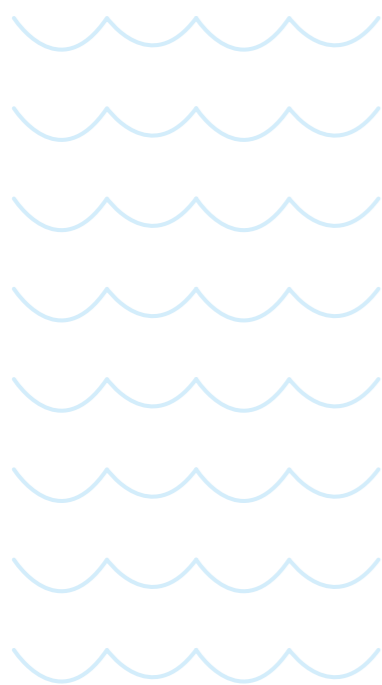


2017



Beijing Enterprises Water Group Limited  
**2017 CORPORATE  
SOCIAL RESPONSIBILITY  
REPORT**

## Description for report preparation

This Corporate Social Responsibility (CSR) Report reflects Beijing Enterprises Water Group Limited (BEWG)'s efforts in meeting with its economic, social and environmental responsibilities for comprehensive, balanced and sustainable development.

### Reporting period

This CSR Report mainly covers activities from January 1, 2017 to December 31, 2017, as well as some activities beyond this period.

### Report content

All cases and data in this CSR Report are related to BEWG and its subsidiaries.

### Source

All data and information in this CSR Report are from BEWG's internal data collection and statistics systems, qualitative and quantitative information collection tools for its preparation, and CSR practical cases submitted by subsidiaries.

### Basis of preparation

BEWG has made every effort to prepare this CSR Report in conformity with general industrial standards on CSR data disclosure. Based on BEWG's industry background and highlights of its corporate characteristics, this CSR Report was prepared in accordance with the *Environmental, Social and Governance Reporting Guide* of The Stock Exchange of Hong Kong Limited ("HKEX") and with reference to the *G4 Sustainability Reporting Guidelines* of the Global Reporting Initiative (GRI).

### Company name

For the convenience of description and reading, Beijing Enterprises Water Group Limited is also referred to as "BEWG", "the Group", "the Company" or "We" in this CSR Report.

### Form of report

This CSR Report has been released in English and Chinese versions, as well as printed and online editions.

To browse or download the online report, please visit: <http://www.bewg.net>.

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# Message from Chairman



Chairman of the Board of Directors of BEWG  
Mr. Li Yongcheng

In 2017, operating income was

HKD 21.192 billion

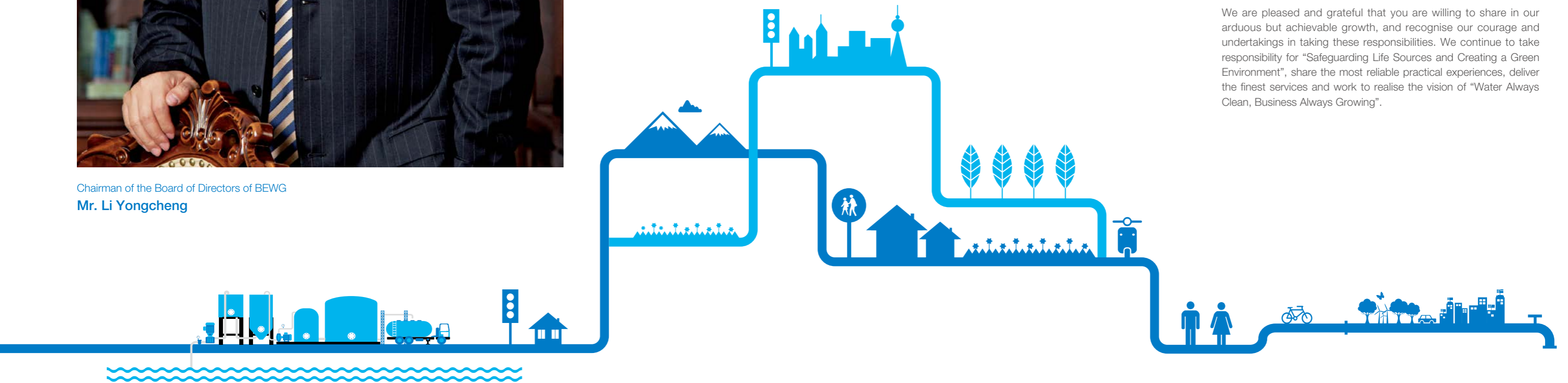
Increasing by

22%

In 2007, we have witnessed strong cohesion of and constant breakthroughs by BEWG. With vigorous development of our core business and emerging business, BEWG realised approximately HKD21.192 billion of operating income, increasing by approximately 22% on a year-on-year basis. In addition, we have maintained strong growth in operating performance, and transformed our income structure to a light asset-dominated one. In addition to company restructuring, we have made investments in the industrial development and continued growth of the Company. We have continued to improve the implementation of our ecological strategy, and strengthened external ecological cooperation without compromising internal ecological organisation. All these efforts will help BEWG become a leader in the flourishing water industry.

We strive to expand environmental protection business and promote environmental governance with innovative technology; we have continuously improved operational transparency to honour our commitments to boost social and industrial progress and sustainable development. We have unremittingly enhanced our sustainable operation capability, and embarked upon the construction of an ecological civilisation as required by the 19th National Congress of the Communist Party of China. To balance social and environmental impacts, each decision was made in consideration of stakeholders' needs from the perspective of social responsibility. We will work with stakeholders to create shared value by actively taking our responsibilities in term of products, environment, employees and communities. We are proud to report that BEWG has put its promises into action, and realised ongoing development through communication and participation with stakeholders.

We are pleased and grateful that you are willing to share in our arduous but achievable growth, and recognise our courage and undertakings in taking these responsibilities. We continue to take responsibility for "Safeguarding Life Sources and Creating a Green Environment", share the most reliable practical experiences, deliver the finest services and work to realise the vision of "Water Always Clean, Business Always Growing".



# Message from the CEO



Chief Executive Officer of BEWG  
Mr. Zhou Min

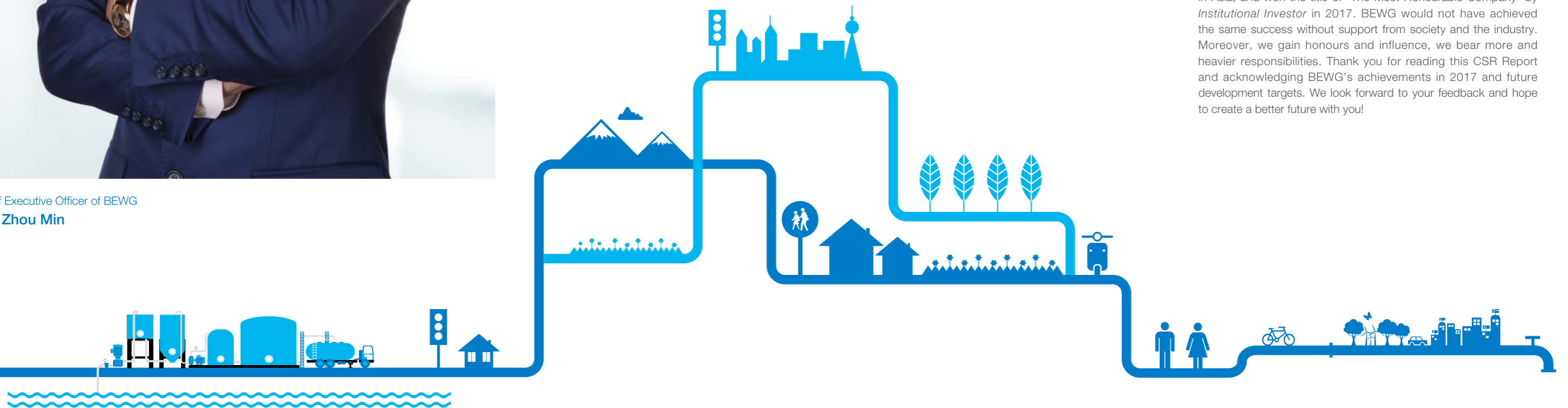
We have persistently and firmly adhered to the mission of taking our corporate responsibilities. We believe that by promoting corporate governance and commercial ethics, further adherence to economic, environmental and social responsibility will help BEWG reduce risks and costs, improve brand value and expand future markets. Finally, this will create ongoing value for the Company and its stakeholders.

**BEWG is also contributing to build up an ecological civilisation**, which is vital to sustaining China's development. The 19th National Congress of the Communist Party of China has proposed a policy on the harmonious coexistence of human beings and nature, and further defined the general requirements for building an ecological civilisation and a beautiful China. Based on the environmental protection attributes of BEWG's business, we will actively promote green development and devote ourselves to addressing environmental problems and protecting ecological systems, thus contributing to the construction of an ecological civilisation.

**As a guardian of the environment**, based on people's needs and ecological environmental conditions, BEWG has pursued optimisation and innovation in water ecological control, and actively practised the green development initiative of "lucid waters and lush mountains are as invaluable assets". While developing environmental protection businesses, we also pay attention to the impact of our own operations on the environment. We have adopted the strictest environmental protection standards from production and operation to daily work, to minimise the impact of our operations on the environment, and realise the harmonious coexistence of human beings and nature, as well as comprehensive, balanced and sustainable development.

**As a pioneering corporate citizen**, BEWG is committed to a people-oriented principle, and recruits employees without discrimination; we have designed our holiday, attendance and benefits system based on employees' needs, and provided them with diversified training courses and development paths; we have made every effort to create a safe and healthy work environment and to maintain employees physical and psychological health and work-life balance, and grow with the Company. In terms of community participation, through environmental protection education and promotion, targeted poverty reduction measures and volunteer services, we have effectively created a public service network to improve the communities in which we operate.

BEWG has been ranked as a "Top 10 Influential Enterprises of the Chinese Water Industry" for seven consecutive years, and has been listed in the Fortune China 500 List for two consecutive years; moreover, BEWG stood out among 2,510 listed companies in Asia, and won the title of "The Most Honourable Company" by *Institutional Investor* in 2017. BEWG would not have achieved the same success without support from society and the industry. Moreover, we gain honours and influence, we bear more and heavier responsibilities. Thank you for reading this CSR Report and acknowledging BEWG's achievements in 2017 and future development targets. We look forward to your feedback and hope to create a better future with you!





## About BEWG

Beijing Enterprises Water Group Limited (BEWG) is a comprehensive and leading professional water services and environmental protection services provider covering industrial investment, design, construction, operation, technical service and capital operation in the full industrial chain. Its scope of business covers many fields such as water services in cities and towns, water services in river basins, industrial water services, seawater desalination services, environmental sanitation, solid waste treatment, clean energy, and scientific and technical services.

