninh Binh Province, Vietnam
Mar. 14, 2017	Signed an MOU on exchange and cooperation in waterworks with the Can Tho Water Supply and Sewerage Company Ltd., Vietnam
Sep. 27, 2017	Signed an MOU on exchange and cooperation in waterworks with the Companhia de Saneamento Paraná in the state of Paraná, Brazil

## Status of Advancement for Overseas Projects

### São Paulo and Curitiba, Brazil (2017)

- Technical consulting on transforming sludge into energy
- Technical diagnosis on maintenance of water purification stations and water distribution pipelines



### Chanchamayo, Peru (2013–2018)

- Assistance in facility improvement of water supply facilities such as water purification stations, intake stations, water pipes, and drains
- 5 companies including Korea Engineering Consultants Corp. operated a waterworks project such as a water purification station in the city with Seoul's Development Cooperation Fund (KRW 2.5 billion).



### Argentina (2019 & 2020)

- Introduction of and meeting with domestic companies specializing in equipment and automation
- Video conference held based on a request for technical diagnosis from Argentina's Agua y Saneamientos Argentinos (AySA)



**Chin, Myanmar (2020)**

- Myanmar delegation, including the Vice President, visited Seoul's waterworks facility and participated in a meeting
- Discussions continue with Myanmar's National Water Resources Committee based on a request for technical diagnosis on waterworks in the Chin region



**Ninh Binh and Hải Dương, Vietnam(2016)**

- Technical consulting for the city of Ninh Binh on the reduction of water leakage rate
- Consulting for the city of Hải Dương on the maximization of water purification processing capacity



**Huế, Vietnam (2016)**

- Installation of automatic waterworks water quality monitoring devices



**Brunei (2012–2020)**

- Consulting in the waterworks sector and development of infrastructure in PMB
- Supervision of on-site construction and operation in the waterworks sector



**Dodoma and Arusha, Tanzania (2023–2027; tentative)**

- Water supply facility improvement project
- Construction of intake and water purification stations, water pipes, and drains, etc.



**Kampong Thom and Kampong Chhnang, Cambodia (2019)**

- Waterworks facility improvement project
- Construction of intake and water purification stations, water pipes, and drains, etc. Development and application of a standard model for drinking water supply in rural areas



**Papua New Guinea (2014)**

- Feasibility study for water purification station facility improvement project
- Consulting on facility improvement and operation of water purification stations



## Seoul Waterworks Policy Training

The Seoul Metropolitan Government has been hosting annual training programs for waterworks and inviting officials from cities around the globe since 2012, producing 262 trainees from 37 countries worldwide thus far. Seoul Waterworks Policy Training has achieved great feats of enabling not only Seoul but also many of the domestic waterworks companies to participate in numerous overseas waterworks projects, which include the drinking water facility improvement project in Hué Province, Vietnam and the water supply facility improvement project in the city of Chanchamayo, Peru.

### Training Overview

Participants	Policy decision makers and engineers from waterworks-related agencies in international cities (from developing countries and inclusion of OECD member nations, etc.)
Training period	6 nights, 7 days (Full-day training: 5 days, excluding arrival and departure dates)
No. of trainees	About 15 per session
No. of sessions	Two sessions by the Seoul Waterworks Authority, one by the Seoul Human Resource Development Center
Completed Trainings	21 sessions, 262 trainees from 87 cities in 37 countries participated (2012–2019)
Expenses Covered	·Seoul Metropolitan Government: Operational expenses of the training, lodging and food expenses ·Trainees: Airfare

### Training Schedule

Day 1	<b>Orientation</b>	Information on training schedule, meet-and-greet among trainees, introduction of hosting department and affiliates
	<b>Welcome ceremony</b>	Introduction of executives and trainees, commemorative photo
	<b>Presentation on waterworks status</b>	Seoul Waterworks Authority's presentation on the current status and Q&A
	<b>City Report I</b>	Presentation on the status of each city and current issues, discussion with experts
Day 2	<b>Visit to the Arisu Water Purification Center</b>	Learning water intake and purification processes
	<b>Special lecture on pipeline management</b>	Special lecture on water flow rate control
	<b>Visit to the Arisu Integrated Information Center</b>	Listening to a lecture on and learning the Arisu Integrated Information System
Day 3	<b>Lecture on Arisu Total Service</b>	Lecture on the service for citizens and water leak detection experience program
	<b>Waterworks Research Institute</b>	Introduction of the institute and visit to a water quality control site
	<b>City Report II prep</b>	Discussion among trainees and preparation of City Report II
Day 4	<b>Visit to the Waterworks Equipment Management Center</b>	Visit to waterworks equipment management site
	<b>Visit to the Hangang Promotional Ship</b>	Visit to Hangang River, the source of Arisu
	<b>Company exchange</b>	Exchange with domestic waterworks companies
Day 5	<b>City Report II</b>	Presentation on the application of contents from the training
	<b>Training evaluation and completion ceremony</b>	Conferment of completion certificates and souvenirs