Suburban

Villages

River

Residence

Park

Sanitation station

Photovoltaic power plant

Wind farm

Airport

Waste landfill

School

Factory

Seawater desalination plant

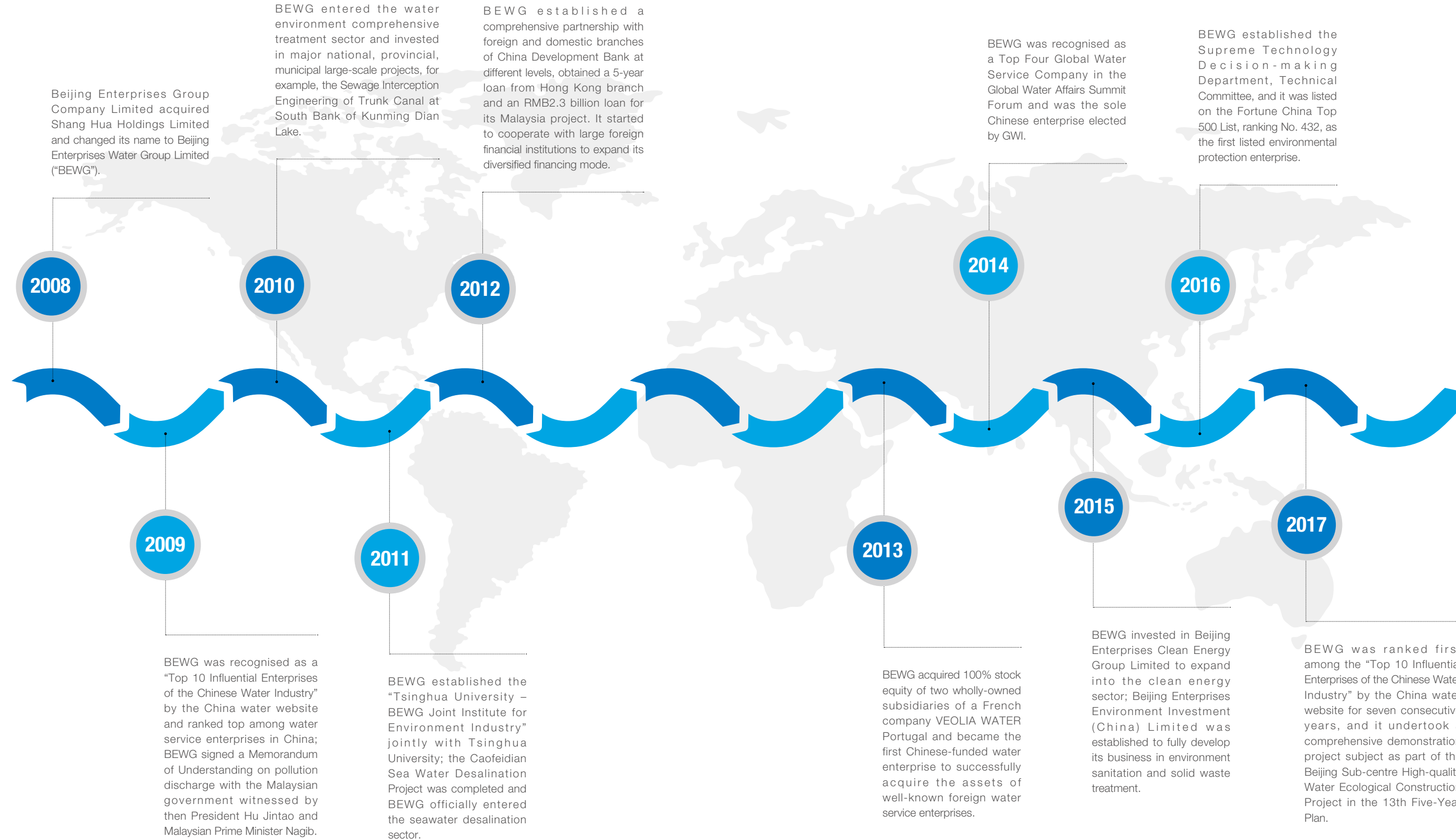
Shore

Main urban area

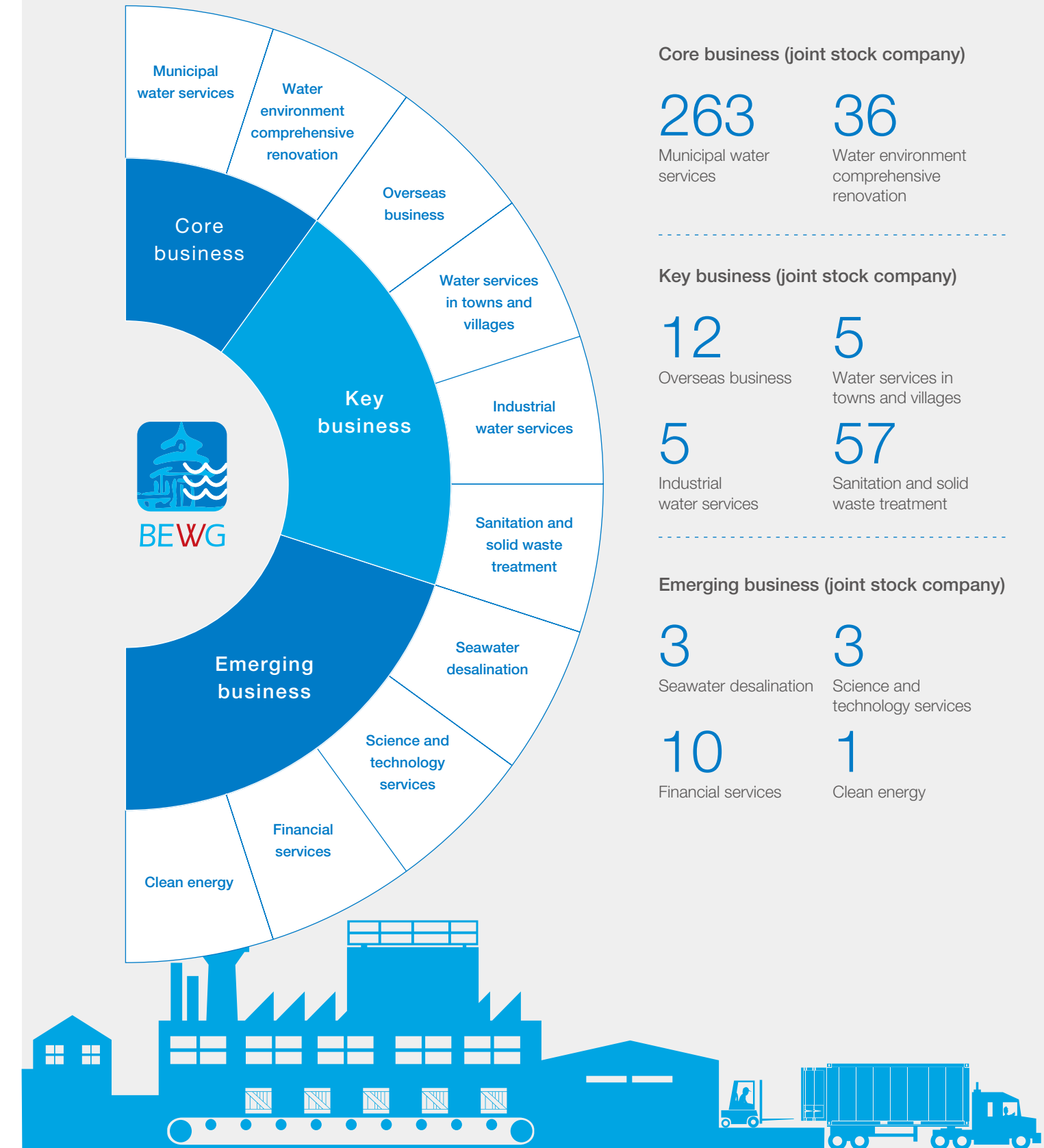
Port



BEWG's ten-year development from 2008 to 2017



Framework of BEWG's business and management



## Strategy and culture

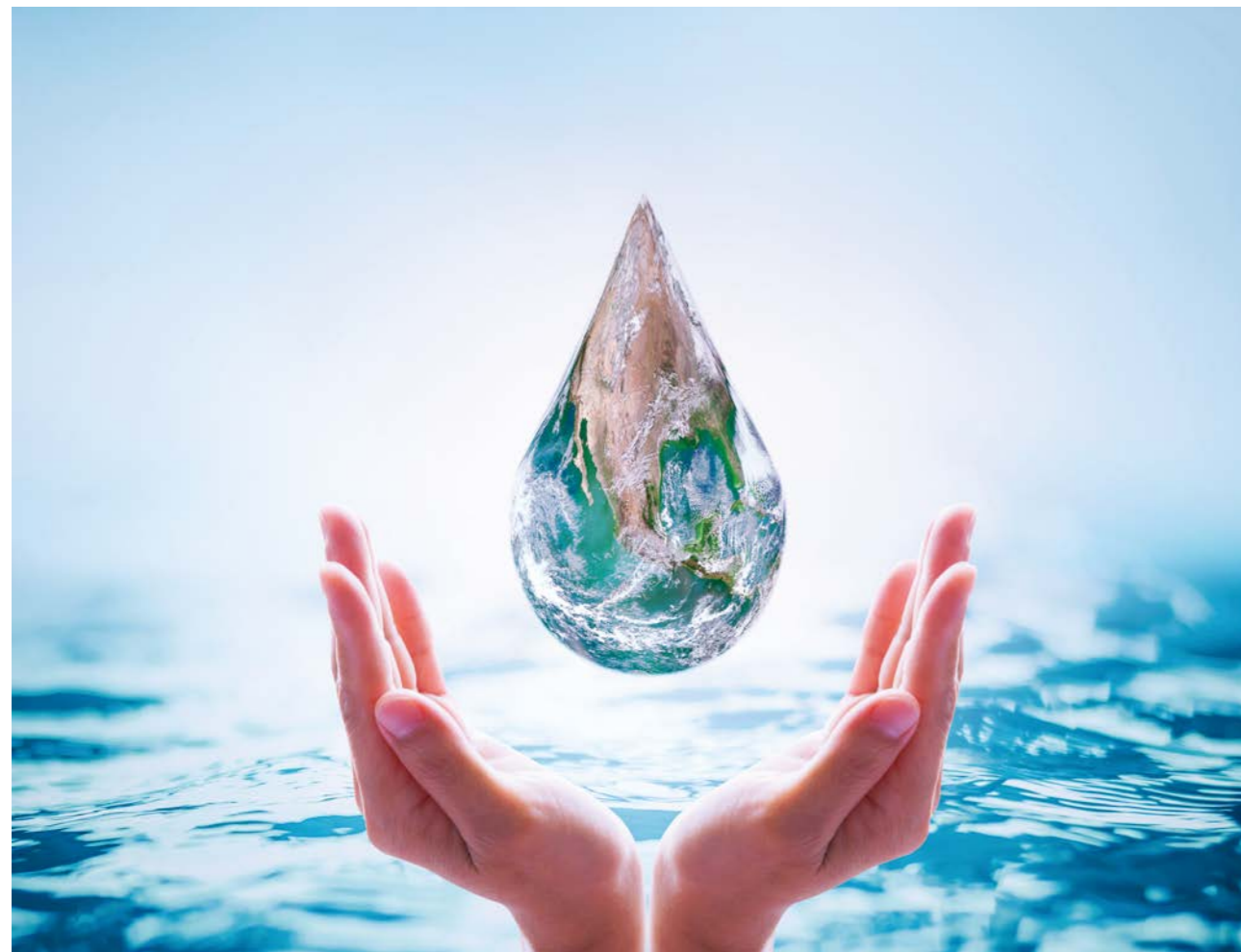
BEWG adheres to the mission of "Safeguarding Life Sources and Creating a Green Environment", and is committed to "Reassuring Governments, Satisfying Citizens, Making Profit, and Benefiting Employees and Partners". Embracing the core values of "Responsibility, Valuable and Sharing", BEWG is committed to fulfilling its industrial promise of "making water cleaner", and becoming a leading professional water environment integrated service provider with a vision of "Water Always Clean, Business Always Growing".

**Mission:** Safeguard Life Sources and Create a Green Environment

**Vision:** Water Always Clean, Business Always Growing

**Core values:** Responsibility, Valuable and Sharing

**Strategic objectives:** Transform to the light asset model, and propose a two platform strategy (asset management platform and operation management platform) under the guidance of ecological strategy and on the basis of further collaboration between finance, investment, technology, construction and operation

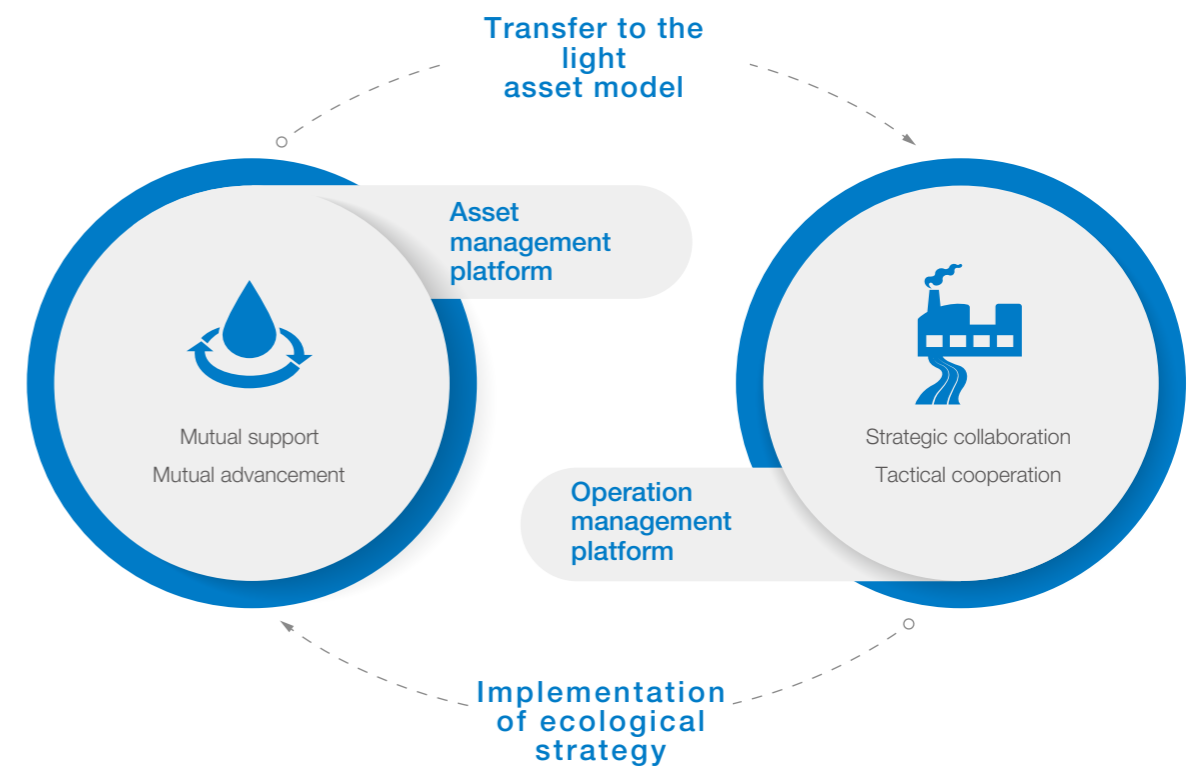


### • Two platforms: Asset management platform + Operation management platform

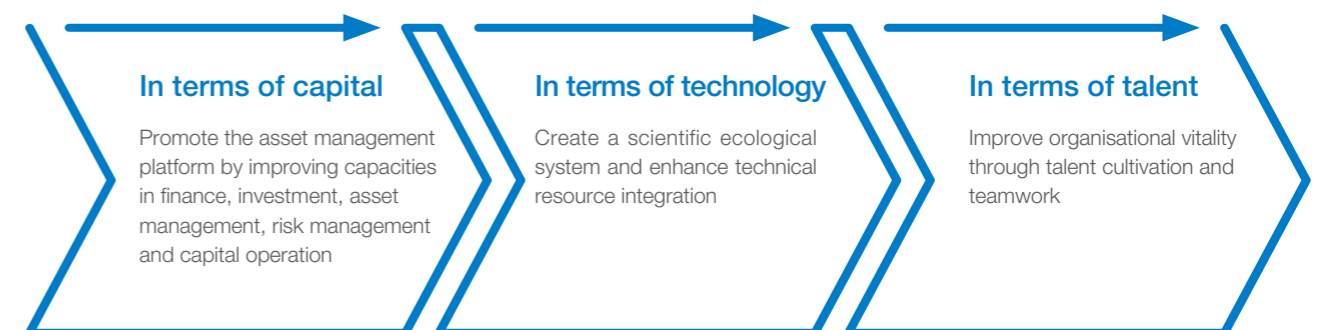
We are striving to meet our light asset model strategic target by implementation of a "two platform" strategy and building of an asset management platform and operation management platform. This is a new strategic choice of BEWG that was made after analysis and study of internal and external factors. Such factors include transformation into an ecological enterprise with high flexibility and updating and improving capability (internally), and constructing an ecological cooperation system for environmental infrastructure in China (externally), both can facilitate the stable and rapid development of BEWG.

**Asset management platform:** Create a multi-industry professional asset management platform by accumulating financial resources

**Operation management platform:** Form a management model featuring technical and professional operations and become an influential multi-business operations management platform



### • Driven by three core powers: Capital + technology + talent



## Compliance operation

BEWG complies with laws and regulations, abides by business ethics, continuously improves internal control and risk management systems, builds penalty and prevention systems, checks erroneous ideas at the outset and ensures legal and compliance corporate operation and management.

### Risk management

The Board of Directors will be fully responsible for evaluating and determining the nature and degree of potential risks to be faced by the Group and ensuring the establishment of sound and effective risk management and internal monitoring systems for the Group in order to safeguard stockholders' equity and the Group's assets. The Board of Directors has authorised the Audit Committee to take charge of management design and the implementation and supervision of risk management and internal monitoring systems.

In order to prevent, control, eliminate and address risks faced in a complicated and changing operational environment and set standards for the Group's overall risk management, BEWG has developed and improved the *Overall Risk Management System* with reference to the *Overall Risk Management Guidelines for Central Government-Owned Companies*, the *Corporate Governance Code* of listed companies in Hong Kong and other relevant documents and in combination with the actual situations faced by the Group, defining division of risk management responsibilities, the duties of each responsible units/persons in risk management and a breakdown of working content and responsibilities of risk identification, evaluation and response, risk monitoring and early warning, and risk management, supervision and evaluation.

Meanwhile, the Group has issued the 10th issue of its internal magazine *Risk Management Monthly*, introducing frontier knowledge on risk management, release of new systems and risk management cases every month in order to continuously popularise risk management knowledge and enhance employees' awareness of risk management.

### Integrity

BEWG strictly complies with national and local policies and regulations concerning corruption and business ethics such as the Criminal Law and the Law against Unfair Competition and is dedicated to creating an honest and anti-fraud corporate culture. We have developed the Management Method for Complaints and Reports to enhance integrity in major anti-corruption events such as bid proposals and invitations and prevent seeking of unjust benefits in violation of laws and regulations. The purpose of the Method is to further strengthen internal company control, improve corporate governance environment, and accept and handle reports in a timely and effective manner in order to set standards for the Group's business activities.

The Group was not involved in any legal cases involving fraud in 2017.

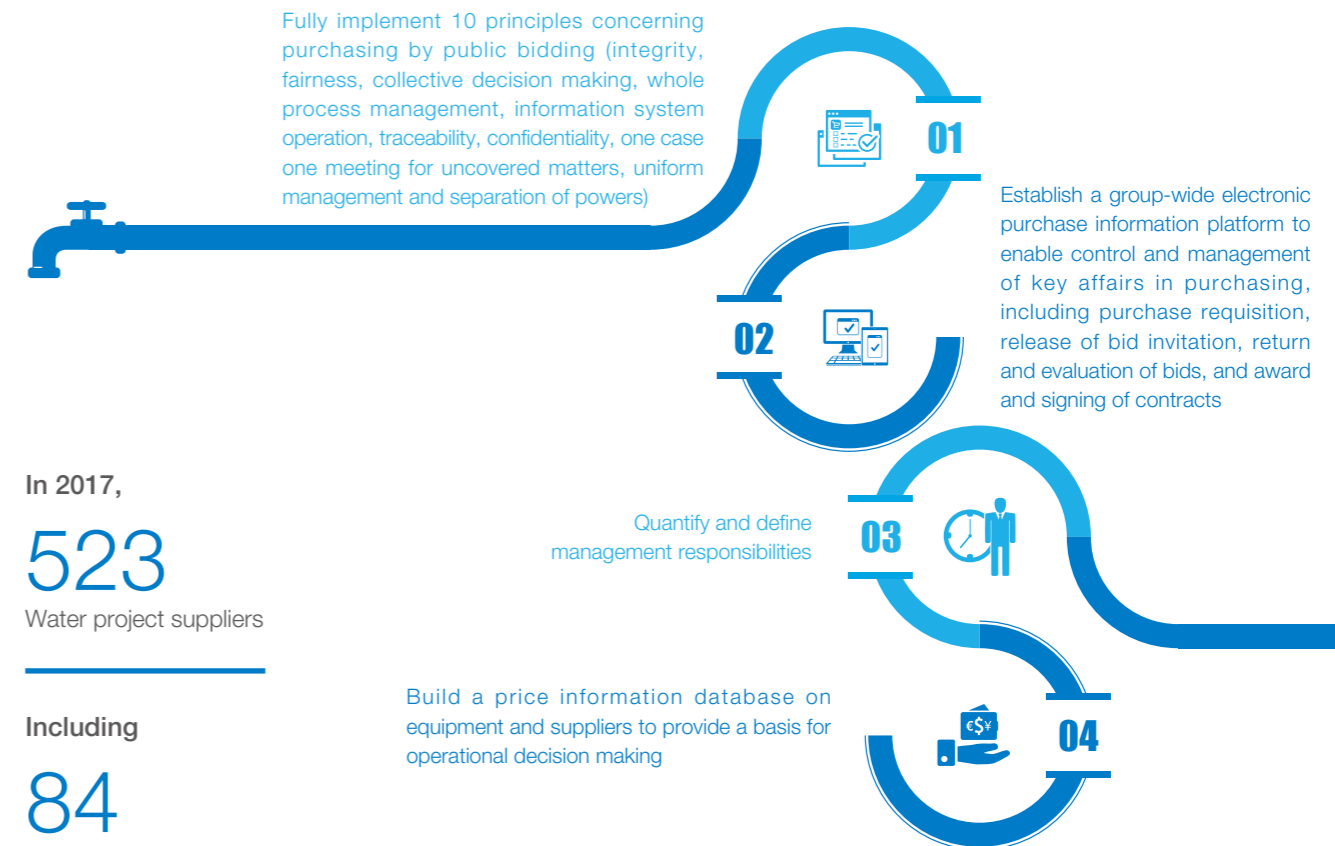
### Management of suppliers

BEWG is committed to establishing long-term and stable partnerships with suppliers, playing a leading role in the industry and urging suppliers to improve their product quality, performance and social responsibility management.

In 2017, we put public bidding purchasing and supplier management systems into operation to manage information in all our bid invitation affairs, built a uniform database of qualified suppliers, and improved performance evaluation and rating management systems for suppliers.

### Consumer rights protection

We encouraged our subsidiaries to regularly conduct consumer satisfaction surveys to protect customers' interests. Regarding customer complaints, we required our subsidiaries to identify reasons and reasonable explanations, and visit the complaining customers to solve the problem. If the complaint were caused by management issues, we would also make internal improvement accordingly.



In 2017,  
**523**  
Water project suppliers

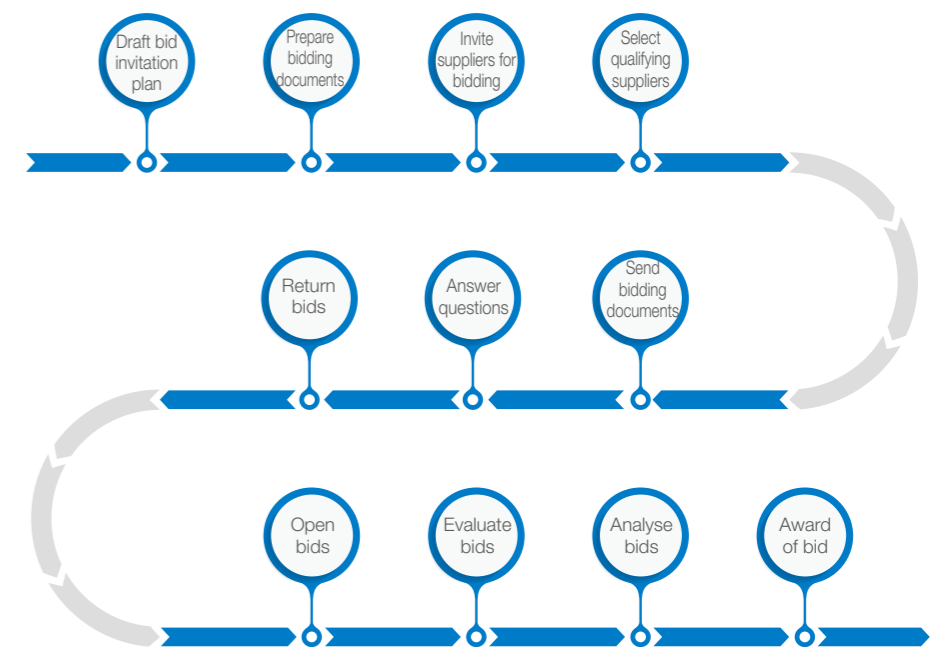
Including  
**84**  
Engineering Procurement  
Construction suppliers

**194**  
Suppliers for special  
work subcontracting

**245**  
Equipment suppliers

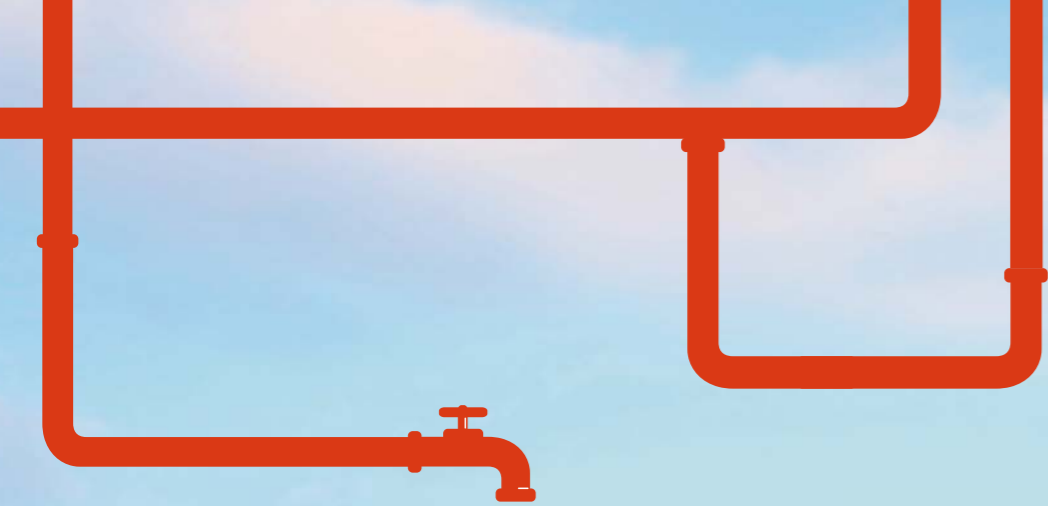
Suppliers from Hong Kong  
of China, Macau of China

**68**



Entire process of purchasing by public bidding





**Social responsibility**  
management



## Concept of social responsibility

### Path to good governance: Seize opportunities and grasp the momentum

- Improve governance structure and operate based on the principle of integrity and compliance
- Establish scientific management systems and efficient decision making mechanisms
- Build an ecosystem that aligns supply chain, capital and technology, and pursue joint development with partners

### Path to cleanness: Cleanse in improved water circulation

- Promote harmonious regional development with high-quality water environmental protection business
- Improve the water circulation industrial chain, guarantee regional water safety and increase environmental quality
- Provide a complete set of urban environmental sanitation solutions to increase the resources and energy use ratio and put into practice the concept of green operation

### Path to mutual aid: Benevolence and generosity





- Provide a good working environment and a platform to fulfil career dreams
- Strengthen scientific and technological research and development and cooperation, promote industrial innovation and development
- Provide livelihood guarantees such as drinking facilities and promote regional livelihood improvement and economic development



## Stakeholder engagement

Methods of communication with stakeholders		
Stakeholders	Expectations and requirements	Engagement
 <b>Shareholders and investors</b>	Compliance operation Continuous and stable return on investment Product and service quality improvement Risk management Corporate governance	General meeting of shareholders Periodic reporting and announcement Investor communication meeting
 <b>Government and regulators</b>	Compliance operation Provision of employment Response to national strategy Product and service quality improvement Safety production Technology innovation Energy saving and emission reduction	Disclosure of information Daily communication and report On-site investigation Supervision and inspection Visit reception
 <b>Clients</b>	Product and service quality improvement Disclosure of information	Customer satisfaction survey Visit and communication Customer activities
 <b>Employees</b>	Guarantee of employee rights and benefits Occupational Health and Safety (OHS) Vocational training Personal development Employee care	Labour contracts Opinion seeking Career development communication mechanism Employee care activities
 <b>Industry</b>	Leading industrial development Technology innovation Product and service quality improvement	Launching and participation of industrial activities Sharing and transmission of research results Construction of communication platform Industrial cooperation Technical exchanges

Methods of communication with stakeholders

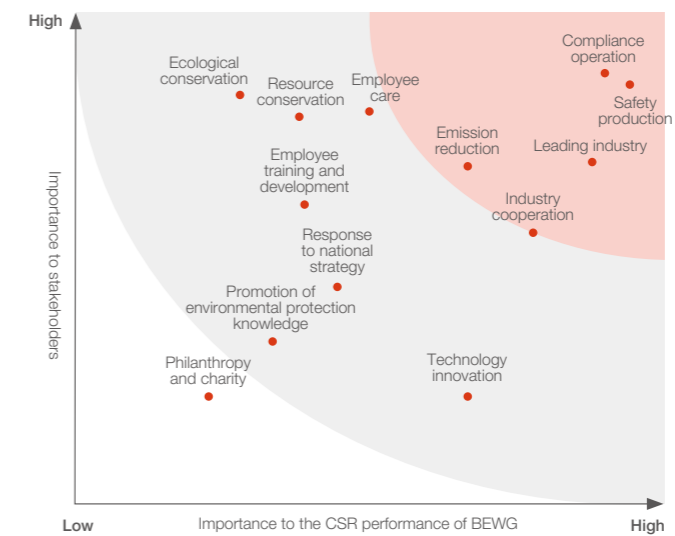
Stakeholders	Expectations and requirements	Engagement
 <b>Suppliers and partners</b>	Compliance with contracts Mutual benefits and long-term cooperation Improvement of supply chain management	Public bidding Contract and agreement
 <b>Community</b>	Community engagement Community service Community investment Promotion of environmental protection concept Compliance operation	Community household interview Charity activities Charitable donations Volunteer activities Open Day event
 <b>Environment</b>	Provision of environmental friendly products and services Ecological environmental protection Green operation Promotion of environmental protection concept	Environmental impact assessment Public investigation about project and environmental impact Environmental protection charity activities Communication with environmental protection organisations
 <b>The public</b>	Promotion of safe and reliable products Stable employment Promotion of Environmental protection concept	Open Day event Public welfare activities

Material issues and matrix

We will further improve the process for determining report content based on the *Environmental, Social and Governance Reporting Guide* of HKEX, enhance interactions with stakeholders in various ways, identify and determine the materiality of their concerns, and finally define the disclosure degree and boundary of such issues in order to ensure more accurate and comprehensive disclosure of information related to operation management.



Results of materiality analysis of BEWG





## Treat water with ingenuity to build an ecological civilisation

- ✓ Actively implement the national green development strategy
- ✓ Provide full ecological comprehensive solutions
- ✓ Leading the cluster development of water service ecosystems
- ✓ Technological innovation, driving the development of the industry
- ✓ Provide water services globally, enhance international influence

Ecological civilisation building is a long-term plan to ensure sustainable development in China. The 19th National Congress of the Communist Party of China has proposed the basic policy of harmonious coexistence between man and nature, and further defined the general requirements of building an ecological civilisation and building a beautiful China. BEWG will actively promote green development and devote significant energy to addressing environmental problems and to protecting ecological systems, thus contributing to the construction of an ecological civilisation.



**Actively implement the national green development strategy**

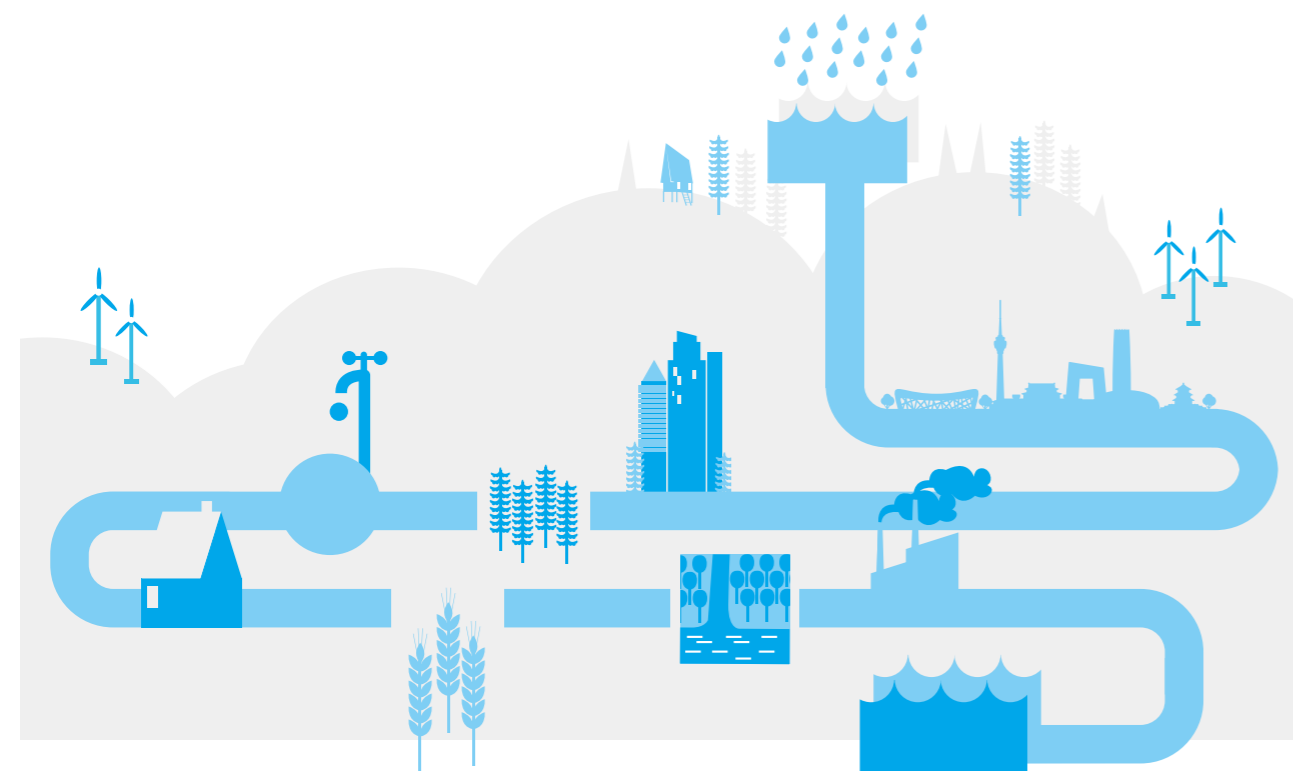
In 2017, BEWG actively implemented the national green development strategy and responded to national policies by participating in Capital construction, coordinating development of Beijing, Tianjin and Hebei, implementing the Belt & Road initiative and promoting green economic development. It strives to meet its social responsibility and fulfil its mission as a state-owned enterprise and a leading environmental protection company to build a beautiful China.

**Participate in building a beautiful Capital**

As a company owned by the Beijing municipal government, BEWG takes an active role in building an economic and ecological civilisation by closely following the “four centres” strategic positioning. It follows the 13th Five-Year Water Ecological Environmental Protection Plan of Beijing to plan and deploy carefully, fully participate in water-related affairs and water environment treatment for the Capital, carry out the New Aerotropolis recycled water plant project, and support the 2022 Olympic Winter Games in order to create the Capital city with blue sky, clear water, green hills and clean soil.

**Flood resistance – Tongzhou – Beijing City Sub-centre Environment Comprehensive Renovation Project**

The government has implemented a new ecological urban layout for Tongzhou, a city sub-centre of Beijing, featuring blue sky and green land, integrating water sources, and focusing on compact development with multiple clusters. Under the Tongzhou– Beijing City Sub-centre Environment Comprehensive Renovation Project, sponge transformation work for the district covering two river basins (a pilot area in sponge city construction in Beijing) in Tongzhou has started and achieved initial success. The current project results have been universally recognised by local residents and covered by news media. A local resident told a journalist during an interview: “The current pavement is great. Water is quickly absorbed after rain. My shoes will not get wet after rain now.”



**New urban development requirements – Beijing New Aerotropolis Recycled Water Plant Construction Project**

Beijing New Aerotropolis is a new urban landmark planned to be built in Daxing District near the new Beijing airport with planned investment of RMB84 billion and a total area of 300 km<sup>2</sup>. Construction of the new airport and Beijing New Aerotropolis will have a profound impact on the regional economy. These projects will attract participation from diverse economic sectors and create a large number of jobs, which will also generate a significant amount of sewage and

pollutants. BEWG has done its best to ensure the successful start of New Aerotropolis and its supporting facilities by participating in the Beijing New Aerotropolis Recycled Water Plant Construction Project. It is also contributing to achieve Beijing’s construction goals in the 13th Five-Year Plan to improve waterways, increase urban river and lake environmental quality, restore watershed ecological functions, and reduce pollutant discharge into rivers.

**Create an ecological gate in south Beijing – Xinfeng River Basin Comprehensive Treatment Project**



The Xinfeng River basin is located north of Daxing District in Beijing. Due to rapid economic development and urban expansion, this area is seriously polluted and its water is black and odorous. BEWG has designed a series of projects including civil works, water environment and ecology works, irrigation works meeting flood control standards, riverside

sponge city, ecological landscape works and intelligent water affair works via comprehensive consideration of “water safety, resources, environment, ecology, landscape, culture and intelligence” to enhance the ecological environment in the Xinfeng River basin and improve the quality of life for residents.

## Promote synergy between Beijing, Tianjin and Hebei

In 2017, BEWG actively participated in planning and construction of Xiong'an New District with overall planning under the guidance of the *Outlines of the Coordinated Development Plan for Beijing, Tianjin and Hebei*, established close cooperation with Tianjin and Hebei and made efforts to promote ecological environmental development in synergy between Beijing, Tianjin and Hebei.

### One core and two wings – participation in planning and construction of Xiong'an New District

Construction of Xiong'an New District is a project with historical significance. BEWG has actively participated in such construction with high-level planning and construction standards. We have established a special coordination mechanism, integrated technical, management and human resources, took an active role in preparation for major project planning, proposed a series of new ideas around "4 new regions", including a super-clean water system of "combined and coordinated treatment of rainwater and sewage, rivers and shallow lakes, and upstream and downstream areas". We have cooperated closely with Xiong'an New District to achieve initial success.