\* Program schedule as of 2019. Detailed schedule subject to change

Asia

East Asia

3 countries (11 cities)

**30** trainees



China



Japan



Mongolia

Southwest Asia (Middle East)

2 countries (2 cities)

**4** trainees



Jordan



Iran

Southeast Asia

17 countries (54 cities)

**174** trainees



Vietnam



Indonesia



Thailand



Bangladesh



Bhutan



Philippines



Nepal



Sri Lanka



Taiwan



Brunei



Laos



Myanmar



Singapore



Cambodia



Malaysia



India



East Timor

South America

4 countries (9 cities)

**35** trainees



Peru



Ecuador



Brazil



Colombia

North and Central America

1 country (1 city)

**2** trainees



Mexico

Oceania

1 country (1 city)

**2** trainees



Papua New Guinea

Europe

4 countries (4 cities)

**7** trainees



Azerbaijan



Turkey



Germany



Russia

Africa

5 countries (5 cities)

**8** trainees



Tanzania



Kenya



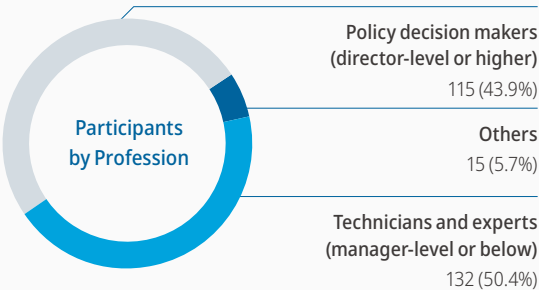
Gambia



Gabon





Sudan



Current members of Seoul Waterworks Public Private Partnership (SWPPP) for overseas advancement

Consulting

	WinnersGate Consulting Korea Ltd. winnersgateconsulting.com	+82-2-522-0477 jhyoon@winnersgate.com	Management consulting (project strategies, project feasibility, performance management), global consulting (overseas market surveys, advancement strategies, international marketing)
	East West EnC Co., Ltd ewenc.co.kr	+82-70-4849-5166 yoonghee05@hanmail.net	Attraction of overseas investors, consulting, ppp project development, etc.

Design

	DOHWA Engineering Co., Ltd. dohwa.co.kr	+82-2-6323-3000 leesj@dohwa.co.kr	Design of waterworks and sewage, plants, etc., construction project management, EPC, facility operation, etc.
	Dong Myeong Engineering Consultants & Architecture . dmecc.co.kr	+82-2-6211-7861 beejay9@naver.com	Design and supervision of waterworks, sewage, and plants
	Sambo Engineering Co., Ltd. samboeng.co.k	+82-2-3433-3144 dochoongho@hanmail.net	Waterworks and sewage engineering
	Saman Corporation samaneng.com	+82-2-6488-8000 port9@hanmail.net	Engineering and construction project management in the field of waterworks and sewage
	Seoyoung Engineering Co., Ltd. seoyoungeng.com	+82-2-6915-7513 cjkun@seoyoungeng.com	Design and construction of project management in waterworks, sewage, plants (electricity generation), etc.
	Soosung Engineering Co., Ltd. soosungeng.com	+82-2-2142-9431 lky05299@naver.com	Engineering and construction project management in the field of waterworks and sewage
	Isan Co., Ltd. kecc.co.kr	+82-31-436-8268 mikejin8880@gmail.com	Design of waterworks and sewage, etc., construction project management, facility operation, etc.
	Pyunghwa Engineering Consultants Ltd. pec.kr	+82-31-420-7382 pss1436@empal sspark@pec.kr	Civil engineering services (roads, bridges, waterworks, sewage, water resources, etc.)
	Korea Engineering Consultants Corp. kecc.co.kr	+82-2-2049-2604 leech@kecc.co.kr	Engineering, consulting, design, supervision, construction, etc. in the field of waterworks and sewage
	Hankuk Engineering Consultant Co., Ltd. hankukeng.com	+82-31-420-5844 ucam97@naver.com	Planning, design, and construction of project management in waterworks, sewage, plants (electricity generation), etc.