### Close cooperation with Tianjin Wuqing District

Tianjin Wuqing District has obvious locational advantage and its close cooperation with BEWG will promote integration of Beijing, Tianjin and Hebei in response to overall planning for Beijing. Such cooperation in water affairs is not only about treatment of the Wuqing Section of the North Canal, but also involves liquidising remnant water assets and construction of new piped water facilities, in order to promote integration of water issues in Wuqing District. Both parties will join hands to promote the idea of "lucid waters and lush mountains are invaluable assets" to restore the ecosystem of Wuqing District.



## Implement the Belt and Road Initiative

The Belt and Road Initiative is a new strategy for China to interact with the world, and involves regional cooperation at a larger scale and a higher and deeper level. BEWG has spared no effort in implementing the Belt and Road Initiative, and is actively engaged in cooperation projects with the Belt and Road core city governments, such as the Urumqi "Facilitate Water to Enter the City" Project, Xi'an

Jing River Water System Ecological Treatment Project, Baotou City Comprehensive Improvement of Urban Water Ecology PPP Project, Xinjiang Kashgar (Payzawat) One City and Four Counties Drinking Water Safety Project and other major projects. BEWG is contributing to the rejuvenation of the Belt and Road.

### Ecological revival of the silk road – Urumqi "Facilitate Water to Enter the City" Project

Urumqi of Xinjiang Province is a core city of the national Belt and Road Initiative. It is farthest from the ocean and driest in terms of climate with a relatively fragile ecosystem. The "Facilitate Water to Enter the City" Project focuses on alleviating the shortage of water resources by making full use of renewable water resources and ecological wetland resources. After implementation, the Project will provide a completely new hydrophilic environment for residents of all ethnic groups with green plants every 200 meters, water every 500 meters, rivers every 5,000 meters, and a lake every 10,000 meters. The total water resource area

(including wetlands) will increase to 50.7 square kilometres, the utilisation rate of rainwater resources will reach over 10%, the water surface rate will increase to 3.31%, and the amount of reclaimed water used will reach more than 70 million cubic meters to provide the old city's water system and canals with 80,000 to 100,000 cubic meters of greenery water, which will greatly enhance the city's water power, realise its rapid transformation, greatly increase the happiness index of residents, and promote the continued prosperity of the urban economy.





### A gift for the 70th Anniversary of the Inner Mongolia Autonomous Region – Baotou City Comprehensive Improvement of Urban Water Ecology PPP Project

Baotou City of Inner Mongolia is a typical arid city. The Baotou City Comprehensive Improvement of Urban Water Ecology Project is an urban water system project that integrates the city's water conservancy and flood control projects, water resources deployment projects, river and lake water network connection projects, urban landscape water system projects, and intelligent water management projects, focusing on building a 100-kilometer urban river flood protection project, a 100-kilometer urban landscape water network, a 200-kilometer "Diversion of Water into Damao" water supply and pipe network, and two 10,000-acre lakes. Through this project, BEWG will build a river and lake network comprising "4 vertical lines and 4 horizontal lines, 4 lakes and 4 reservoirs, and 3 water networks" in Baotou City to use urban and rural water networks to create "south-north connections and east-west cooperation", improve the city water landscape and liveable environment, and realise the dream of Baotou residents to "live beside clear waters".



### The ancient city drinks sweet dew – Xinjiang Kashgar (Payzawat) One City and Four Counties Drinking Water Safety Project

The Kashgar (Payzawat) One City and Four Counties Drinking Water Safety PPP Project is an important measure for implementation of the development plan of the city circle centred on Kashgar developed by the Party Central Committee and the State Council to improve water safety for residents in southern Xinjiang and improve their quality of life.

BEWG will provide investment, financing, design, construction, operation management and human resources to optimise design and investment control and management, maintain quality and quantity, and complete project construction in a timely manner. BEWG's goal is to turn the project into a first-class Public Private Partnership (PPP) project in both the Xinjiang Autonomous Region and China. The project will provide residents of Kashgar with better drinking water in the near future.



### Promote the development of a green economy

Adhering to the concept of green development and "making the mountains green, making the water clear" is BEWG's responsibility and obligation. BEWG intends to establish two core strategic platforms: first, an operation management platform created for the water industry based on BEWG's outstanding operation and management capabilities; second, to learn from advanced models at

home country and abroad, transform heavy assets into light assets with financial means, and build a strong financial asset management platform to meet the needs of increasingly complicated water and water environmental treatment projects. Through actively implementing the national green finance policy, BEWG promotes the development of a green economy and contributes to the construction of the national ecological environment.



### New power added into the green financial market – first issuance of Green Asset-Backed Notes in 2017

In 2017, Beijing Enterprises Water (China) Investment Co., Ltd., a wholly-owned subsidiary of BEWG successfully issued the first green asset notes of 2017 (issuance amount: RMB2.1 billion) pledging the concession rights of the reserve sewage treatment fees under its operating 18 subsidiaries. This is the first issuance of green asset notes in National Association of Financial Market Institutional Investors and has achieved breakthroughs in many areas: optimisation of basic assets, the lowest coupon rate of the same class in the same period, the best product structure design, the most environmental friendly cash flow source (green dual certification), and the broadest space for future development.



### A new model for green financial cooperation – financial support for development of PPP projects with China Life

With the deepening of investment and financing system reforms, China is encouraging private capital to participate in infrastructure projects. At the same time, China has continuously introduced policies to regulate and promote better development of the Public Private Partnership (PPP) model. In the process of expanding its business, BEWG not only actively practises the PPP model, but also integrates financial institutions with innovative models that combine production with finance to allow green finance to improve the green industry. In 2017, BEWG signed an investment cooperation agreement with China Life Investment Holding Co., Ltd., and specialised financial institutions will provide financial services for water and water environment projects as well as other environmental protection projects operated by BEWG to support the development of the water and water environment industries.





## Provide full ecological comprehensive solutions

As a “leading professional water environment comprehensive service provider”, BEWG provides integrated solutions for multi-business projects, full value chain operations and management for the government and enterprises. At the same time, we will continue to expand our business areas and develop environmental protection businesses such as environmental sanitation, solid waste treatment and clean energy to provide diversified and comprehensive support for the green development of society.

### Focus on developing the water business

#### Improve municipal water supply

BEWG is actively expanding the urban water market and provides comprehensive solutions for investment, construction and operational management of water services such as water source, water transmission, water supply, sewage and reclaimed water projects.



### Implementation of the three-year action plan for sewage treatment – Changping District Shahe Reclaimed Water Plant

Changping District Shahe Reclaimed Water Plant is the first sewage treatment plant invested-constructed-operated by BEWG in Beijing. It is a concession BOT project with two phases. The Phase I projects were put into operation by the end of 2011 with a treatment capacity of 30,000 tons/day and improved A/A/O+ ultra-filtration treatment process technologies. The Phase II projects belong to the *Three-Year Action Plan for Sewage Treatment of Changping District*, and began commercial trial runs in May 2017 with a treatment capacity of 60,000 tons/day and MBR+ ozone contact oxidation processes. The effluent water quality standard of the water plant is relatively high with a local emission standard grade of B for Beijing City. The effluent is used as ecological compensation water and is directly discharged into Shahe Reservoir to provide better water for rivers, improve the downstream water quality, and improve the water quality of the Shahe Reservoir.



## Building a beautiful urban water environment

In terms of comprehensive treatment of the water environment, BEWG has participated in the investment and development of many comprehensive water treatment projects in national key river basins such as Kunming Dian Lake, Guiyang Nanming River, Beijing Liangshui River, Luoyang Luo River and Fuzhou Water System. BEWG has improved the water environmental carrying capacity of urban water resources and built up eco-cities that are intertwined with blue and green rivers, and fresh and bright water to support social and economic development from the five dimensions of “guaranteeing water safety, preventing water pollution, repairing water ecology, building water culture and nurturing aquaculture”,

with the eight themes of “water security, water resources, water environment, water ecology, water landscape, water culture, water management and water economy”. At present, BEWG is engaged in the investment, development and construction of more than 60 comprehensive water environment treatment projects covering more than 20 provinces and cities, including Beijing-Tianjin-Hebei, the Yangtze River Delta, the Pearl River Delta, Yunnan-Guizhou-Sichuan, Hunan-Hubei-Shaanxi, Inner Mongolia and Xinjiang, and the total contractual investment is about RMB100 billion.



### Beautiful China, blessed state – Fuzhou Water System Comprehensive Treatment Project

Fuzhou has a developed water system, but fetid black water runs through its rivers. BEWG has undertaken the comprehensive treatment of 30 inland rivers within the administrative divisions of Gulou District and Taijiang District of Fuzhou City. The Group has adopted the methods of “control at source and pollution interception, internal source reduction, clean water supply, live water circulation, water purification,

ecological restoration, step-by-step implementation, and improvement in stages” to improve the water quality of Fuzhou’s water bodies, optimise the residential environment and landscape, and build a water-loving Fuzhou with “clean water, a green waterfront, beautiful waterscape and harmony between people and water”.



Gulou-Taijiang Central District Water System Comprehensive Treatment Project’s first appearance on CCTV 13 News Channel





### Expanding emerging businesses

#### Making our cities better

Beijing Enterprises Urban Services Investment (PRC) Group Limited ("Beijing Enterprises Urban Services"), an associated corporation of the Group, focuses on providing "one-stop" services in the areas of investment, research and development, consulting, design, construction and operation in the field of environmental sanitation, covering such comprehensive businesses as landscaping, property management, municipal engineering and environmental monitoring. Dozens of integrated projects relating to sanitation have been invested in and operated throughout the country. Through scientific planning, increased capital investment and professional management, the quality of urban and rural environmental sanitation has been continuously and effectively improved.

#### Prevent garbage from besieging the city

BEWG Solid Waste Business Department is responsible for the investment, design, construction and operation management of various types of solid waste treatment and disposal projects such as hazardous waste, food waste and sludge, and has a complete industrial chain to provide solid waste treatment solutions and long-term customised services covering investment, consulting, construction and operation processes, and actively promote the realisation of China's management goals to make solid waste harmless, minimise and recyclable.



### Inner Mongolia Hohhot City Togtoh Sanitation Project

With regard to domestic garbage collection and transportation, Togtoh District, Hohhot City has encountered problems such as litter, secondary pollution and odour emissions, and the foundation for collection and transportation is weak. Beijing Enterprises Urban Services has arranged personnel and vehicles for dispatch in this project, added containers and helped collection and transportation vehicles to ensure daily domestic garbage is collected and prevent contamination by hermetically sealed transportation. By utilising its professional management experience, it has strengthened target assessment, emphasised actual results, and delegated tasks and responsibilities to every employee to realise sanitation operations and improve the overall level of Togtoh's sanitation.



### Shandong Province Industrial Solid Waste (Hazardous Waste) Disposal Centre Project

In January 2017 Shandong Province Industrial Solid Waste (Hazardous Waste) Disposal Centre Project obtained its hazardous waste business license. It is a hazardous waste management enterprise with the most complete operating qualifications and the largest comprehensive disposal capacity in Shandong Province with 38 categories and 425 items, including:

**11,300** tons/year  
rotary kiln disposal system

Capable of disposing of combustible organic waste and non-heat-value waste to be detoxified with high temperature;

Capable of disposing of inorganic sludge;

**38,900** tons/year  
solidification disposal system

**14,400** tons/year  
physical-chemical disposal system

Capable of disposing of inorganic waste liquids, pre-treatment of some organic waste liquid before incineration, domestic sewage, initial rainwater, production waste water, percolate, and waste water generated by physical-chemical treatment;



**54,000** tons/year  
safe landfill system



**Making energy cleaner**

BEWG and CITICPE jointly established Beijing Enterprises Clean Energy Group Co., Ltd. ("BECEG"), which focuses on the development of clean energy and clean usage of energy. Its business areas mainly cover independent development, acquisition, construction and operation of ground photovoltaic power stations, distributed photovoltaic power stations, wind power stations and micro grid energy storage. It is also actively exploring and attempting to enter other clean energy fields such as hydropower and geothermal energy.



**RMB10 Billion Investment Supporting the Construction of Tibetan Public Utilities**

Beijing Enterprises Group Company Limited has signed a *Strategic Cooperation Agreement* with the People's Government of the Tibetan Autonomous Region. As an important part of the cooperation agreement, BECEG will invest over RMB10 billion in the investment, construction and operation of photovoltaic, hydropower, plateau wind power and geothermal power generation projects, as well as energy

storage power stations, smart micro grids and other projects in the Tibetan Autonomous Region. The agreement integrates Photovoltaic (PV) poverty alleviation and other national policies to improve the lives of tens of thousands of poor people within the Autonomous Region through mechanism and model innovation and long-term policy implementation.

**Leading the cluster development of water service ecosystems**

In the face of changing domestic and international factors and the current situation of the environmental protection industry where both opportunities and challenges coexist, BEWG has proposed an ecological strategy and is devoted to establishing an environmental protection water service ecosystem "co-constructed based on benefit-sharing, and centred on pan-centralisation and symbiosis, intergrowth and regeneration". We strive to break boundaries, reshape integration, and establish a community of interests with strong vitality. We will work with all social parties on "developing resources, aggregating capabilities, co-innovation and creating value". To this end, BEWG actively participates in and initiates industry forums, and promotes cooperation both within the industry and across industries to increase the true value of the industry and create a more favourable market environment.

As a leading company in the environmental protection industry, BEWG actively participates in industry forums and is a leader in the transformation and development of the water industry with its professional perspective, ideas and pragmatic spirit.



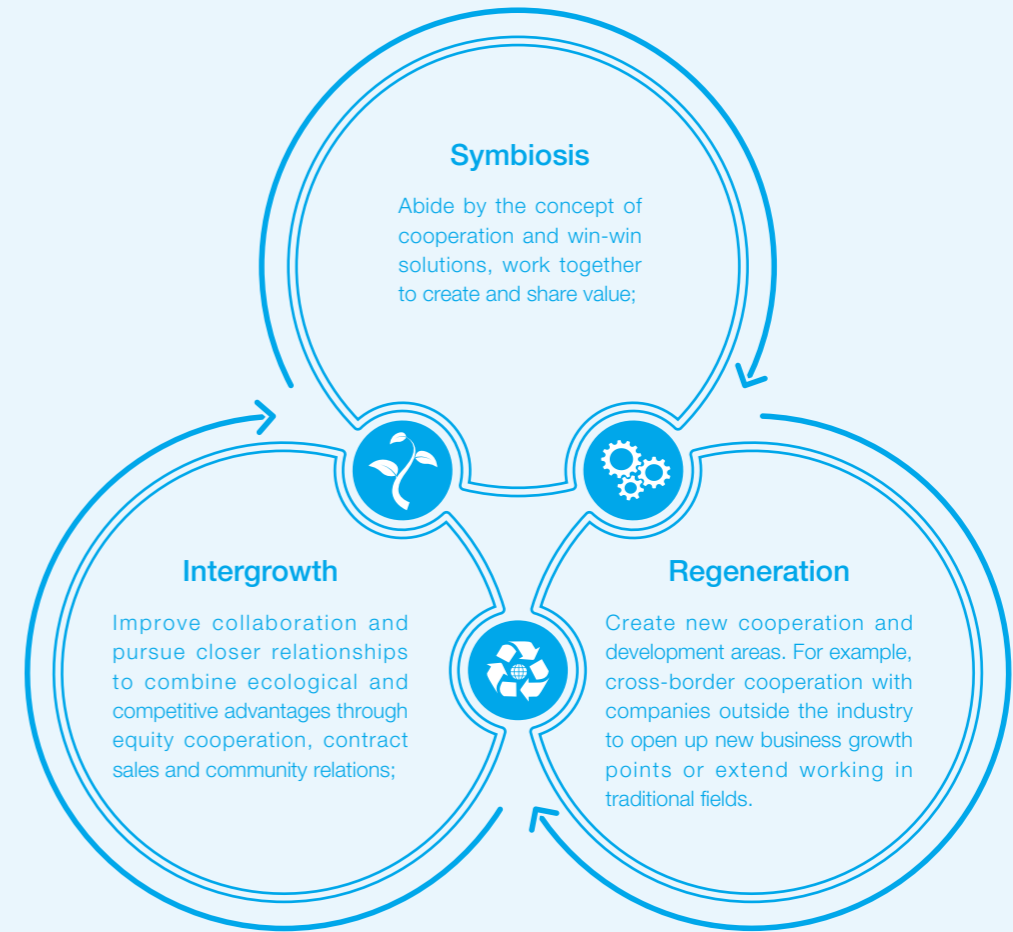
**Forums and exhibitions:**

The 4th Tsinghua University Engineering Doctors Summit Forum, Macao International Environmental Co-operation and Development Forum, 14th China-ASEAN Environmental Cooperation Forum, 12th International Conference on China Urban Water Development.



**BEWG's "ecological strategy":**

Jointly establish an environmental protection water service ecosystem with "co-construction based on benefit-sharing and centred on pan-centralisation and symbiosis, intergrowth and regeneration".



On the one hand, we have achieved a strategic market layout through traditional water service and water environment renovation, and on the other hand, we have led innovation in clean energy and financial services through the development of key businesses such as environmental sanitation and solid waste. These emerging businesses have completed strategic construction to perfect the super tactical system. They also used capital, technology and human resources to drive the "three-wheel vehicle" through the establishment of an asset management platform and operating platform to turn the Company into a light asset management company.

**Externally**

We have built up an environmental water service ecosystem.

**Internally**

We have created the BEWG Ecological Circle.

We have built up an environmental water service ecosystem that is not centred on any single enterprise, but breaks boundaries, reshapes and integrates, and establishes a community of interests that is extremely dynamic. We invite ecological industrial enterprises with high capacity to mutually develop with us in the four aspects of "developing resources, aggregating capabilities, co-innovation and creating value".

### In terms of investment and financing

We have cooperated with financial institutions to use the functions of the two fund management companies that have been established to invest in environmental protection water PPP projects to provide financing services for PPP projects of peer companies awarded the bid.

### In terms of technical research

We collaborate with various universities and scientific research institutions such as Tsinghua University, Beijing University of Technology, Harbin Institute of Technology, Chinese Research Academy of Environmental Sciences and Beijing Water Science and Technology Institute, have undertaken a number of national-level research projects focusing on water, and established water environment research institutes to strengthen top-level design research on water environment development.

### In terms of operational excellence

Joint efforts have been made for pilot digital operations and intelligent water services among partners within and outside the industry to explore the integration of the Internet and water services.

### In terms of business models

We have actively explored many innovative business models such as water plants + distributed photovoltaic, PPP + PE, small proportion of equity interest holding in local water companies, and water supply + secondary water supply.

### In terms of capability integration

BEWG has carried out cooperation in respect to various types of equity cooperation, project implementation, and new business development with a variety of industry-specific strong forces.

### In terms of creating value

The future direction of the industry lies in the creation of more value for the government and society with strong comprehensive service capability. In the future, we hope to create more added values in gardens, tourism, real estate and ecological agriculture with partners in the ecological system by projects such as sponge cities and black and odorous water body treatment and river improvement projects.

## BEWG's "ecological strategy" footprint in 2017

May	BEWG signed a strategic cooperation agreement with China Railway Investment Group and Ranken Railway Construction	Three parties will make full use of their respective resources, technologies, and management advantages to develop hand in hand in related areas such as water environment treatment and river and lake ecology restoration.
June	BEWG signed a strategic cooperation agreement with China Railway 18 Bureau	We will apply advanced environmental protection technologies to the comprehensive utilisation and development of water resources, smart cities, etc.
	BEWG signed a strategic cooperation agreement with Bank of Beijing	With the abundant capital of Bank of Beijing, we will jointly open a new chapter in the water environment treatment of Beijing's urban sub-centre.
July	BEWG signed a strategic cooperation agreement with CCCC Shanghai Dredging	Two parties will establish a cooperation platform of "investment, construction and operation" in municipal water services, sponge city construction and other business areas.
	BEWG signed a strategic cooperation agreement with China Railway 22nd Bureau	We will apply advanced environmental protection technologies to the comprehensive utilisation and development of water resources, smart cities, etc. through close cooperation.
	BEWG signed a cooperation agreement with China Development Bank Beijing Branch	We will use our respective resource advantages to accelerate the promotion of major projects such as the Daxing Xinfeng River and the Beijing City Sub-centre, and establish strategic cooperative relationship.
August	BEWG signed a strategic cooperation agreement with Ziyang City of Sichuan Province	We will take full advantage of BEWG's brand, technology and expertise to provide better services to the government, the city and citizens.
	BEWG signed an agreement with Bank of Beijing and Beijing Rural Commercial Bank	The signing of this agreement signifies that the Beijing Tongzhou Water Environment Fund, which was specially launched by BEWG for the Tongzhou Water Environment Treatment Project, has achieved remarkable results.
	BEWG signed a strategic cooperation agreement with CSD Water Service	We will establish a cooperation platform in municipal water services, water environment renovation, urban services, etc.
	BEWG signed an investment and cooperation framework agreement with Shannan City of Tibet	We will promote the urban environment in Shannan, create cooperation models, and promote the progress of liveable construction in Shannan.
October	BEWG signed a strategic cooperation agreement with Changsha Zoomlion	Two parties will employ their resources and advantages in their respective fields and establish a strategic partnership.
	BEWG signed a strategic cooperation agreement with International Cooperation Environment Institute	Two parties will carry out in-depth cooperation in the field of water environment renovation, including project concept plan, top level planning of the water environment system, etc.
November	BEWG signed an investment cooperation agreement with China Life Investment Holding Co., Ltd.	Two parties will jointly create an environmental ecosystem of "symbiosis, intergrowth and regeneration" based on the combined innovation model of production and finance.
December	BEWG signed a strategic framework cooperation agreement with Country Garden	Two parties will promote the construction of an ecological civilisation and regulate the PPP business model to achieve common development.
	BEWG signed a strategic cooperation agreement with Ping An Trust Co., Ltd.	Two parties will jointly create an environmental ecosystem of "symbiosis, intergrowth and regeneration" based on the combined innovation model of production and finance.



## Technological innovation, driving the development of the industry



In 2017, BEWG actively promoted the construction of its technical system and focused on the four major lines of “technology decision-making, technology business, scientific and technological management, research and development and industrialisation”. Through equity cooperation and other forms, BEWG carried out technical cooperation with numerous small and micro technical innovation companies, supported the Group to establish the “Academician & Expert Workstation” and postdoctoral workstation, established the Water Service National Engineering Laboratory, focused on building a national innovation centre to strengthen technological research and development in strategic areas such as smart water services, promoted the enterprise’s core technological capabilities, and enabled the positive development of the industry by the power and influence of technological innovation.



### Promote technology cooperation:

Beijing Technology Services Association, German institutions and enterprises, Wuhan Institute of Hydroecology



### Establish Academician Workstation:

Signed with Academic Wang Hao, Academic Peng Yongzhen, Postdoctoral Scientific Research Workstation



## Enhance the system guarantee of scientific and technological innovation

In 2017, BEWG established the Science and Technology Association of Beijing Enterprise Water (China) Investment Co., Ltd.. The Technical Director of the Group serves as the chairman of the Association, and the members of the Technical Committee serve as members of the Association to improve the Company’s scientific and technological innovation and development institutions and the connection with external resources, and better promote the implementation of technological innovation activities throughout the Company.

At the same time, in 2017, BEWG prepared and issued 5 management measures to support scientific innovation, including the *BEWG Administrative Measures for Science and Technology Investment Management*, *BEWG Administrative Measures for*

*Scientific and Technological Innovation and BEWG Administrative Measures for Postdoctoral Scientific Research Workstations* to protect and promote the Group’s technological innovations in terms of systems.

In 2017, we actively promoted technical identification, technical verification, and joint development to improve the extended development. The BE-Water technology identification and assessment model has been innovatively developed to set up a quantitative evaluation system from multiple dimensions, reduce the influence of subjective human factors, increase the efficiency of technology identification, and provide tools for aiding the decision-making of technology identification. A number of technical verification and joint development tests are currently in progress.

In 2017, BEWG invested

RMB **33.08** million  
in independent science and technology projects

**5** licensed patents  
obtained



## Exploring smart water services

In 2017, BEWG raised the construction of smart water services to the strategic level of the Group focusing on the “BEWG Smart Water Cloud”, and using advanced technologies such as big data analysis and artificial intelligence to develop overall smart water service systems including businesses such as wastewater, water supply, water environment and water services for villages and towns. From

a professional perspective, leading thinking and pragmatic spirit, BEWG proposes, explores and realises the concept of smart water services to solve problems, enhance efficiency and lead the water service industry to achieve intelligent transformation and large-scale development.



## Guangdong Dongguan Dalingshan Water Plant unattended project pilot operation, smart water plant version 1.0 successfully implemented

In August 2017, the pilot projects of the “group-based” smart water plant with the goal of “management with less people and high-efficiency management” were carried out in three plants in Dalingshan, Hengli and Changping of Dongguan. Currently, the system operation is stable and reliable, and the expected results have been reached.

After the construction of the Dalingshan District Centre in Dongguan, the smart water plant version 1.0 was successfully implemented. Water plant operation and maintenance management is conducted through the centralised monitoring system, information platform and mobile phone client with the core of “work order management”. The traditional mode of water plant operation and maintenance has been completely changed, and the project has opened up a new path for personnel reduction and efficiency improvement of water plants. Human-computer collaboration, security, reduction of personnel, improved efficiency and efficient management have been achieved.





### Ecological platform built by BEWG – Shuizhahui (Water Smart Collection)

The Shuizhahui platform was established in order to solve the operational management weak points in the water service industry, accelerate the transformation of the value of advanced and practical technologies, and seek new technologies, new equipment and overall solutions for energy conservation, water quality qualification, sludge reduction and intelligent water plants. According to business needs, BEWG regularly publishes information on business and technology demands to open up opportunities and resources for fair

cooperation in the industry. At present, the Shuizhahui platform has issued two phases of cooperation requirements, and has been recognised by the industry. We are looking forward to building a mutual-operating system between enterprises to stimulate technology and product development, enhancing the operation and management level of the water service industry, and promoting the development of the water service industry with operational resources.

### Promote industry-university research cooperation

BEWG has always been actively committed to the development of and contribution to scientific and technological progress, university-industry cooperation and talent development. With cooperation platforms such as Tsinghua University-Beijing Enterprises Water Group Limited Joint Institute for Environmental Industries, BEWG College, National Engineering Laboratory of the

National Development and Reform Commission, Academician Workstation and Postdoctoral Workstation, the Group will strengthen cooperation in national scientific research projects, and major water service and water body projects, and use its technologies and resources in environmental and ecological construction projects in an open manner.



### Official launch of BEWG Postdoctoral Scientific Research Workstation

On September 5, 2017, the launch ceremony of the BEWG Postdoctoral Scientific Research Workstation was held at BEWG's headquarters in Beijing. The workstation recruited its first four postdoctoral fellows in 2017. Relying on real engineering projects in the Group's key business areas, the workstation is committed to water treatment in sponge cities, ecological restoration and control of black and odorous water bodies, and industrial water treatment.



### Daoxianghu R&D Base is in use, building a high-end research and development platform integrating industry, teaching and research

In the first half of 2017, after five months of intense preparation, construction of BEWG Daoxianghu High-end R&D Base Phase I was successfully completed and the facility was in use.

The Daoxianghu R&D Base is located at Beijing Daoxiang Water Purification Co., Ltd. As one of the key projects of BEWG's "six centres and six bases" of scientific and technological innovation platform construction, the base serves several scientific and technological platforms such as the National Development and Reform Commission's Urban

Wastewater Advanced Treatment and Resource Utilisation Technology National Engineering Laboratory, Beijing Municipal Reclaimed Water Quality Safety Guarantee Engineering Technology Research Centre, National Postdoctoral Workstation, Analysis and Testing Centre and Joint Cultivation Base for Postgraduates. In 2017, the focus of the construction of the base was functional expansion, management specifications and technology development, aiming to building a domestic first-class engineering technology research and development and transformation platform to help the Group enhance its scientific and technological competitiveness.



### Hebei University of Environmental Engineering – BEWG College is founded

On November 9, 2017, the signing ceremony for cooperation between BEWG and Hebei University of Environmental Engineering and the establishment ceremony of BEWG College were held in Hebei University of Environmental Engineering. BEWG College is committed to the cultivation of professionals for BEWG and the entire environmental protection industry through undergraduate education and water plant/project management trainee training.

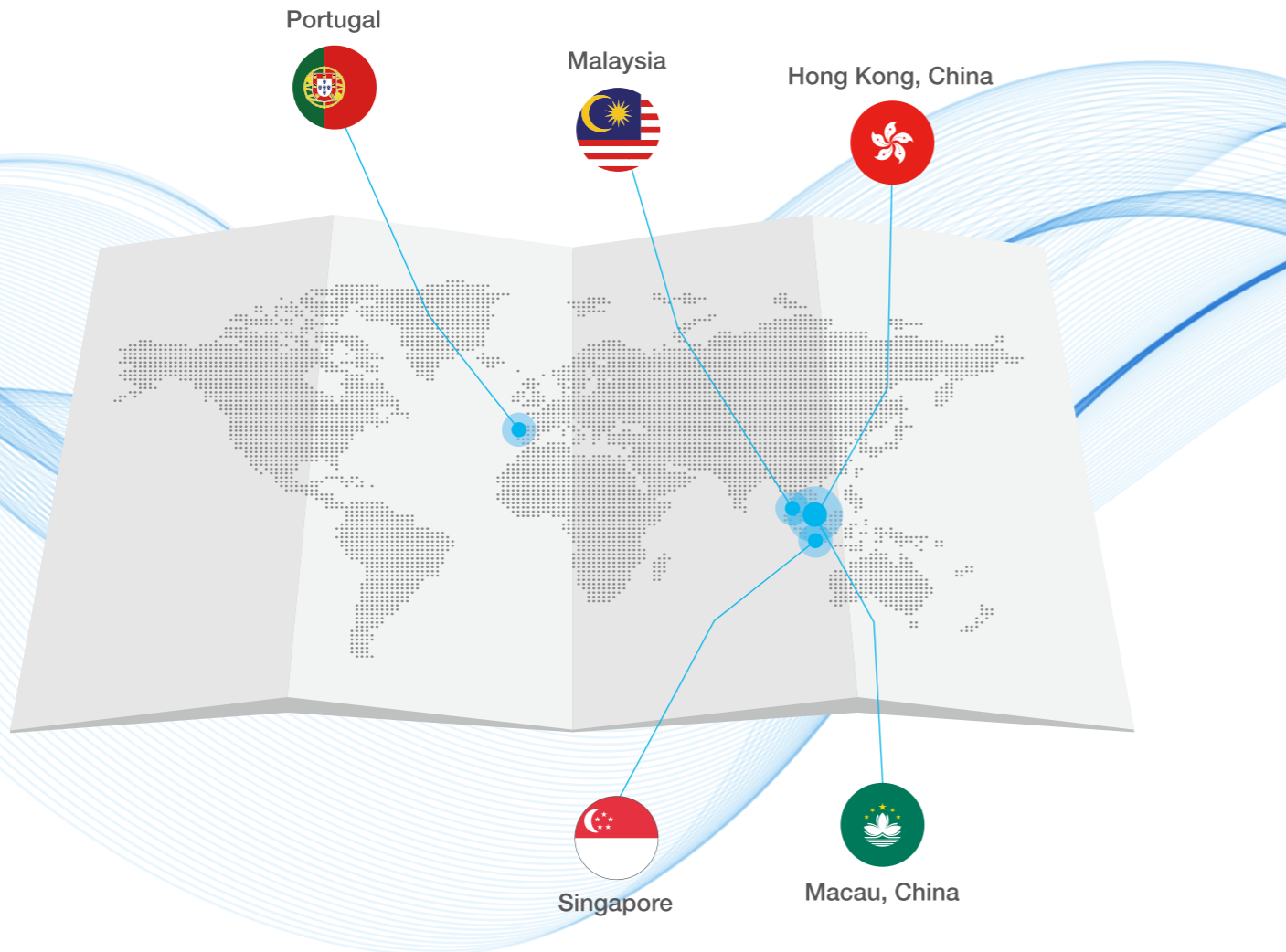


Representatives from two parties signed a strategic cooperation agreement framework and held the first deans' work meeting of BEWG College, making specific arrangements for the College's regulations, development plans and annual plans.

## Provide water services globally, enhance international influence

As the Group expands operations, accelerates globalisation and actively carries out the national “go global” strategy, BEWG has established platform companies in Malaysia, Portugal, Singapore, Hong Kong of China, Macau of China, and has been actively tapping markets in Pakistan, the UAE, Israel, Thailand, the Philippines, Sri Lanka, Indonesia, Mongolia, Kazakhstan and other countries along the Belt and Road, as well as Australia and countries in Africa, South

America and North America. At the same time, we are standardising and localising operations and incorporating local employment, training and community investment into daily management to better take root in local markets. These measures will bring economic benefits to local markets, expand water service operations globally and enhance our international influence.



BEWG has always promoted localised operations and management for overseas projects. In respect of overseas employment in 2017, BEWG formulated the *Employee Manual* and emphasised localised employment as the top priority of the employment process. According to the *Employee Manual*, in addition to designating personnel from China to assume positions with specific technical requirements, most employees at overseas subsidiaries shall be from its local market.



### Localised employment and training in Malaysia

The Malaysia subsidiary emphasizes great importance to skills training and retraining for local employees. The subsidiary’s management makes training plans for each employee each year and encourages employees to actively participate in various training sessions and lectures. The training covers a very wide range of areas, including project financial model, soft skills training, dispute resolution, language and communication skills, construction site safety management, and wastewater and water service projects.