Construction

	Daewoo Engineering & Construction Co., Ltd. daewooenc.com	+82-2-2288-3114 donghwan.kang@daewooenc.com	Construction (civil engineering, residential construction, plants, investment development, O&M, FM, etc.)
	Sanyang Construction Co., Ltd.	+82-2-553-9270 san9270@hanmail.net	Construction (civil engineering, waterworks, sewage, paving, structure maintenance, etc.)
	DL E&C Co., Ltd. dlenc.co.kr	+82-2-2011-7114 ywoo9@dlenc.co.kr	Design, construction, project launch, planning, investment, financing, building, operation, management, etc.

## Water quality

	DaAll.Eng Co., Ltd. daalleng.kr	+82-2-859-8491 tyshin12@hanmail.net	Online water quality measuring device (turbidity meter, pH, residual chlorine, conductivity, dissolved oxygen, etc.)
	Toray Advanced Materials Korea Inc. torayamk.com	+82-2-3279-7359 yonghwan.lee@torayamk.com	Separation membrane for water treatment, filter manufacturing (RO, NF, UF, MF)
	Water Resources Engineering Corp. wareco.co.kr	+82-42-333-5273 kwon8801@hanmail.net	Waterworks diagnostic device (inspection camera in water-flowing pipes, etc.)

## Devices and materials

	GoBee Co., Ltd. ab3p.com	+82-2-585-9190 gobee.info@gmail.com	Waterworks and sewage pipe manufacturing, compounds, joint accessories, etc.
	Newtork Korea Co., Ltd. newtork.co.kr	+82-31-711-3107 emhuh@newtork.co.kr	Electric manipulators, electric valves, waterworks and sewage
	Daehan Sensor Co., Ltd. dh34.com	+82-2-2213-9888 dhs3482@gmail.com	Manufacturing, sales and trading of water level sensors and systems
	Samjin Precision Co., Ltd. samjinvalve.com	+82-2-839-1863 kblee@sjv.co.kr	Parts related to waterworks and sewage valves, smart water pipeline management system, water treatment system, etc.
	Seokwang Industrial Co., Ltd. skvalve.co.kr	+82-31-709-1430 skvalve@chol.com	Valves (butterfly valves, ball valves, etc.)
	Shin An Cast Iron Co., Ltd. shinanpipe.co.kr	+82-43-743-1090 shinan5663@hanmail.net	Manufacturing of waterworks ductile cast iron pipes, joint accessories, special pipes, etc.
	SM Tech Co., Ltd. waterhammer.kr	+82-32-623-0091 antisurge@hanmail.net	Water hammer prevention equipment
	Waternix Co., Ltd. waternix.com	+82-51-202-3054-5 cs@waternix.com	Water treatment devices, industrial water purifiers
	Jain Technology Co., Ltd. jain.co.kr	+82-2-856-4114 nsl@jain.co.kr	Ultrasonic flow meters, portable flow meters, solar energy block flow meters, etc.
	Gentrogroup Co., Ltd. gentro.co.kr	+82-2-2225-0425 gentro@nate.com	Guide walls, baffle walls, PE lining (manufacturing)
	Cowithone Co., Ltd. cowithone.com	+82-31-212-5565 cowith1@hanmail.net	Equipment and tools related to damage prevention of underground pipes and real-time water leakage detection system
	Hitec EPC Co., Ltd. hitecepc.com	+82-2-3012-2900 kimdawe@hitecepc.com	Water meters, digital water meters, remote automated meter reading system
	Korea Cast Iron Pipe ind. Co., Ltd. kcip.co.kr	+82-2-565-4900 lee0108@kcip.co.kr	Ductile cast iron pipes and special pipes, common cast products, steel pipe piles, structural steel pipes
	Hanse Precision Meter Co., Ltd. hsmeter.com	+82-31-997-1445 hanseo@hsmeter.com	Water meters, hot water meters, heat meters
	PPI Co., Ltd. PPI Co., Ltd.	+82-31-359-0031 hongsw@ppinet.co.kr	PVC water pipes, waste pipes and drains, fire pipes, etc.

The water made by Seoul  
supplied around the world

# Arisu