To recognise BEWG (Malaysia Company) for its efforts in employment and training policy, HR Asia named BEWG (Malaysia Company) one of the Best Companies to Work for in Asia in 2017.



BEWG pays attention to community communication and giving back to community development. BEWG’s overseas subsidiaries have been actively communicating with local communities to better integrate into local communities. To allow local communities to better understand our businesses, our overseas subsidiaries regularly invite people from local communities to visit water plants, hold various community charity events, and strive to gain support and trust from overseas local communities.



Students from University of Malaysia visit BEWG Malaysia water plant



Students from Mutiara International Grammar School visit BEWG Malaysia plant



## Low-carbon operation, protect lucid waters and lush mountains

- ✓ Develop a comprehensive environmental management system
- ✓ Strict operational emissions management
- ✓ Efficient resource and energy use

Based on the needs of society and the ecological environment, BEWG has continuously optimised and innovated in the concept of water ecological control, and actively practices the green development initiative of "lucid waters and lush mountains are invaluable assets". While developing environmental protection businesses, we also pay great attention to the impact of our own operations on the environment.

In 2017, we improved our comprehensive environmental management system, established a strict operational emissions management, and clean, low-carbon, safe and efficient energy systems, and advocated green and low-carbon work to minimise the impact of our operations on the environment, and realised harmonious co-existence between human beings and nature, and comprehensive, balanced and sustainable development.



## Develop a comprehensive environmental management system

The water environment comprehensive service process is conducive to environmental improvement. Environmental benefits include: reducing pollutants in urban and rural sewage, improving river ecology, recycling and comprehensively utilising solid waste, using clean energy to reduce pollution and greenhouse gas emissions, and improving the urban environment.

While bringing environmental benefits, we have comprehensively established a quality, environment, occupational health and safety management system, and strictly abide by national laws and regulations, such as the *Environmental Protection Law of the People's Republic of China*, the *Law of the People's Republic of China on the Prevention and Control of Atmospheric Pollution*, the *Law of the People's Republic of China on Prevention and Control of Water Pollution*, the *Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste*, the *Law of the People's Republic of China on Prevention and Control of Pollution From Environmental Noise* and local policies.



We have implemented environmental management throughout the entire process and have considered reducing negative environmental impacts and maximising environmental benefits from investment to design and construction. We have a sound management system in place in our operation processes, adhere to up-to-standard discharge and must not cross over the red line for ecological protection, and are committed to continuous improvement to save energy, lower consumption, reduce pollution and increase efficiency during the entire process.



## Environmental management system upgrade

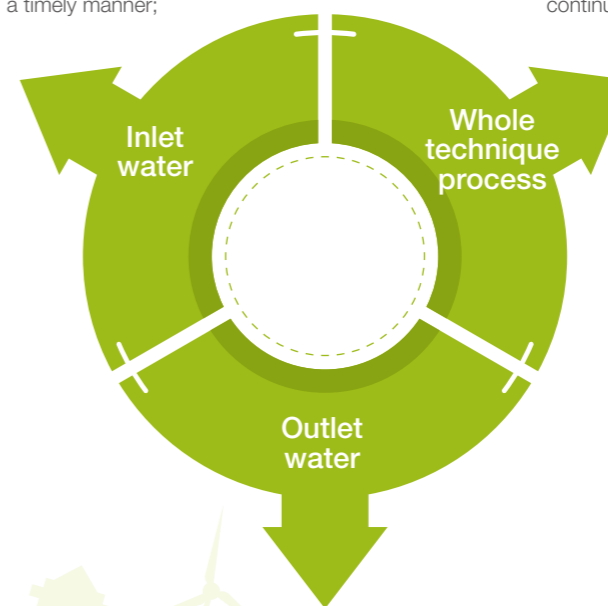
In September 2017, the environmental annual management system was comprehensively upgraded. In accordance with the requirements of the latest national standard GB/T19001:2016 quality management system and GB/T24001:2016 environmental management system, the Group completely revised its management manual and procedure documents, added relevant system documents and recorded forms in the new versions, and organised internal audits and management reviews.

The Group has promulgated and implemented the *Quality, Environment, Occupational Health and Safety Management Manual* and the *Quality, Environment, Occupational Health and Safety Procedure Documents*.

The quality of products and services represents the quality of our contribution to the environment. To strengthen product and service quality management, we have prepared a series of procedure documents, including the *Control Procedures for Monitoring and Measuring Equipment*, the *Control Procedures for Non-conforming Products*, the *Control Procedures for Non-compliance, Accidents/ Incidents* and the *Procedures for Handling Abnormalities* to closely control the quality of products and services.

The quality of sewage treatment and discharge is controlled from the source, and the quality of inlet water, semi-finished products and finished products are all under control.

- **Identification:** Monitor the quality of inlet water and detect abnormalities in a timely manner;
- **Review:** Present a water treatment plan;
- **Handle:** Ensure emissions are up to standard according to the plan and report the case in a timely manner;
- **Identification:** Monitor the process and detect abnormalities;
- **Review:** Present a water treatment plan;
- **Handle:** Make improvements in techniques and continuously monitor abnormalities;



- **Identification:** Monitor and identify abnormal water quality and take emergency measures if needed;
- **Review:** Analyse outlet water abnormalities and present a handling plan;
- **Handle:** Improve techniques, ensure up-to-standard pollutant discharge, strengthen monitoring and monitor the quality of outlet water;





## Strict operational emissions management

### Sewage treatment and recycling, water supply business

Water is the source of life. People need to consume water resources for life and production, and the products from sewage will pollute the environment.



#### Environmental performance

Type of pollutant	Unit	Reduced amount of pollutant in 2017*
Sewage treatment and recycling, reduce the discharge of pollutants in sewage into environmental water and reduce river pollution	Reduced amount of chemical oxygen demand	ton 553,742
	Reduced amount of ammonia nitrogen	ton 50,960
	Reduced amount of total phosphorus	ton 8,728
Emission management, emphasising daily emission management, and sticking to eco-friendly development The outlet water strictly complies with relevant national and local standards such as the <i>Discharge Standard of Pollutants for Municipal Wastewater Treatment Plants</i>		
Type of pollutant	Unit	Emissions in 2017*
Emissions of chemical oxygen demand	ton	63,193
Ammonia nitrogen emissions	ton	4,812
Total phosphorus emissions	ton	1,194
Greenhouse gas emissions	Emission of tons of carbon dioxide equivalent	535,705
Amount of hazardous waste	ton	67,032
Amount of sludge	ton	1,116,253

\* Note: The scope of statistical data on water treatment business reductions and emissions covers major subsidiaries.

\* Note: The amount of sludge for sewage treatment per ton is 5.00 ton in 2017.

## A water service operation “health examination” is provided to improve lean management and further intensify pollutant reductions



### Overseas business

We contribute to the local environment and people's lives while developing our businesses. We carry out sewage treatment and water supply operations in Malaysia, Singapore and Portugal to reduce local water pollution and provide fresh water.

#### Environmental performance

Type of pollutant	Unit	Reduced amount of pollutant in 2017
Contribution to the local environment	Reduced amount of chemical oxygen demand	ton 33,323
	Pollution control, complying with local laws and regulations and emission standards	
Type of pollutant	Unit	Emissions in 2017
Emissions of chemical oxygen demand	ton	17,616
Greenhouse gas emissions	Emission of tons of carbon dioxide equivalent	32,360
Amount of sludge	ton	9,380

### Solid waste business

**Make the city cleaner:** Our urban services mainly focus on road cleaning, and we have built a smart sanitation information platform integrating vehicle GPS satellite positioning and Internet of Things (IoT) intelligent management of waste collection and transportation to make our cities cleaner in a more intelligent manner;

**Turn waste into resources:** We are committed to reducing the impact of solid waste on the environment and transforming solid waste into useful resources and energy.

### Environmental performance

Type of pollutant	Unit	Reduced amount of pollutant in 2017
Urban service, making cities cleaner	Road cleaning area	m <sup>2</sup> 166,458,174
	Treatment capacity for municipal solid waste	ton 344,721
Solid waste treatment and recycling, reducing the environmental hazards of solid waste and turning waste into resources and energy	Treatment capacity for sludge	ton 2,248,527
	Treatment capacity for domestic waste	ton 545,800
	Treatment capacity for kitchen waste	ton 936
	Treatment capacity for medical waste	ton 1,980
	Treatment capacity for hazardous waste	ton 5,748
	Electricity generated from recycling of solid waste	kWh 111,676,400
Emissions management, emphasising daily emission management and ensuring environmental performance		
Type of pollutant	Unit	Emissions in 2017
Discharge of wastewater	ton	1,493,817
Emissions of chemical oxygen demand	ton	14,302
Ammonia nitrogen emissions	ton	739
Emissions of sulfur dioxide	ton	104
Oxynitride emissions	ton	586
Greenhouse gas emissions	Emission of tons of carbon dioxide equivalent	23,037

### New energy business

Beijing Enterprises Clean Energy Group Limited, an associated corporation of the Group, is engaged in clean energy development and utilisation, provides "clean energy+" solutions, and strives to build a more profitable clean energy ecosystem connecting different kinds of energy and coordinating different industries. The associated corporation is dedicated to becoming a leading integrated service provider of clean energy. It has expanded its businesses to 11 provinces and 3 autonomous regions nationwide, and has invested, constructed and operated more than 2GW clean energy power stations.

Photovoltaic power station project	Installed capacity	Photovoltaic power sales in 2017
48	2.2 GW	1,400,934 MWh



### Efficient resource and energy use

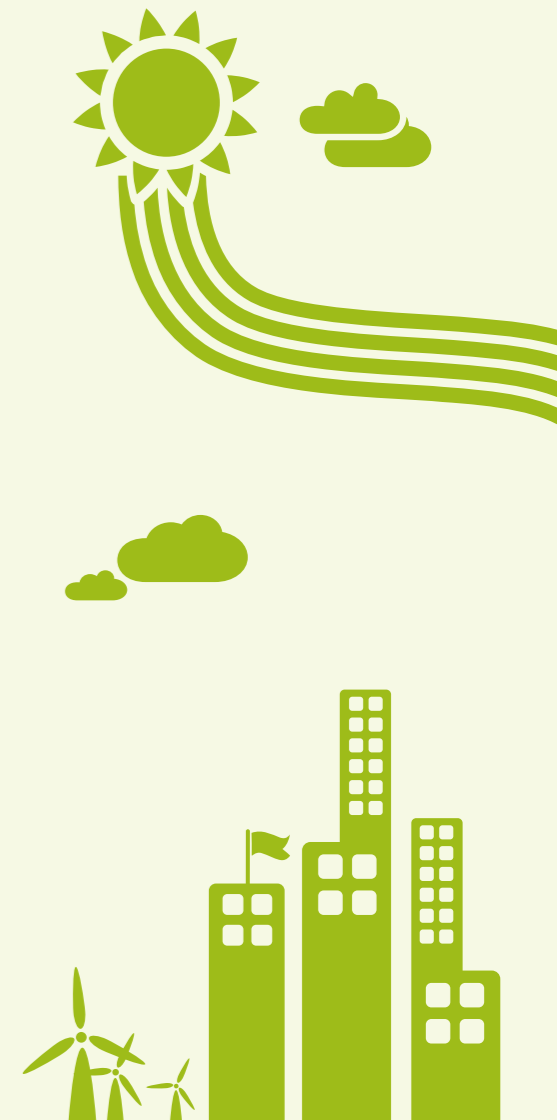
We emphasize importance to energy conservation and saving of water resources and chemicals in our production and operation processes.

We continuously optimise consumption of energy and resources during our operation processes by analysing equipment operation, conducting contrastive analyses of water consumption and electricity consumption, and optimising facility operation. We have also included energy conservation as one of our indicators for performance monitoring, and formulated the *Project Operation Control Procedures and the Performance Monitoring and Control Procedures* and other standard procedures to improve energy and resource utilisation. In 2017, the average power consumption per ton of sewage treated was about 0.22 kWh.

### Energy conservation

Type of energy	Unit	Consumption in 2017*
<b>Water treatment service</b>		
Power consumption	kWh	779,942,827
Power consumption of renewable energy	kWh	4,645,539
Consumption of gasoline	Litre	514,434
Consumption of natural gas	Cubic meters	128,691
Consumption of diesel	Litre	145,757
Outsourcing steam heating	GJ	4,990
<b>Overseas water treatment service</b>		
Power consumption	kWh	57,727,085
Power consumption of renewable energy	kWh	2,640,000
<b>Solid waste business</b>		
Power consumption	kWh	6,100,108
Consumption of gasoline	Litre	659,515
Consumption of natural gas	Cubic meters	267,406
Consumption of diesel	Litre	6,436,107
<b>Seawater desalination business</b>		
Power consumption	kWh	1,722,601

\* Note: The scope of statistical data of energy consumption covers major subsidiaries of BEWG.



**Shahe Reclaimed Water Plant in Changping District, Beijing reduces consumption of electricity and chemicals by adopting comprehensive energy conservation and consumption reduction technologies, which has an important demonstrative effect**

With technologies such as “adjusting dissolved oxygen to achieve low-oxygen operation, reducing the sludge return ratio, and improving the operation efficiency of blowers through frequency modulation,” the Shahe Reclaimed Water Plant in Changping District, Beijing has reduced power consumption per unit of oxygen demanding substances by 28.6% while ensuring the quality of outlet water is stable and up to standard.

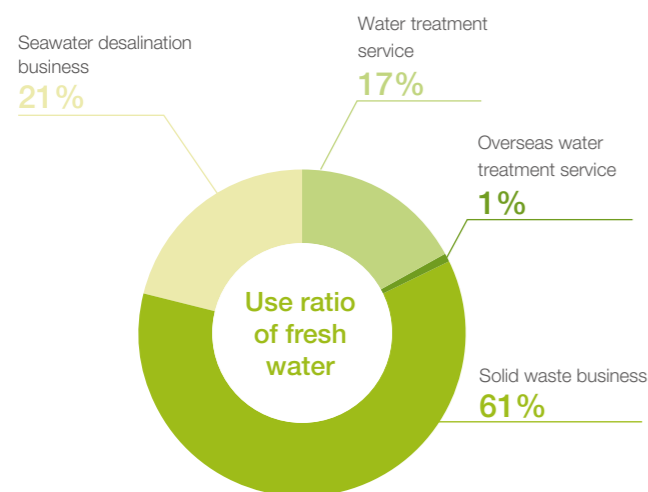
With technologies such as “chemical molecular weight and ionicity parameter screening, ultrasonic sludge concentration meter monitoring and optimisation control”, the plant has realised precise chemical injection and reduced the dehydration chemical cost per unit of dry sludge by 16.9%.

**Xinhua Sewage Treatment Plant in Huadu District, Guangzhou City reduces water and electricity consumption with precise aeration control technology, and passes major national specific item acceptance tests**

The Xinhua Sewage Treatment Plant in Huadu District, Guangzhou City applies precise aeration control technology in its aeration blower and has adopted a “feedforward compensation – multi-parameter cascade control” system. The system adjusts the air volume required by the aeration tank and provided by the blower in real time based on water quality and volume. The power consumption per unit of pollutants has dropped significantly, and the quality of the outlet water is stable. The power consumption per ton of water of the blower has been reduced by 18.51% and 20.59%, respectively, helping effectively realise the goals of energy conservation and consumption reduction.



Reductions in energy consumption could help cut carbon emissions from the use of energy. Carbon dioxide emissions per ton of water have been reduced by 15%. With technology promotion, these efforts will drive the building of a low-carbon society in China.



In 2017, 5,218,992 tons of fresh water were consumed with a consumption of 2.46 ton per 10 thousands HKD, and water resources were recycled in the sewage treatment process as much as possible to increase the utilisation rate of water. In 2017, 14,197,893 tons of water were recycled, which greatly reduced the consumption of fresh water.

**Reduce chemical use, standardise chemical management**

Chemicals (such as flocculants) are the main resource consumed during the sewage treatment process. In 2017, we conducted evaluations of chemical use to standardise and reduce the use of chemicals:

- Performed flocculant tests to explore the room to reduce chemicals;
- Made centralized purchasing of chemicals to improve quality and reduce operating costs;
- Prepared the *Administrative Measures for Chemical Agents* to standardise management with systems.

**Green office**

We have advocated for a green office, improved “greening” of office work and increased environmental awareness of all employees while reducing the impact of operation and production on the environment and energy.



**Improve air quality in the public photocopy room:**

Prevented the spread of carbon powder emitted from printers, fax machines and photocopiers, and set up public photocopy rooms and ventilation systems to improve air quality in offices.

Set up waste paper recycling bins to implement waste paper classification and handling, re-used paper with only one printed side, and sent paper used on both sides to waste recycling companies for classification and handling.



**Use LED energy-saving lamps:**

Replaced energy-saving lamps with LED lamps, which is expected to reduce power consumption for illumination by 57% and prolong the service life of lamps by 30%.



**Advocate use of video conferencing:**

Supported long-distance, real-time information exchange and collaborative conferences with multi-media technologies such as real-time audio and video to reduce office costs, improve work efficiency and promote a low-energy, low-pollution and low-emission green office.



**Adjust cooling load:**

Energy consumption can be reduced by adjusting the supply water temperature of the refrigeration equipment. According to actual measurement, an increase in water temperature by 1°C will result in decrease in the operation coefficient of refrigeration units by 0.1-0.15, that is, the electricity consumption per hour can be reduced by 41.4 kWh.



**Promote shared workstations:**

Set up shared office areas or workstations based on the distribution and use of office area to increase the utilisation of workstations and maximise the use of office space.

Energy and resource consumption for office work		
Office power consumption	10,000 kWh	3,310
Consumption of renewable energy	kWh	25,920
Consumption of gasoline	Litre	1,693,318
Consumption of diesel	Litre	76,537
Consumption of natural gas	10,000 cubic meters	20,990
Consumption of fresh water	ton	280,807



## Create a better future and be a pioneering corporate citizen

- Create a fair work environment
- Spare no effort in protecting employees' health and safety
- Help employees grow
- Upgrade employee happiness
- Give back to the community

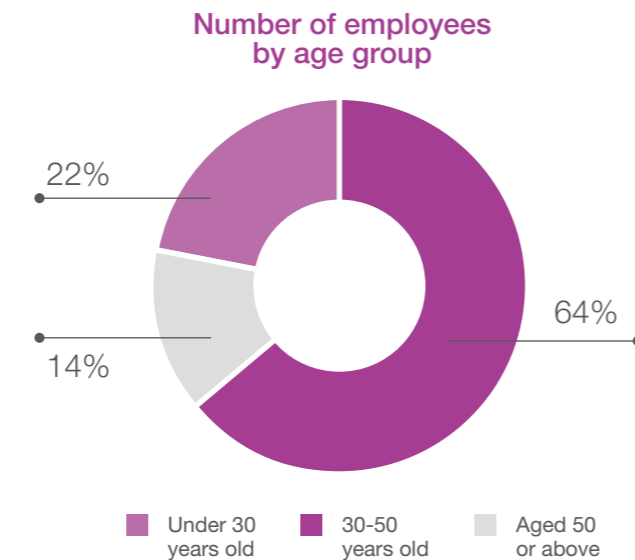
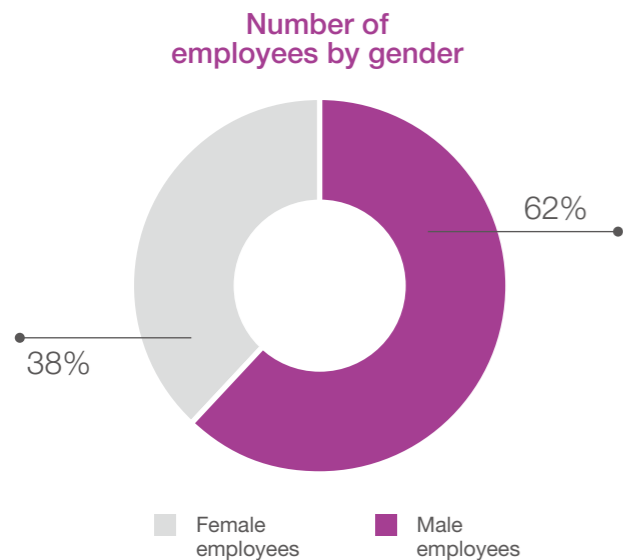
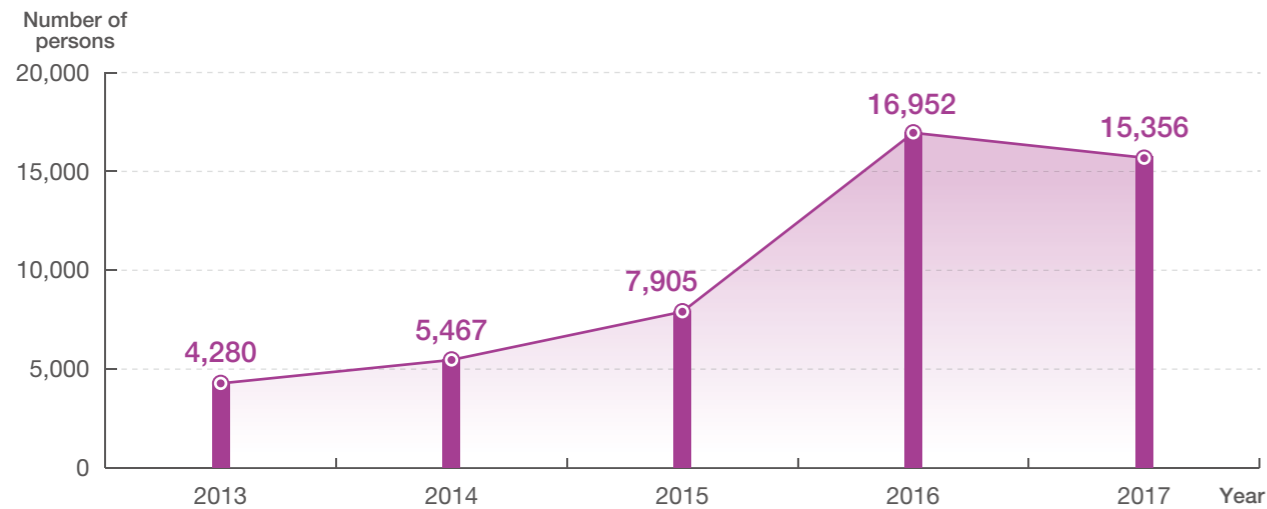
We have always adhered to a people-oriented operation, regard employees and communities as major serving targets as a corporate citizen, safeguard the legitimate rights and interests of employees, strive to create a harmonious cultural environment, and actively give back to society by launching charitable activities and promoting local development.



## Create a fair work environment

The Group understands that employees are the basis for its long-term development. It abides by relevant laws and regulations such as the *Labour Law of the People's Republic of China* and the *Labour Contract Law of the People's Republic of China*, and formulates labour and employment systems like the *Employment Management System* to fully ensure legal employment, and respects, values and protects the legitimate rights and interests of all employees. The Group strives to eradicate all inequality

in employment, salary, training and promotion due to gender, region, ethnicity, religion, age and political orientation, allowing every employee to enjoy fair and just treatment and a friendly working environment without discrimination. With respect to basic labour issues, such as child and forced labour, the Group takes a zero-tolerance attitude in terms of both rules and regulations and monitoring mechanisms, and strives to eliminate labour issues in all aspects of employment.



## Spare no effort in protecting employees' health and safety

The Group strictly abides by national laws and regulations, such as the *Production Safety Law of the People's Republic of China* and the *Law of the People's Republic of China on Prevention and Control of Occupational Diseases*, and relevant industry rules. In accordance with relevant standards, the Group has formulated the *Quality, Environment, Occupational Health and Safety Management Manual* and relevant systems like the *Accountability System for Prevention and Control of Occupational Hazards* and the *Regulations on Management of Labour Protection Supplies*. The Group has made efforts to control security risks, provide employees with a healthy and safe working environment, and ensure the occupational safety of employees.

### Safety production

We have implemented the "safety first, prevention foremost and comprehensive renovation" safety policy, assigned safety

management personnel, defined their responsibilities of the Group, regional and business units and project companies, and established safety production management committees at all levels to build a safety production management network with clearly defined rights and responsibilities.

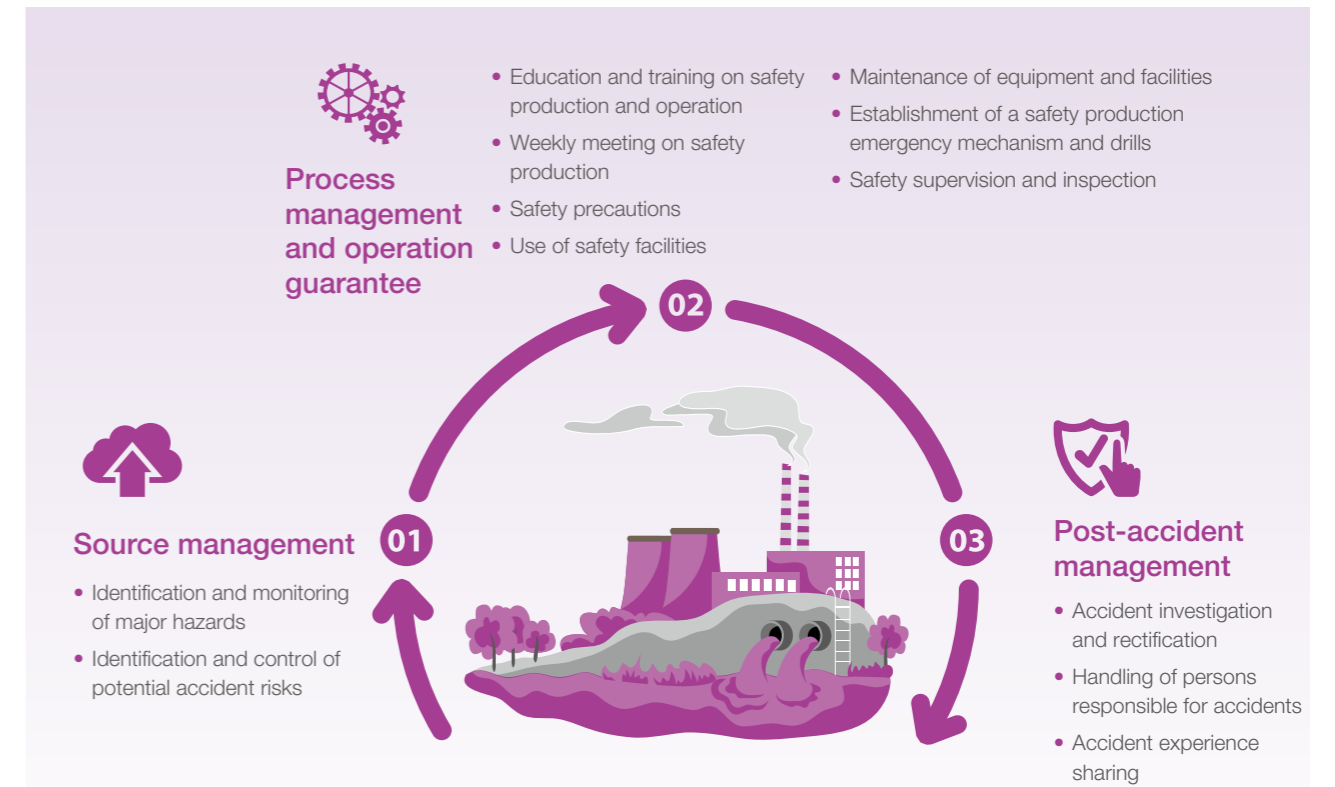
We have set up a system governing our safety production objectives and responsibility management and evaluation. We set annual safety production objectives based on the actual situation and have signed the *Responsibility Statement for Safety Production Objectives* with major regions and business units under direct management to clarify safety management responsibilities, objectives and assessment requirements. Regions and business units under direct management will set safety production objective indicators for project companies and individuals to meet their safety production responsibilities. At the end of the year, comprehensive assessment is conducted based on

the safety management process and assessment results of regional subsidiaries. Accidents are assessed in two aspects. In addition to punishment imposed on any persons responsible for accidents, the Key Performance Indicators (KPIs) of major regions or business units under direct management will also be downgraded and a certain percentage of the year-end bonus will be cut.

In 2017, the Group invested

RMB **20.24** million in safety production

**100%** Safety training coverage



## The Group's key measures for safety production management in 2017

<b>Carry out safety production inspections</b>	<ul style="list-style-type: none"> <li>• More than 10 comprehensive safety inspections and special safety inspections were carried out, covering all major regions and business units under direct management, requiring timely rectification of identified hidden hazards, and incorporating inspection results into safety assessments at year-end</li> <li>• All major regions were required to carry out internal inspections and regularly conduct safety inspections on subordinate project companies</li> </ul>
<b>Promote safety training and education</b>	<ul style="list-style-type: none"> <li>• Fire safety training was conducted for employees at the Group headquarters</li> <li>• A 4-day group-wide training session for safety management personnel was conducted, covering basic knowledge of safety production management, safety management systems and internal auditing knowledge</li> <li>• Annual training and assessments for safety management personnel from all major regions and units under direct management were conducted, covering safety management systems, laws and regulations, safety management on construction projects and water plant operation, accident case analysis, accident emergency drills, etc.</li> </ul>
<b>"Safety production month" event</b>	<ul style="list-style-type: none"> <li>• A safety management and emergency rescue competition was held</li> </ul>
<b>Improve monthly reports on safety production</b>	<ul style="list-style-type: none"> <li>• The monthly safety production reports were created since July to summarise and analyse the safety information of major regions and business units under direct management each month, as well as to adjust the direction and strategy of safety management in a timely manner</li> </ul>
<b>Introduce a third-party inspection agency</b>	<ul style="list-style-type: none"> <li>• An inspection team consisting of the project management centre, internal experts and a third-party inspection agency conducted an inspection on the quality, safety, progress and cost of the Group's water environment development projects, prepared an inspection report and urged project companies to correct any non-conformance based on the inspection team's opinions</li> </ul>

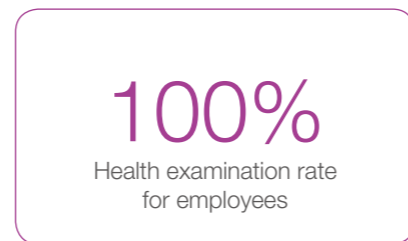
## Occupational health

The Group emphasizes great importance to management of occupational health for employees. Each year, it makes and implements occupational disease prevention and control plans based on experience and actual conditions, continuously improves occupational disease prevention and control measures, and improves management on occupational disease prevention and control. We have specifically set the *Accountability System for Prevention and Control of Occupational Hazards* to clearly define relevant responsibilities of different functional departments.

In terms of preventive measures, we entrust a qualified intermediary technical service agency to conduct detection of occupational workplace hazards every year and conduct an evaluation on the status quo of occupational hazards every three years, and designate persons for daily monitoring of occupational workplace hazards. Based on this, we take measures to fundamentally reduce and actively eliminate hazards in the

work environment, and reduce employee exposure to occupational hazards. According to the types of occupational hazards, we set standards for personal protection equipment, supervise employees' use of such equipment, and provide employee annual physical examinations to improve occupational health. In 2017, the occupational health examination rate for employees was 100%, and the occupational disease incidence rate was zero.

With respect to employee awareness, the Group stipulates that the education and training programs formulated at the beginning of the year must include content on occupational hazard prevention and control with at least 8 training hours for each employee. Business units create education and training programs based on their occupational hazard characteristics and actual production conditions, report their occupational hazards education content and require new employees to receive occupational health education.



In addition, the Group requires posting of warning signs and instructions in eye-catching positions near equipment that may cause occupational hazards. The warning instructions should specify equipment performance, potential occupational hazards, safety operation and maintenance precautions, occupational hazard protective measures, etc.



## Help employees grow

Corporate development and employee growth complement each other. The Group regards employees as its core assets and has implemented a career development system that includes employee training and promotion mechanisms to ensure that employees enjoy a range of career development options, regardless of their positions, qualifications or job types.

### Employee training

We have continuously improved our training system, enhanced the relevance and coverage of training programs, and provided an open and free platform for employees to improve their occupational qualities and abilities.

Group-level training programs include expert training, induction training and capacity building training for business units. In 2017, the development of strategy-oriented group assembled four expert teams: the mathematical model, water supply management, sewage

process operation and intelligence teams. The Group provides targeted professional training for each team and requires them to work together to solve operational problems, so as to continuously improve the theoretical and practical skills of team members and reserve high-end technical talents for the development of the Group. All new employees must receive the Group's induction training to integrate with and adapt to the team as soon as possible.

Based on the training guidance at the Group level, the business units have actively carried out surveys on employees' demand for training to design and implement annual training plans and continuously upgrading the quality of employees.

### Training performance in 2017

100%

Training coverage

86 hours

Average training time of all employees

### Average hours of training by employee type

111 hours

Senior employees

118 hours

Mid-level employees

72 hours

Ordinary employees

## 2017 Group-level Training Features

Training types	Excellent Performance in 2017
<b>Expert training</b>	Organise training for four expert teams
<b>Induction training</b>	Provide newcomer training class Phase I for 213 participants
<b>Training on achievements sharing</b>	Three conferences on water supply modules: Exchange management experience in water supply business, ideas exchange and training on techniques to prevent leakage or damage to pipe networks for employees in water supply enterprises who take direct charge of such work, water supply management seminar, attended by up to 300 participants
<b>Training on capacity building</b>	The senior training Phase IV for operational management talents was held twice a year and was attended by up to 65 participants
<b>Training on business capability</b>	5 training activities to improve business capability in special modules: 2 training activities on application of "GPS-X simulation software" themed mathematical modelling technique in wastewater treatment plant, 2 system seminars of operational experts, 1 training activity on equipment management of operation and management centre; attended by 103 participants



### A training class provided by BEWG for senior managers engaged in the environment industry in China to cultivate industry-wide senior managers

The training class was provided by BEWG in cooperation with Tsinghua University. Many academics, government officials and experts from well-known companies and industries were invited to give lectures so as to improve management quality and introduce innovative management methods for subsidiaries of BEWG.

In 2017, training class Phase VI was successfully conducted in Tianjin Financial Training College and attended by 68 trainees from the head office, subsidiaries, regional business divisions, business areas/platform companies and 18 ecological partners.



### Initiate the "Wisdom Influx" lecture to share experiences and in-depth understanding in environmental protection

Based on the concept of "collecting wisdom from experts to cultivate professional elites", BEWG sponsored the "Wisdom Influx" lecture and invited many top experts from the industry to share their experience and research achievements to cultivate wisdom for the industry development, answer questions, and improve the capacity and quality of BEWG's employees.

In 2017, the "Wisdom Influx" lecture was held 9 times and attended by hundreds of participants. The lecture featured in-depth and forward-looking content on municipal sewage treatment, stinking wastewater treatment, water treatment in villages and towns, comprehensive treatment of the water environment and other similar fields, and even on other industries like "Internet+" industry. In the future, we expect the "Wisdom Influx" lecture to continue to promulgate advanced technologies and ideas and cultivate talents for BEWG and the water industry.



### Promote teamwork with the "water environment business seminar and discussion" team building activity

In October 2017, a team building activity was jointly organised by Water Environment Investment Centre, Central Region and other departments of BEWG for the purpose of "staying true to our mission and moving forward – water environment business seminar and discussion". A series of activities were specially designed for this team building activity, including an "ice-breaking trip" "moving meeting" and "Nasca painting", to encourage employees to think from other perspectives, play an active role in teamwork and be responsible and united. Employees were also recognised with "Golden Idea", "Sword" and "Little Bee" awards. Open-minded and inclusive, all participants were expected to trust and rely on each other to show the wisdom and power of a united group.



## Career Advancement

Based on the formulation and implementation of the *Performance Appraisal Management System*, the Company has established a three-dimensional career development system, both horizontally and vertically, also known as “Four Horizontal and N Vertical”. “Four Horizontal” represents management, potential talents and department managers, regional managers, and senior executives, who are directly governed and cultivated by the Group, with special attention paid to potential talents. Each business line is divided into N vertical positions. In this way horizontal and vertical management helps ensuring that each employee enjoys equal opportunities in career development and occupational promotion.

We respect the career planning of each employee and provide them with the necessary support for their success. Employees are required to complete a form regarding career development after they make a work summary and communicate with superiors. The form will be submitted to the Human Resources Centre for filing as an important reference for their training plan and work arrangement.



## Customise the New Power Plan to help management trainees grow quickly

The New Power Plan, a plan to develop young middle-level management personnel and technical experts for the Group, aims to develop management trainees as the backbone of specific businesses and functional areas and the driving force for sustainable development of the Group through high standard screening, customised cultivation and targeted position training.

With a term of 18 months, this Project is designed to determine the trainees' personal career direction at the beginning of recruitment by major, strength and demand from group businesses. During the program, inter-unit and inter-

department rotation and frontier training will be implemented supplemented with “versatile + specialised personnel” customised training systems. The Group appoints career mentors for each trainee to help them achieve work goals and plan for career development.

In 2017, we completed the work report and post appointment for the 2015 management trainees and organised training and work communication for the 2016-2017 trainees with an emphasis on improving communication capability and interdisciplinary thinking.



## Upgrade employee happiness

The Group emphasizes an importance to material and spiritual enrichment, encourages employees to achieve work-life balance and integrates building of sense of belonging into corporate culture so as to enhance employee happiness.

With our comprehensive and reasonable remuneration management system, we provide competitive salaries in the industry. With respect to employee's efforts and focus on personal development, we have stressed on an integration of remuneration and performance in the last two years to further improve the remuneration incentive mechanism. With regard to welfare, we have established the *Welfare System for Group Headquarter Staff and Regulations on Organisation and Implementation of Group Corporate Cultural Activities*. In addition to annual bonuses, supplementary medical care, subsidies, holiday allowances, heating subsidies, afternoon tea and other material welfare benefits, we have implemented a variety of activities to demonstrate our care for employees. Such activities include a moon cake making class for Mid-autumn Festival, Children's Day activities and employee birthday parties. Our activities integrate teaching and fun, such as lectures, interest groups and group development activities so as to enhance the relationship among employees, families, and group with collaborative progress. Moreover, we also aim to improve employee

satisfaction by inviting them to assess the Group's administrative service items and processes, communicating with them in multiple ways, identifying differences between their demands and actively pursuing improvement.







## Give back to the community

In developing businesses, BEWG is also committed to giving back to local communities. As an environmental friendly enterprise, we popularise environmental protection knowledge in business operating areas; as a responsible enterprise, we answer the call of targeted poverty alleviation; as a corporate citizen, we are committed to serving communities and helping them change for the better.

### Promotion of environmental protection knowledge

As an environmental friendly enterprise, it is our duty to promote environmental protection knowledge in communities. In 2017, we held an open day activity educating students about environmental protection to improve public knowledge with regard to environmental protection and to help them understand the work of an environmental enterprise.



### Promote environmental protection by Haidian District Water Authority and BEWG to celebrate World Water Day

On March 22, 2017, the twenty-fifth World Water Day, Haidian District Water Authority and BEWG held a large public welfare promotion activity of “beautifying water courses and building wonderful homes”. The activity aimed to promote water ecological development and increase awareness of the importance of environmental protection and green ecosystem development.



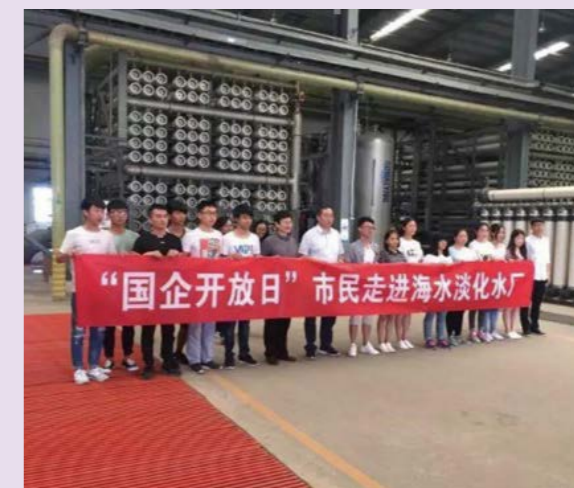
In the activity, Li Jingsong, the Director of Haidian District Water Authority, presented a flag to the “BEWG Beijing Water Conservation and Protection Voluntary Service Team”. This team was set up by employees from BEWG’s North Region to promote water ecosystem development and make contributions to a water-focused career. The volunteer representative received the flag and the whole team took a solemn oath demonstrating their determination in preserving water resources, protecting water environments and implementing water-related activities.



### State-owned Enterprise Open Day held by Tangshan Caofeidian Beijing Enterprises Desalination Co., Ltd. of BEWG

On June 10, 2017, the second “Capital State-owned Enterprise Open Day”, BEWG, as the flagship enterprise in water environment protection, opened several water plants to the public to help them better understanding urban development and livelihood projects. Participants visited our exhibition hall, air flotation system, ultra-filtration system and post-treatment system and were invited to taste desalted product water.

This tour deepened participants’ knowledge of professional seawater desalination processes, new technologies applied in seawater desalination and the work of the environmental protection industry.



### Primary and secondary school environmental protection education campaign held by Xinhua BEWG Operation Co., Ltd.

In 2017, Xinhua BEWG Operation Co., Ltd. carried out an “On-campus Education” campaign and implemented two scientific activities for primary two students from Chengdu Garden (International) Primary School. The Company also organised a “Science in Water Factory” event educating students from Pengzhou Primary School about environmental protection.



## Targeted poverty alleviation

In order to fulfil central and provincial spirits and requirements of targeted poverty alleviation tasks and advance measures to help impoverished people, BEWG and its subsidiaries have carried out a number of activities to help and support the poverty.

### Guangxi Guigang BEWG Co., Ltd. solved water supply problems for communities and five-guaranteed households without charge

In 2017, Guangxi Guigang BEWG Co., Ltd. learned that certain offices and five-guaranteed households of Nanping Community Guigang City lacked access to tap water. Guangxi Guigang BEWG Co., Ltd. connected the water pipes for the office building and 2 five-guaranteed households and installed water meters for free, solving a water shortage problem that the community had faced for years. On January 30, 2018, Guigang City Nanping Community sent a silk banner to Guangxi Guigang BEWG Co., Ltd. to thank them for solving their drinking water problem.



### Xinhua BEWG Operation Co., Ltd. helped Guangming Village

Xinhua BEWG Operation Co., Ltd. assigned people to Yangxi Town Guangming Village to support the local development, with accompanying support to Yangxi Town Gongsheng Village. In 2017, the Company invested RMB60,000 to support the PV plant in Guangming Village and improve the collective economic income. Meanwhile, they encouraged the impoverished households to develop industry with an emphasis on helping several Guangming Village farmers develop cattle, sheep and crayfish breeding and organic vegetable cultivation projects, which have yielded good economic benefits.



### Poverty relief campaign of BEWG Junan Project Company

Representatives of BEWG Junan Project Company paid visits to five-guaranteed households, families of revolutionary martyrs and servicemen, and families in financial difficulty with leaders of the village committee on December 12 and 13, 2017 and provided necessities, consolation money and blessings for the festival.





### Yecheng BEWG Sewage Treatment Co., Ltd.'s poverty alleviation campaign for Corban Festival

On August 31, 2017, the day before Corban Festival, Fu Qiuming, the General Manager of Yecheng BEWG Sewage Treatment Co., Ltd., accompanied by management staff and employees gave out festival gifts to 73 families with financial difficulties in Xigebeige Village, helping them to celebrate this warm and auspicious festival.



### Community Service

BEWG aims to give back and bring change to local communities by employing our resources and strengths. BEWG and its regional branches cared for the elderly and served communities in 2017.



### Charitable event held by Yuxi BEWG Water Purification Co., Ltd. in the Elderly Home of Yuxi City

Yuxi BEWG Water Purification Co., Ltd. held a charitable event in the Elderly Home of Yuxi City on September 23, 2017 and donated fruit, moon cakes and other necessities to the elderly. Employees, members of micro-charity organisations and middle-and old-aged art troupes performed for the elderly. The Company hoped elderly people in the nursing house would feel the love and joy of the society in this event, whereby they made contributions to philanthropy of Yuxi City.



### Benxi Manchu Autonomous County BEWG Co., Ltd. visited Xiaoshi Town Nursing House

Benxi Manchu Autonomous County BEWG Co., Ltd. visited the elderly in Xiaoshi Town Nursing House and addressed their living needs on January 11, 2017. They gave out cotton-padded shoes, socks and other necessities, cut and washed senior people's hair and helped them with personal hygiene.



### Voluntary service of Xiangjiating Water Purification Co., Ltd. under Yongzhou BEWG to clean up the community environment

On the afternoon of October 28, a voluntary service team of Xiangjiating Water Purification Co., Ltd. under Yongzhou BEWG picked up trash and publicised environmental protection from Lingling District Xiaoxiang Wharf to Hexi Yanchang Road.





## Future prospects

Building an ecological civilisation has been cited as vital to sustaining China's development in the Work Report of the 19th National People's Congress. BEWG will follow the national objective of building an ecological civilisation, implement sustainable and innovation-driven development strategies, develop a quality workforce, positively respond to pollution control and targeted poverty alleviation, and continue to fulfill its corporate social responsibilities.



In the future, we will continue to make contributions to society and deepen water management and water environment business development to become a responsible leader in the industry.

Great virtue is like water, and it is closest to the truth. Committed to rules of cleanliness, good governance and mutual aid, BEWG will continue to contribute to the environment and society. We respect opinions from all stakeholders, we value their suggestions, and will spare no efforts to meet their expectations.



## Cross-references to the ESG Reporting Guide of Hong Kong Stock Exchange

Index of Environmental, Social and Governance Indicators		Disclosure plan and explanation
Environmental	General Disclosure Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and nonhazardous waste	P48-50
	A1 Emissions	
	A1.1 The types of emissions and respective emissions data	P50-52
	A1.2 Greenhouse gas emissions in total (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility)	P50-52
	A1.3 Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility)	P50-52
	A1.4 Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility)	P50-52
	A1.5 Description of measures to mitigate emissions and results achieved	P48-52
	A1.6 Description of how hazardous and non-hazardous wastes are handled, reduction initiatives and results achieved	P48-52
	General Disclosure	
	Policies on the efficient use of resources, including energy, water and other raw materials	P53
	A2 Use of Resources	
	A2.1 Direct and/or indirect energy consumption by type (e.g. electricity, gas or oil) in total (kWh in '000s) and intensity (e.g. per unit of production volume, per facility)	P53-55
	A2.2 Water consumption in total and intensity (e.g. per unit of production volume, per facility)	P54-55
	A2.3 Description of energy use efficiency initiatives and results achieved	P53-55
	A2.4 Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency initiatives and results achieved	P54
	A2.5 Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced	Not applicable

A3 The Environment And Natural Resources	General Disclosure Policies on minimising the issuer's significant impact on the environment and natural resources	P48-49
	A3.1 Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them	P48-49
B1 Employment	General Disclosure Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare.	P58, 64, 65
	B1.1 Total workforce by gender, employment type, age group and geographical region	P58
	B1.2 Employee turnover rate by gender, age group and geographical region	-
B2 Health and Safety	General Disclosure Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to providing a safe working environment and protecting employees from occupational hazards	P59-60
	B2.1 Number and rate of work-related fatalities	-
	B2.2 Lost days due to work injury	-
B3 Development and Training	B2.3 Description of occupational health and safety measures adopted, how they are implemented and monitored	P59-60
	General Disclosure Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities	P61-65
	B3.1 The percentage of employees trained by gender and employee category (e.g. senior management, middle management)	P61
B4 Labour Standards	B3.2 The average training hours completed per employee by gender and employee category	P61
	General Disclosure Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to preventing child and forced labour	P58
	B4.1 Description of measures to review employment practices to avoid child and forced labour	P58
	B4.2 Description of steps taken to eliminate such practices when discovered	P58

Social

B5 Supply Chain Management	General Disclosure Policies on managing environmental and social risks of the supply chain	P16
	B5.1 Number of suppliers by geographical region	P17
	B5.2 Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, how they are implemented and monitored	P16-17
B6 Product Responsibility	General Disclosure Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to health and safety, advertising, labelling and privacy matters relating to products and services provided and methods of redress	P49
	B6.1 Percentage of total products sold or shipped subject to recalls for safety and health reasons	Not applicable
	B6.2 Number of products and service related complaints received and how they are dealt with	P16
	B6.3 Description of practices relating to observing and protecting intellectual property rights	P40-41
	B6.4 Description of quality assurance process and recall procedures	N/A P49
	B6.5 Description of consumer data protection and privacy policies, how they are implemented and monitored	Not applicable
B7 Anti-corruption	General Disclosure Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to bribery, extortion, fraud and money laundering	P16
	B7.1 Number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the reporting period and the outcomes of the cases	P16
	B7.2 Description of preventive measures and whistle-blowing procedures, how they are implemented and monitored	P16
B8 Community Investment	General Disclosure Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its activities take into consideration the communities' interests.	P66-71
	B8.1 Focus areas of contribution (e.g. education, environmental concerns, labour needs, health, culture, sport)	P66-71
	B8.2 Resources contributed (e.g. money or time) to the focus area	P66-71



## Reader feedback

### Dear readers,

Thank you for reading *2017 CSR Report of Beijing Enterprises Water Group Limited*. We value your and expect to listen to your feedback on corporate social responsibilities, practices and information disclosure of BEWG. Your opinions and suggestions are the important basis for us to carry forward corporate social responsibility management and practice. We are looking forward your reply!

### Optional questions (please mark on your answer)

1. Do you think this report can reflect material impact of BEWG on economy, society and environment?

Yes  Probably Yes  No

2. Do you think this report can identify stakeholders and correctly and comprehensively analyse their relationships with BEWG?

Yes  Probably Yes  No

3. Do you think the information in this report is comprehensive?

Yes  Probably Yes  No

4. Do you think the information in this report is readable?

Yes  Probably Yes  No

### Open-ended question

You are welcomed to making comments and suggestions for *2017 CSR Report of Beijing Enterprises Water Group Limited*.

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